



# Bachelor Thesis

Industrial Engineering and Management

Developing a maturity model for Rijkdienst Caribisch Nederland by identifying needs, to create a supporting base and cooperation between the units

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# Title Page

## Document

Title                Developing a maturity model for Rijksdienst Caribisch Nederland by identifying needs, to create a supporting base and cooperation between the units

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## Management Summary

The purpose of this study is to investigate the options for improving the cooperation between the various departments within the National Office of the Dutch Caribbean (RCN). At the moment the services of the RCN are provided by the different departments. These departments operate individually and are in close contact with their main departments in the Netherlands. There is little or no cooperation between the different departments of RCN.

Improved cooperation of units can offer benefits to both the different departments and the inhabitants of the islands of Bonaire, Sint Eustatius, and Saba (BES). The research focuses on identifying common interests. With these interests, a maturity model is drawn up, which serves as a basis for future developments within RCN. This model and its recommendations are mainly centered on information and process management.

The results show that three of the largest service providers, the Tax Authority Dutch Caribbean and Customs Administration, Social Affairs and Employment, and the Immigration and Naturalization Service, in a certain sense want to move in the same direction when it comes to the future of service provision. The most important aspects in the field of future cooperation within RCN are:

1. Citizens do not experience a uniform service approach from the different service providers. The experiences of different citizens with the same service provider can also differ. It is essential to create a uniform image towards inhabitants for the cooperation of units.
2. The basic administration of all residents is error-prone, often updated manually, and differs per department. For cooperation, the basic administration must be of a sufficient level so that all service providers can use it.
3. Services and processes are organized per department. There is little or no insight into the services and processes of the various units, which must be made more transparent for cooperation between departments.
4. There is little guidance or support within RCN. Too little consultation takes place, there is a lack of support and a strategic plan, which is important to establish cooperation.
5. The IT architecture is set up individually, which is very limiting for setting up the cooperation of different departments.
6. Ambitions and available resources are insufficiently coordinated. There is also insufficient coordination between the various units (including SSO CN), the Ministry of Inland Affairs and Kingdom relations, and the public bodies, which is an obstacle to setting up cooperation between units.

The above six aspects are the core of the maturity model. The model consists of four layers of maturity, and within the six aspect categories, different characteristics have been drawn up. The model serves as a basis for improving cooperation, with the overarching goal of improving service. The model focuses on information and process management. The use of the model will contribute to increasing the support base between the different departments.

This study recommends that the various departments work together to further develop cooperation. The central issue should be the improvement of services, with which the departments can be brought closer together. Due to current legislation and regulations, it is not possible to redefine RCN in the short term, but in improving the cooperation within RCN, it should become easier to achieve better cooperation with the Ministry of the Inland Affairs and Kingdom Relations and the Public Entities.

## Management Samenvatting

Het doel van dit onderzoek is om de mogelijkheden te onderzoeken in het verbeteren van de samenwerking tussen de verschillende departementen binnen de Rijksdienst Caribisch Nederland. Op dit moment wordt de dienstverlening van de Rijksdienst CN verleend door de verschillende departementen. Deze departementen zijn zelfstandig ingericht en staan in nauw contact met hun hoofddepartementen in Nederland. Er is weinig tot geen samenwerking tussen de verschillende departementen van de Rijksdienst CN.

Een verbeterde samenwerking van units kan voordelen bieden aan zowel de verschillende departementen, als de inwoners van de BES-eilanden. Het onderzoek focust zich op het identificeren van de gezamenlijke belangen. Met deze belangen wordt een volwassenheidsmodel opgesteld, wat als draagvlak dient voor toekomstige ontwikkelingen binnen de Rijksdienst CN. Dit model en bijbehorende aanbevelingen zijn overwegend gefocust op informatie- en procesmanagement.

De resultaten tonen aan dat drie van de grootste dienstverleners, de Belastingdienst, Sociale Zaken en Werkgelegenheid, en de Immigratie- en Naturalisatiedienst, in zekere zin de zelfde richting in willen als het gaat om de toekomst van de dienstverlening. De belangrijkste aspecten op het gebied van toekomstige samenwerking binnen de Rijksdienst CN zijn:

1. De burger ervaart beperkte uniforme benadering vanuit de verschillende dienstverleners. Ook de ervaringen van verschillende burgers bij dezelfde dienstverlener kunnen verschillen. Voor een samenwerking is het essentieel dat er een uniforme uitstraling gecreëerd wordt.
2. Het bevolkingsregister van alle inwoners is foutgevoelig, wordt vaak handmatig bijgewerkt en verschilt per departement. Voor een samenwerking is het van belang dat het register van voldoende niveau is dat alle dienstverleners er gebruik van kunnen maken.
3. Diensten en processen zijn per departement ingericht. Er is weinig tot geen inzicht in de diensten en processen van de verschillende units, wat transparanter dient te worden voor een samenwerking van departementen.
4. Er is weinig aansturing of ondersteuning binnen de Rijksdienst CN. Er vindt te weinig overleg plaats, er mist draagvlak en een strategisch plan, wat van belang is om een samenwerking op te zetten.
5. De IT architectuur is individueel ingericht, wat belemmerend is voor het opzetten van een samenwerking van verschillende departementen.
6. Ambities en beschikbare resources zijn onvoldoende afgestemd. Ook vindt er te weinig afstemming plaats tussen de verschillende units (inclusief SSO CN), Ministerie van BZK en de Openbare Lichamen, wat belemmerend is voor het opzetten van een samenwerking van units.

Bovenstaande zes aspecten zijn de basis voor het volwassenheidsmodel. Het model bestaat uit vier lagen van volwassenheid, en binnen de zes categorieën zijn verschillende karakteristieken opgesteld. Het model dient als draagvlak voor een verbetering van de samenwerking, met als overkoepelende doel om de dienstverlening te verbeteren. In het model is gefocust op het informatie- en procesmanagement. Het gebruik van het model zal bijdragen aan het vergroten van het draagvlak tussen de verschillende departementen.

Dit onderzoek adviseert de verschillende departementen om met elkaar een verdere uitwerking te gaan geven aan de ontwikkeling van de samenwerking. Het centrale onderwerp dient de verbetering van de dienstverlening te zijn, waarmee de departementen dichter bij elkaar komen. Door huidige wet- en regelgeving is het niet mogelijk om de Rijksdienst CN op korte termijn opnieuw te definiëren, maar bij het verbeteren van de samenwerking binnen de Rijksdienst CN dient het makkelijker te worden om een betere samenwerking met het Ministerie van BZK en de Openbare Lichamen te bewerkstelligen.

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Kind Regards,

Laurens Derkx  
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## Terminology

Concept	Abbreviation	Translation & Description
Belastingdienst Caribisch Nederland	BCN	Tax Authority Dutch Caribbean
Bonaire, Sint Eustatius en Saba	BES	The islands Bonaire, Sint Eustatius and Saba
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties	BZK	Ministry of Inland Affairs and Kingdom relations
Continuous Improvement Maturity Model	CIMM	
Chief Information Officer	CIO	
Capability Maturity Model Integration	CMMI	
Immigratie- en Naturalisatiedienst	IND	Service for Immigration and Naturalization
Koninklijke Marechaussee	KMar	Royal Dutch Marechaussee
Koninklijke Politie Caribisch nederland	KPCN	Dutch Caribbean Police Force
Openbaar Lichaam (Bonaire)	OL(B)	The public entity of Bonaire, similar to the municipality as known in the Netherlands
Persoonsinformatievoorziening Nederlandse Antillen en Aruba Verstrekkingen	PIVA-V	Public Registry of all inhabitants of the Dutch Caribbean
Rijksdienst Caribisch Nederland	RCN	National Office of the Dutch Caribbean
Strategic Alignment Maturity Model	SAMM	
Shared Service Organization CN	SSO CN	
Unit Sociale Zaken en Werkgelegenheid	SZW	Social Affairs and Employment



## Chapter 1. Introduction

This thesis has been written for the graduation of the bachelor program in Industrial Engineering and Management at the University of Twente. In the first chapter, the background information about the host organization is given. This research is conducted at the Shared Service Organization of the Dutch Caribbean (SSO CN), which is part of the National Office of the Dutch Caribbean, in Dutch: Rijksdienst Caribisch Nederland (RCN). The research focuses on the improvement of the cooperation between the various components of Rijksdienst Caribisch Nederland, where both all inhabitants of the BES-islands and the units of RCN benefit.

### 1.1 Rijksdienst Caribisch Nederland

This research is conducted at the Shared Service Organization of the Dutch Caribbean (SSO CN), which is part of the Rijksdienst Caribisch Nederland (RCN) and is located on Bonaire. In 2010, the island Bonaire, together with the islands St. Eustatius and Saba (together known as the BES islands), became special municipalities of the Netherlands. From then on, the Netherlands Antilles ceased to be an autonomous country, and the BES islands were named the Dutch Caribbean (in Dutch: Caribisch Nederland (CN). This means that these islands are part of the Netherlands, but the islands have their own laws and regulations, with independent local governments and a National Office for all national services.

RCN is part of the Dutch central government and is a cooperation between several Dutch ministries, serving the inhabitants of the special municipalities of the Dutch Caribbean. The main purpose of RCN is to serve the inhabitants, both privately and professionally. All officers in the Dutch Caribbean are formally employed by RCN, but all the different units are individually responsible for their employees on a functional level. The structure of RCN is shown schematically in Figure 1.1.

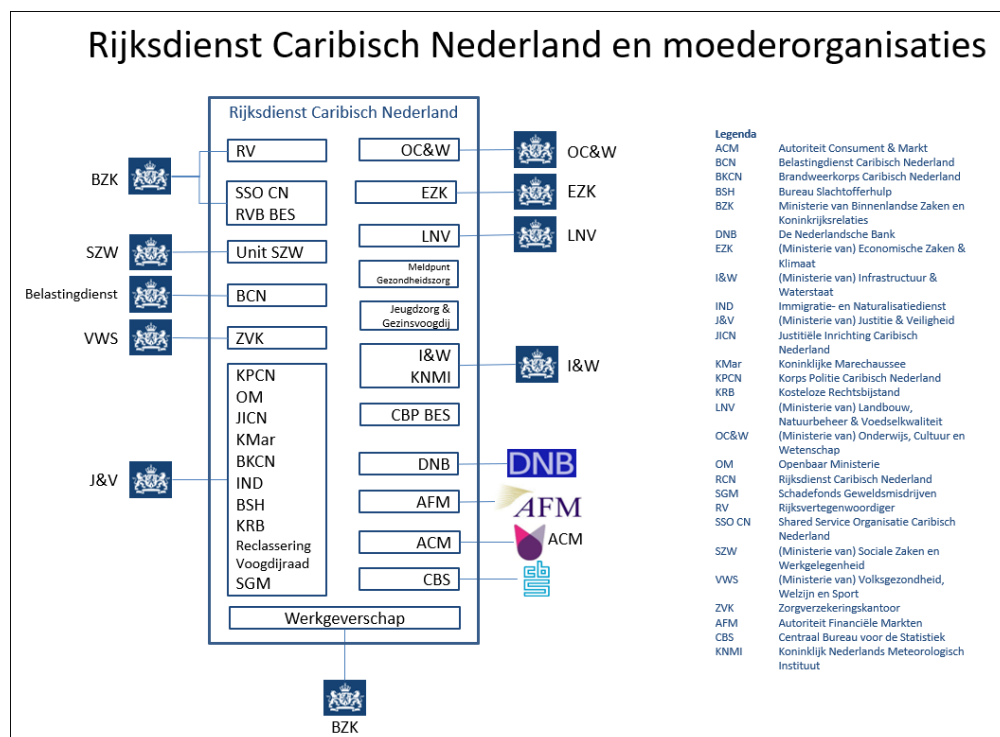


FIGURE 1.1 – NATIONAL OFFICE OF THE CARIBBEAN NETHERLANDS

When comparing this structure with that of the Netherlands, it is noticeable that the island is organized in much the same way as the Netherlands. All units have their own tasks to serve the inhabitants and manage the island appropriately. However, there is a big difference in scale, the Netherlands has over 17 million inhabitants, where the BES islands together have only about 26,000 inhabitants.

## 1.2 Shared Service Organisation CN

As mentioned, this research is conducted within SSO CN. After the formation of RCN in 2010, the different units were provided with support services from RCN, such as Human Resources (HR), procurement, and ICT services. In 2016, this organization was separated into RCN and SSO CN. From then on, SSO CN has been responsible for supporting the business operations of all units within RCN.

SSO CN has developed significantly over the past five years under the program "SSO in Beweging", including a revised service concept. This concept involves the use of a catalog of products and services. The program also includes a new governance structure for better agreements with users, and a Front Office - Back Office model has been established.

This program was completed in 2019 after a new state-of-the-art office building was commissioned. The mission of this building is to facilitate and improve coordination and cooperation between the various teams. This is done to ensure service delivery and to be a valuable partner for the central government services in the Dutch Caribbean.

## 1.3 Information Management

In recent years a lot of development has taken place within various units in the field of digitalization of processes and improvement of information management. This requires the services of SSO CN to move with this changing demand.

In the coming years, SSO CN will continue developing their IT department to further develop RCN and the associated digitalization. This has to be done in consultation with the different units and services.

## 1.4 Chief Information Officer

The developments in the information management of the different units are still done individually. All units do have their policy regarding information management and digitalization. To support this movement, SSO CN is working out a possible profile for a general Chief Information Officer for the RCN. This profile contains the tasks and responsibilities to ensure a better connection between the different units of RCN. This research finds recommendations regarding this CIO-profile and its implementation.

## Chapter 2. Problem Definition

This chapter helps to identify the problem. In the first section, the motivation for the research is explained. Also, the problem cluster and the core problem are elaborated and a proper scope for this research is set.

### 2.1 Research motivation

The governmental structure of the Dutch Caribbean has been drastically changed in 2010. The current organizational structure of RCN makes that all units are mainly connected with their head departments in the Netherlands. This is a logical consequence of the responsibility on a functional level. The main connection between the units and the head departments in the Netherlands makes that the cooperation between the units within RCN is minimal. SSO CN is looking to bring the different units of RCN more together. The reason for this is that the departments on BES-islands have more activities than an average municipality in the Netherlands, but it is too small to function in the same way as the Netherlands. The inhabitants of the BES islands make use of the same government and municipal services as in the Netherlands, but on those islands, these organizations are more related to each other.

This can be done in multiple ways, for example with the implementation of an overarching CIO. Therefore, SSO CN wants to get an insight into the opinions and the opportunities within and between the different units of RCN. Next to this, they want to get more insight into the service provision of RCN.

To identify opportunities for RCN where units can easily cooperate, and to make the service provision of RCN visible, a lot of information is needed. Both information on the current situation and the targets have to be gathered. Clearly, this information is not only collected within SSO CN but also other units have to be willing to cooperate in this research. Gathering all information on the opportunities for RCN and the service provision will take too much time for this research, so a proper scope will be set in section 2.4 and chapter 3.

### 2.2 Problem Cluster

Based on the problems, which are explained during the first interviews with the employees of SSO CN, the Belastingdienst CN (BCN), and the unit SZW, a problem cluster has been set up. The problem cluster can be seen in figure 2.1.

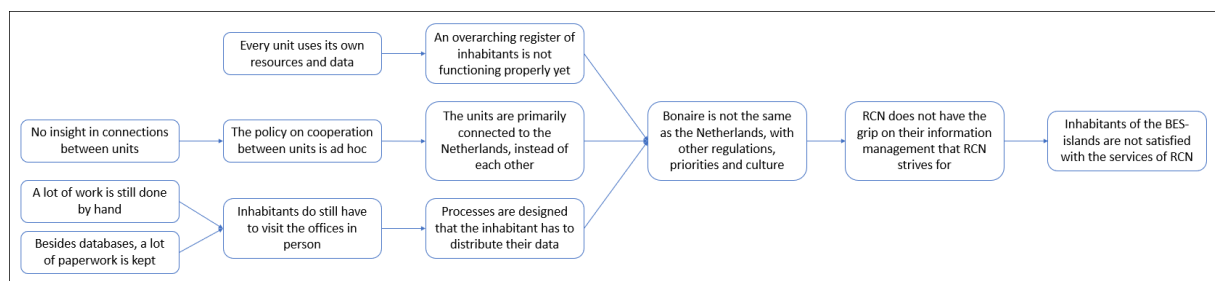


FIGURE 2.1 – PROBLEM CLUSTER

The causal relationships between the problems are indicated with arrows. Each problem is explained on the next page.

1. The problem cluster starts with the problem that the inhabitants of the BES-islands are not satisfied with the services of RCN. A lot of work still happens on paper, inhabitants do have to visit the different offices in person, often without the possibility of making an appointment in front.
  - 1.1. SSO CN strives for improved 'customer satisfaction' for the inhabitant and would like to achieve this with improved information management for an independent organization as RCN, with cooperation between the units. There is no grip on the processes within the units and cooperation is minimal.
    - 1.1.1. Because of other regulations on the BES islands, there are difficulties in improving information management. The Dutch system cannot just be copied. Also, other priorities and another culture make those proceedings that are self-evident in the Netherlands, are not in the BES. For example, moving from one address to another. In the Netherlands, this is centrally organized. In Bonaire, the address is only changed at an unit if it is discovered or it is necessary.
      - 1.1.1.1. One of the reasons for the difficulties around other regulations and priorities is that an overarching register of inhabitants is not functioning properly yet. The Public Entities of the BES (in Dutch: Openbare Lichamen) is the owner of the public registry of all inhabitants of Bonaire, but this is not generally connected to all different units of RCN.
        - 1.1.1.1.1. This implies that every unit uses its own set of resources and data. Sharing of data is limited, which makes it unclear and inefficient.
      - 1.1.1.2. Because Bonaire is not the same as the Netherlands, it cannot work that the organization of the Netherlands will just be copied. The units are primarily connected to the Netherlands, instead of with each other.
        - 1.1.1.2.1. Because of the connection with the Netherlands, instead of with each other, the policy on cooperation between units is ad hoc or even missing. If one unit needs information of another unit for validation, just an e-mail will be sent, instead of the situation that the desired information is available in a central portal.
          - 1.1.1.2.1.1. The minimal cooperation between all units makes that there is not an insight available in all information flows and cooperation between the units.
      - 1.1.1.3. The current situation is that the inhabitant still has to distribute their own data to all important instances. To grab back on the example of moving from one address to another, an inhabitant has to inform the different instances that they have moved.
        - 1.1.1.3.1. The way they have to make clear that they have moved is most of the time in person. They have to wait in line at the different units over and over again, without the opportunity of making an appointment.
          - 1.1.1.3.1.1. Processing this information is mostly done by hand, with paper forms and signatures.
          - 1.1.1.3.1.2. All this processed information will be kept in physical folders.

## 2.3 Core Problem

Within the problem cluster in figure 2, three groups of problems can be identified, containing different core problems. The different core problems can be seen as partly coherent, it is all about the improvement of the information management and about digitalization and optimization of the current processes.

To zoom in on the first core problem, all units are making use of their own administration of all inhabitants. The Public Entities are currently the owner of the public registry of all inhabitants of the islands. However, it is not self-evident yet for all units to make use of that information. The Public Entities are reserved and hesitant in cooperation with the different units of RCN, because of cultural defense. The cooperation between RCN and the Public Entities is limited, and a clear vision of the administration is missing. In the meantime, it is possible to request an authorization decision for access to certain data, but this has to be done for every single process and every type of data.

The batch of problems around the distribution of data by inhabitants is a problem that multiple units are facing. A lot of work is not digitalized yet. It would save time for as well the inhabitant as the unit. However, this will not be the main focus of this research. Reorganizing and digitalizing processes at the different units will be very valuable, but this research will focus on the overarching strategy for improving information management. The reasoning behind this decision is to give priority to shaping RCN as a more coherent organization, where cooperation between units is enabled, to build a basis for all units to make digitalizing easier.

Therefore, the second core problem in the problem cluster will be chosen as the core problem. The core problem is formulated as follows:

*The different units and services of RCN cannot satisfy the inhabitants of the BES-islands, due to a lack of strategy and insights into the wishes and demands of the units, primarily in the field of information management.*

The goal is to solve this problem in a way that a supporting base can be set up for the units of RCN. This supporting base will be the basis for an improvement of RCN with more cooperation between the different units. It will also support the fulfillment of a general CIO and improve the 'customer satisfaction' of the inhabitants of the BES.

## 2.4 Scope of Thesis

To make sure that this core problem will stay solvable, a scope for this thesis has to be set, to fit it in the planned time frame. At first, the scope will only be on Bonaire. This entails that in the rest of the document, only Bonaire will be mentioned. The reason for this is that the scope of all BES islands would be too broad for this thesis. Next to that, the activities on the islands of Sint Eustatius and Saba are mainly executive, where the overarching activities mainly take place on the island of Bonaire.

Also, a limited selection of units will be used. The involved units will be: Belastingdienst CN, unit SZW and the Immigration- and Naturalisation services (IND). These units are three of the biggest units of the BES and do have a lot of stakes in this research. These units are already working on digitalization and improving service.

## Chapter 3. Research Design

In this chapter, the approach to solve the core problem is explained. To solve the core problem, a set of steps are taken. It starts with getting to know the current service provision of the different units within RCN. This is done with the use of the available information on the internet and the experiences of employees of the different units. With an overview of the current service provision, the needs of the units are identified in the field of cooperation and development of RCN. With these experiences, the joint needs have to be distinguished, which are the basis of the maturity model. All input is bundled and result in a maturity model with different levels, categories and characteristics. The model is verified with the interviewed employees of the different units. An overview of the main steps taken in this thesis is given in the figure below.

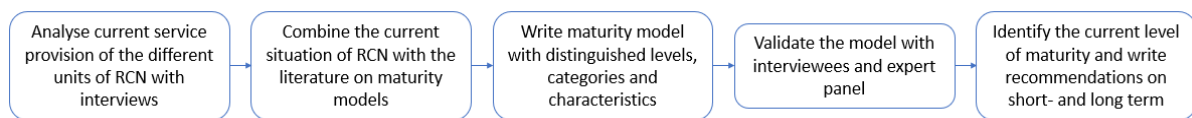


FIGURE 3.1 – OVERVIEW OF THE MAIN STEPS TAKEN IN THIS RESEARCH

The maturity model visualizes the current situation of RCN, primarily on information- and process management. It shows the different levels of maturity that RCN has to reach, to become more mature. A more mature organization will provide a better supporting base for the different units within RCN to cooperate. This supporting base is built from the data, gathered from the interviews. In the upcoming sections, the research questions, deliverables, and data collection methods are mentioned.

### 3.1 Research Questions

This research answers the following overall research question:

*What are the needs for cooperation between the units of RCN and the development of a supporting base, and how can these needs be combined in creating a maturity model?*

Currently, a profile for a CIO of RCN is set up, with accessory tasks, responsibilities, and developments of the organization. One of the steps is to improve the information management as a whole, but the 7 other problems of the problem cluster will also be on his/her agenda. Therefore, this thesis focuses on the cooperation between units and improving the information management, but also further digitalize processes and make the connection with the municipality stronger.

To answer the main research question, a couple of research questions have been set up. Throughout this thesis, information about the research questions is gathered and analyzed to answer the research questions.

#### 3.1.1 What should a maturity model for RCN look like?

The first question is set up to find suitable literature that can attribute to this research. This literature indicates existing maturity models and theories that contribute to the improvement of information management and cooperation. This information is used in this research to have a good understanding of maturity models and points of attention, specified for this case. To further clarify the goal of this research question, two sub-questions are set up to give a better direction to this research question:

- What is a maturity model and how is it used?
- What factors are of importance for RCN?

A systematic literature review is executed for chapter four, to collect more information about maturity models and their applications. This chapter is supplemented with information about processes and service provision and concludes in important factors for RCN.

### 3.1.2 What is the current situation of RCN, regarding cooperation and information management?

To develop a maturity model for RCN, the current situation around cooperation and information management must be identified. At this moment, the units are operating mostly individually, which makes it difficult to identify collaborated demands. To get insights into the current situation, information has to be gathered about the processes and the service provision of the units. Next to that, the current facilities on information management have to be identified, as well as the units' opinion on future cooperation and development of RCN as an overarching organization.

To do so, interviews will be held with participants of four different units. The participants do participate in all parts of the interviews, where each unit will be interviewed two or three times, depending on the pace of the interviews. The current situation will be covered in chapter five and will be concluded with an additional question: 'What are the fields of interest for RCN as an organization?', which will be the input for the maturity model.

### 3.1.3 Based on the current situation, how are the fields of interest defined?

The third research question is a continuation of the second question. After the current situation is analyzed and the fields of interest are set, the fields of interests do have to be defined with characteristics. The reason for this third research question is to fill the maturity model with measurable characteristics for every field of interest over the width of all four levels.

These characteristics are based on the interviews that are performed with the participants over the units. The gathered data was used to set up a measurable model while maximizing the supporting base between the units. After this, the model will be evaluated and validated with the participants.

### 3.1.4 How does RCN perform in this maturity model?

The fourth research question is all about the use of the model. The developed model is used with two purposes, divided over two supplementing questions:

- What is the current performance of RCN?
- What are the recommendations in the short- and long-term?

The first use of the model is to measure the current performance of RCN. This has to be done to get insights into the current matureness and the level of cooperation within RCN as an organization. With those insights, the recommendations in the short- and long-term can be given, which are at the same time the connection between the sub-questions and the main research question, given in paragraph 3.1.



## 3.2 Data Collection

The data is gathered with the use of literature, interviews, and a panel. The method for collecting and using the data is mentioned in the corresponding section.

### 3.2.1 Literature

The systematic literature review and other relevant sources provide the literature resource. The literature that is used, is mostly focused on the origin and use of maturity models. Several theories are used for multiple decades and bundled together for a maturity model that fits RCN. In the discussion, a section is written about the generalization of the used model.

### 3.2.2 Interviews

Several employees of SSO CN are interviewed, as well as information managers and members of the management team of the units BCN, SZW, and IND. Employees of SSO CN are mainly interviewed to map the core problem and to shape the research. The other units have been interviewed to get to know the different services and processes, as well as the view on the current state and its opportunities of RCN. In advance of the interviews, an e-mail with information about the research and a selection of questions is sent to the interviewees. The interviews are conducted according to the principles of gathering data from an interview. Only information is recorded and used for this research with the direct permission of the interviewees.

### 3.2.3 Panel

To validate the different phases of this research, a panel of employees has given feedback on the conducted research. The panel consists of a few employees of SSO CN. The research has been checked on relevance and clarity.

## Chapter 4. Literature

To support the research design, several articles and books will be used. For the first research question, a combination of maturity models will be used to set up a maturity model for RCN. This maturity model will help the different units of RCN to work towards more coherent information management.

### 4.1 Maturity Models

Maturity models provide a simple yet effective way for businesses to assess the quality of their operations. Maturity models have emerged from software engineering. Their application area has broadened over the past two decennia and research on maturity models has become increasingly important. (Wendler, 2012) The most well-known maturity model is the Capability Maturity Model Integration (CMMI). Although the first maturity concept was proposed as early as 1930 out of a need for quality management, the basis of the maturity models as we know it today took shape around 1979 by Crosby. He proposed a quality management process maturity grid, which categorized best practices along five maturity stages and six measurement categories. Around this same time, Nolan published an article on data processing maturity by defining six growth stages as measures of maturity. (Wendler, 2012) Since then, the number of different maturity models has increased rapidly. Finding the most appropriate maturity model, is however not an easy task, especially for industry practitioners. (Albliwi et al., 2014)(Röglinger et al., 2012)

This research takes three different, well-known models as its foundation. These three theories are the Continuous Improvement Maturity Model (CIMM) of Lean Management, the Stages of Growth model developed by Richard L. Nolan, and the Strategic Alignment Maturity Model by Luftman. These three models are chosen because they can all three add value to the organization of RCN. Continuous Improvement can serve to create a culture that recognizes that improvement isn't just about big projects; it can also be discovered in small wins. Nolan's Stages of Growth model is a more traditional model that has different stages of maturity. The identification of those several levels can aid in the formulation of both short- and long-term targets. The Luftman Strategic Alignment Model specializes in bringing business and IT together, which makes it applicable to this research.

Determining the level of process maturity is essential for any organization's business stability, improvement, and sustainability. The advantage of a maturity model is that it allows organizations to quickly record their present maturity state without the need for outside experts. A maturity model is a technique for assessing the strengths and weaknesses of a company's business operations. A maturity model evaluates the organization by quality standards and best practice of maturity of the organization by comparing it to other organizations and in this way provides a roadmap for improvement. (Albliwi et al., 2014) There is no single definition for a maturity model but this research will adhere to the definition of García-Mireles et al. "a structured collection of elements that describes the characteristics of effective processes at different stages of development. It also suggests points of demarcation between stages and methods of transitioning from one stage to another". (García-Mireles et al., 2012)

#### *Continuous Improvement Maturity Model (CIMM) of Lean Management*

The continuous improvement method that best suits a particular organization depends heavily on the maturity level of that organization. This also applies to the associated principles and techniques. The lean six sigma academy (LSSA) developed the Continuous Improvement Maturity Model (CIMM) to support organizations in applying the best fitting improvement methodology. CIMM summarizes best practices and techniques from different methodologies into one framework, for different maturity

levels. LSSA recommends that the CIMM framework should be completed sequentially as much as possible. It is not recommended to advance too quickly to the higher CIMM levels if the lower levels are not sufficiently developed and secured. The CIMM shows through five development phases, how an organization can develop. These phases consist of creating a solid foundation (I), creating a continuous improvement culture (II), creating stable & efficient processes (III), creating capable processes (IV), and creating world-class products & services (V). (CIMM Framework - LSSA.Eu, n.d.)



FIGURE 4.1: CONTINUOUS IMPROVEMENT MATURITY MODEL (CIMM) OF LEAN MANAGEMENT (Theisens, 2014)

#### *The Stages of Growth model developed by Richard L. Nolan*

According to Nolan, management principles change depending on the growth stage, and various technologies are in different phases at any one time. His model emphasized the importance of aligning management strategy with the stage of the organization in terms of technology.

The first three stages, Initiation, Contagion, and Control, are concerned with technology, whereas the latter three stages, Integration, Data Management, and Maturity, are concerned with technology management. Nolan outlines specific management tasks for each level, claiming that an organization will progress through six stages of maturity in terms of information technology adoption and management. (Eduardo Ricciardi Favaretto & Getulio Vargas, n.d.)

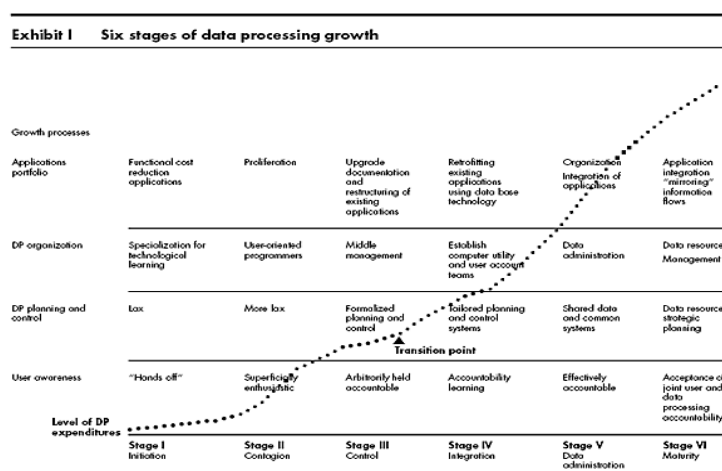


FIGURE 4.2: THE STAGES OF GROWTH MODEL DEVELOPED BY RICHARD L. NOLAN (*Managing the Crises in Data Processing*, n.d.)

### *The Strategic Alignment Maturity Model by Luftman*

Jerry Luftman, developed his Strategic Alignment Maturity Model (SAMM) beginning in 1999. The model offers organizations a practical tool to gain insight into the extent to which the business and ICT are aligned. In the model, Luftman distinguishes six dimensions that determine the degree of Business/ICT alignment. For each dimension, various factors are then recognized as being important for achieving and maintaining alignment. According to Luftman, Business/ICT alignment is never 100%. Alignment is by definition dynamic as the wishes of the organization, the support (possibilities) by ICT, and the requirements for alignment are constantly changing. (Luftman & Kempaiah, 2007)

Luftman translated the factors into six dimensions, namely Communication, Added Value, Steering, Partnership, Scope & Architecture, and Competencies. Luftman translated the six dimensions into a tool to score organizations on the degree of alignment between business and ICT. For each dimension, he identified several factors and formulated one or more statements. By asking participants to indicate to what extent they agree with the statements, a score is generated - both per dimension and as a total score - which indicates the level of maturity of the Business/ICT alignment. The more mature the alignment, the better the use of ICT in the organization.

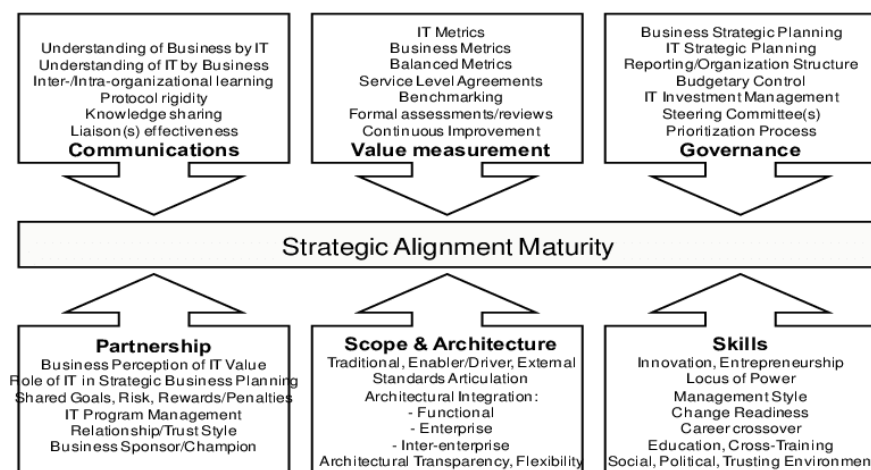


FIGURE 4.3: THE STRATEGIC ALIGNMENT MATURITY MODEL BY LUFTMAN (Silvius et al., 2013)

### *General points of attention regarding maturity models*

It is remarkable that in the last decades, the number of maturity models has been increased significantly. Existing maturity models are extended and new applications are used for specific cases. This gives a lot of intersections for this research. However, it makes that the validation and the guidance of a lot of the models are limited. (Wendler, 2012) (Tarhan et al., 2016)

Next to that, maturity models are often coming with a kind of cultural transformation. That means that the maturity model in itself cannot bring a company or organization into a huge movement, but the employees do also want to carry the model and work to develop the organization in all fields. (Fryer & Ogden, 2014) (García-Mireles et al., 2012)

The third point of attention is that a maturity model on its own does not directly change an organization. It is of importance to bring the model with a clear roadmap, with goals in both the short- and long-term. (García-Mireles et al., 2012)

### 7S Model McKinsey

McKinsey's 7S model was developed by Robert H. Waterman and Tom Peters. The model is widely used in strategic and change management. It is used in analyzing the so-called internal organization: everything that takes place within the walls of an organization and in thinking about the impact of a change. The model represents the key internal elements of an organization and the relationships between them. The seven elements of the model must be in balance. The elements influence each other, with a change in one element always triggering a change in another. So with that model, one can look at the impact of a change and the new equilibrium. The model has hardware aspects and software aspects. Hardware aspects are the rational, hard elements of the organization for example strategy, structure, and systems. Software aspects are the soft, emotional aspects of an organization such as culture and shared values, staff/personnel, (core) skills, and style. The seven elements are structure, systems, style, staff, skills, strategy, and shared values, their connection can be seen in figure 4.4.

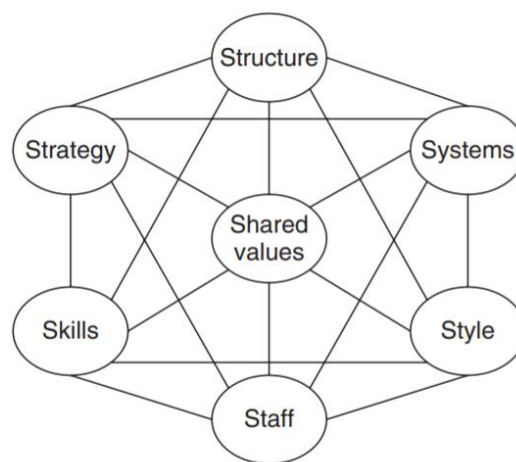


FIGURE 4.4: MCKINSEY 7S FRAMEWORK (*Structure Is Not Organization*, n.d.)

An interrelationship diagram can be used to analyze the interrelationships. Using the model, the major issues per element can be identified and their relationships can be mapped using the diagram. The number of incoming and outgoing information flows then gives a good indication of their importance and discussing them together provides a lot of useful information.

### 4.2 Usage of Literature

The abovementioned literature will be used during the rest of the thesis. Most important is the definition of a maturity model, which will be the thread throughout the thesis, “a structured collection of elements that describes the characteristics of effective processes at different stages of development. It also suggests points of demarcation between stages and methods of transitioning from one stage to another” (García-Mireles et al., 2012).

Next to the definition and the general points of attention about maturity models, it is good to know that the literature has learned that a maturity model has the advantage of allowing organizations to record their current maturity state without the need for external experts. This makes that the maturity model should be readable and manageable for the entire organization.

Also, if the lower levels are not sufficiently developed, it is not recommended to advance too quickly to the higher levels. This means that every field of interest does have to be in harmony with the rest

of the model. It does not make sense if one field of interest is very mature, where other fields of interest lack matureness.

Alignment is by definition dynamic, as the organization's needs and requirements for alignment change over time. This makes that this model will not be written in a way that every characteristic and every recommendation is defined really strictly, but it gives a direction with enough room for interpretation over time.

In the upcoming chapter, the input of interviews is used to find a collection of elements, in this thesis called 'fields of interest', to define the important pillars between RCN. These fields of interest will be filled with characteristics in chapter 6, to make a measurable model of all four different stages of development. In chapter 7, the model is used to measure performance and give short- and long-term recommendations to transition from one stage to another.

## Chapter 5. Current Situation

This chapter presents the current situation regarding cooperation between the units, together with the desired needs for cooperation. This is done by analyzing and describing the different units involved, supported by interviews. Current shortcomings from the unit's perspective are described in the interviews held. This analysis is based on semi-structured interviews with the management and/or information managers of BCN, SZW, IND, and SSO CN. A total of eight interviews were conducted. The interview was divided into four sections. The interview protocol can be found in appendix A.

1. The first part is a short and structured part in which the participants shared personal information. The personal information is about the participant's background information, work experience, and information about the unit concerned. An introduction to this research has additionally been given. This information is not included in this thesis but rather used to understand the participants better during the interviews.
2. The second part is a semi-structured section on the services and processes within the unit. The participant is asked to outline the services and processes within their unit that are needed to serve the BES residents. The participant is also asked to provide insight into the data needed for the services and the cooperation between the various units, to form a better insight into the services and the position of the unit.
3. The third part is an unstructured segment about the National Office. Participants were asked to express their thoughts on RCN. Participants expressed their views on the current situation, the positioning of the units, and the future of RCN.
4. The fourth part is an unstructured part about any other subjects. To build up better cooperation between units and a supporting base, participants are asked whether they have other additions to this research.

According to the interviewed units and her employees, the current situation points out that the cooperation between the units is minimal. However, the units are willing to set up better cooperation between the units. The results of the interviews are more unstructured than initially expected, but the output has been compiled in segments from the interviews. These sections form the basis of the objectives in the maturity model, found in chapter 6.

In the next sections, the outcomes of the units BCN, SZW, IND, and SSO CN are discussed. In conclusion, the six different categories are written.

### 5.1 Belastingdienst Caribisch Nederland

The Belastingdienst Caribisch Nederland (BCN) is part of the Tax Authority in the Netherlands and is one of the biggest service providers for the inhabitants. BCN does not enact the law itself nor can adapt legislation, they provide the service to the inhabitants of the BES. With approximately 100 employees, BCN executes the legislation and regulations for the BES. In addition, BCN performs work for other organizations, such as collection for other ministries and island taxes. BCN consists of both the Tax Authority and the Customs, divided over five different teams:

- Team Customs: Physical Supervision
- Team Customs: Customer care
- Team Levy and Supervision
- Team Tax Collection and service provision
- Team Saba and Sint Eustatius



Next to the five different teams, the unit is complemented with a director and supporting staff, such as information managers.

From the conducted interviews, the important aspects of the cooperation between the different units of RCN are listed, shown from the perspective of BCN.

1. When setting up cooperation within RCN, it is important for BCN that this cooperation focuses on the interconnection between the various units. It is emphasized that this cooperation should not originate from RCN, nor from SSO CN. The danger of organized cooperation coming from RCN or SSO CN is that the units will lose their autonomy. The units currently report to the main departments in the Netherlands and are not accountable to RCN. RCN is only the employer for all units and BCN wants to keep it that way. BCN emphasizes that there is a lot to gain on cooperation between the different units.
2. The form of cooperation between the various units must be given practical shape. BCN indicates that in the past year there has been too much talk about the political form of RCN instead of a concrete interpretation of development. The main priority must be that all units within RCN provide their services to the residents of the BES. Therefore, according to BCN, cooperation should always be about improving this service instead of the political formalities.
3. In addition to the development of the cooperation with the other units within RCN, BCN believes it is also necessary to improve the cooperation with SSO CN. BCN is looking for clarity on what services SSO CN can and aims to provide to the units within RCN. BCN is to some extent dependent on the services provided by SSO CN, therefore clarity in this area is also the basis for cooperation with other units.
4. An important matter on which BCN is currently working is the development of a digital portal called MijnCN. In the future, this portal will also offer the various services of BCN digitally, so that citizens will no longer have to go to the counter for all their tax affairs. BCN indicates that this portal could be an important part of future cooperation with other units. The portal has a flexible set-up so that other units can also join in to digitize their services. The SZW unit is currently developing its services one by one in the portal. Discussions are also being held with the IND and the OLB to connect to the portal in the future. However, the question remains as to who will be able to perform the technical and functional management of this portal. When other services are also connected to the portal, it would be advisable to arrange this centrally.
5. In addition to the digital portal, BCN is also developing its own Document Management System (DMS). BCN states that they would have liked to set this up in combination with SSO CN and the other units, but they also say that they are lacking initiative and determination. For future cooperation, BCN would like there to be scope for tackling such projects together.
6. Furthermore, BCN would like to investigate whether their data warehouse can be located in The Netherlands. Within cooperation of units, BCN has indicated that they would like to investigate the possibility of setting up a back office in the Netherlands, which multiple units could use.
7. Halfway through 2019, a report has been written by PBLQ, the Dutch Institute for Public Administration, on the future of ICT services within RCN. BCN is not aware of any action taken by SSO CN in this regard. BCN would like to see this actively addressed in case of unit cooperation because a solid ICT service provision is the basis for improved service provision and unit cooperation within RCN.

## 5.2 Unit Sociale Zaken en Werkgelegenheid

The unit Sociale Zaken en Werkgelegenheid (SZW) is positioned directly under the Dutch Ministry of the same name. SZW is committed to safe, healthy, and fair working situations and supervises this. On behalf of the Ministry, the unit pays social insurances to help and secure the livelihood of the elderly, parents, and people who are temporarily unable to work due to e.g. illness or pregnancy.

In addition, there is subsistence security for residents who are in a hard financial situation. The unit SZW works on a dignified existence for everyone in the Dutch Caribbean.

1. According to the SZW unit, it is important that cooperation between units within RCN is based on a common focus to improve services for citizens. It is often forgotten that all services and processes are aimed at serving the citizen, and thus should cooperation be based on making things easier and more efficient for both the units and the citizens.
2. Concerning digitalization, the unit SZW would like to emphasize that they guarantee a pragmatic approach. According to the SZW unit, SSO CN is in charge of large projects in which commitments are checked against the SSO CN policy. SSO CN is committed to the long term, whereas the SZW unit emphasizes that it prefers to work in smaller steps towards improving services and processes. An example is the construction of the SZW portal in MijnCN. The SZW unit is in the process of digitizing its services one by one, whereby cooperation with other units will take place calmly and naturally.
3. According to the unit SZW, the formation of a CIO profile for RCN would contribute to the development of cooperation with other units. SZW is of the view that a centrally regulated information management is necessary to be able to uniformly present the services to the citizens. A CIO can contribute to the generalization of the connection between the units and the citizen, and in the background support the development of the information management of the different units.
4. For cooperation between the units, it is important for the unit SZW that units will keep their autonomy in the field of services and processes. On the part of SZW, it is necessary to have a good separation between the responsibilities of the units and RCN in general. The tasks and responsibilities of a general CIO must equally be well defined.
5. According to the SZW unit, there are big differences in the levels of service and maturity between the units within RCN. These differences limit the cooperation between the different units. It is important that there is a joint focus on subjects such as information management and digitalization, but that the units also have room to develop themselves.
6. According to the SZW unit, it is also important to professionalize the hosting of the back office of the various units to achieve cooperation between them. At the moment, according to the unit SZW, there is insufficient knowledge and manpower on the island to maintain this on the BES islands. That is why SZW would like to investigate whether a joint back office can be realized in the Netherlands. Outsourcing the more intensive ICT tasks will help to achieve the ambitions for digitization and improvement of information management.
7. Although it can be investigated whether to move the back office to the Netherlands, the unit SZW emphasizes that for successful cooperation of units it is important that the service remains present on the BES islands in an independent role. According to the unit SZW, moving the services creates too much distance between RCN and its inhabitants.
8. According to the unit SZW, to ensure the good cooperation of units, it is necessary to remain involved with each other and to harmonize the expectations of units. At this moment the services within RCN are not of the level that SZW would like to achieve. On a strategic level,

more consultation should take place. Also, the unit SZW emphasizes that there should be better coordination with SSO CN so that mutual expectations are improved and made more transparent.

### 5.3 Immigratie- en Naturalisatiedienst

The Immigratie- en Naturalisatiedienst Caribisch Nederland (IND) is responsible for the execution of the immigration regulations on the BES islands. The IND processes applications for admission of foreigners and Dutch nationals (except islanders or tourists) who want to settle in the Dutch Caribbean. The IND also handles applications for extension of the tourist stay and admitted persons who want to become a citizen of the BES islands. The applications are examined with a law about admittance and deportation. To enforce this law, the Dutch Caribbean Police Force (KPCN) and the Royal Dutch Marechaussee (KMar) are consulted.

The IND is an organization with approximately 20 employees on Bonaire and a total of 4 employees on the islands Sint Eustatius and Saba. However, to examine the applications, other units are also consulted. The Judicial Institution (JICN), the court, the department of youth care, and the department of civil affairs of the Public Entities are consulted to discuss applications on certain foreigners when necessary.

1. The IND indicated that, as a unit, they have several collaborations concerning the services provided by the IND. First of all, structural consultations are held with several authorities, such as the police and the KMar, to discuss certain applications for residence permits. Periodically, a strategic consultation is organized with all heads of service of the different units in the IND chain organization. In addition, consultations take place on a more political level with the SZW unit, BCN, and the Public Entities. However, the focus here is mainly on the execution of the services, and less so on the improvement of the National Service.
2. The IND notes that the service provision concerning residence permits on the BES islands is not at the level that is expected in the Netherlands within the same field. However, it is also recognized that few steps are being taken to improve this in the short term. For good cooperation between the various units, there must be a joint focus on forming a clear point of contact for the inhabitants. In addition, according to the IND, the division between a front desk function for the inhabitants on the islands and the administrative part, which could possibly also take place in the Netherlands, should be examined. The question is whether this is possible politically in the short term, but that should not be the focus of the units. The units were created on the islands to be able to provide services to the inhabitants.
3. In the next few years, the IND wants to focus on the digitalization of its services. Both the processes must be digitalized, as well as the administration that is currently still carried out on paper. According to the IND, RCN can play an important role in this. It would be good if large-scale projects such as digitalization were supported by a central organization such as RCN, to achieve a joint digitalization. In addition, the IND emphasizes that the idea of a CIO at the RCN level is certainly supported.
4. The IND indicates that setting up cooperation between units can be difficult due to data protection issues. At the moment, units handle their own basic administration of residents. In the case of cooperation, it is even more important that the regulations for privacy and data protection are met.

5. According to the IND, for cooperation between the RCN units and an improvement of the information management, it is necessary to look at what kind of re-education of personnel is required. For the service provision concerning residence permits, it would be good to look for a central desk, where citizens can go to a central location for all their government affairs. This does require some adaptation of employees. Therefore, it should be tested whether employees have the right competencies and whether the cooperation remains feasible as a result.
6. In addition to the cooperation with other units within RCN, the IND would also like to look at how to cooperate more with SSO CN. At the moment, SSO CN mainly carries out a functional task for the IND, but the IND would certainly like to see whether SSO CN can play a role in improving the collaboration within RCN.
7. According to the IND, not only the reformation of RCN should be taken into account for the cooperation of units within RCN. The service provision of RCN is supported by the Ministry of the BZK and the Public Entities. The local laws and priorities confirm that RCN should not only be a reflection of the Central Government from the Netherlands but that it should fit in the local context. The RCN service providers are strongly linked to the departments in the Netherlands, while the Public Entities are much further away from politics in The Hague. This should certainly be taken into account when setting up cooperation.

#### 5.4 Shared Service Organisation

The Shared Service Organisation holds a special place within RCN. Whereas all the other units provide one or more services directly to the BES residents, SSO CN is designed to assist the other units by providing shared services without being in direct contact with the residents. Examples include a general purchasing department, shared ICT services, and front office, workplace, and functional management, etc.

This research was primarily conducted from within SSO CN, therefore the input from SSO CN was collected in a different way rather than by conducting large interviews. The input was mainly collected through ongoing conversations with my supervisor Ruud Binnekamp, and employees who work on information management within SSO CN or are in direct contact with the operations of the other units. The input is a combination of own input and the view from SSO CN on the other units.

1. RCN is specifically dedicated to the inhabitants of the islands. At the same time, RCN came into existence because their tasks could not be tackled independently by the public entities. It is a complex situation because the public entities could have taken up all tasks themselves if they had functioned better, but due to the political shape of the island and the large distance between the public entities and the regulations in The Hague, a third organization had to be created.
2. The Public Entities have always been hesitant about RCN because they are afraid of being taken over. This has to do with the island culture, where the 'locals' are worried that the island will be taken over completely by the Dutch. SSO CN would like to emphasize that this would never be the case because it would never be compatible with the context of the island.
3. There has been a long-standing discussion about a centrally organized counter for the inhabitants of the BES islands. This is where all the service providers of the Rijksdienst are located and the resident is approached via a central point. According to SSO CN, there are many valuable points in this, such as good cooperation between the various units and a central

presence towards the inhabitants of the islands. However, organizing a central counter, where all services come together, remains difficult. Especially since all units currently operate individually, bringing them together requires a lot of effort.

4. In addition, it is emphasized that cooperation between the units must be voluntary. RCN arose from a cooperation between several Dutch Ministries. The various units are installed on the BES islands as an extension of the Netherlands to provide services to the inhabitants. To set up a cooperation between units, there must be approval from all the Dutch Ministries to be able to adjust anything in the structure of RCN. For this reason, it will primarily be interesting to build cooperation voluntarily, to build mutual support, and to show the rest of the units and the politicians in The Hague that there is a need for cooperation and centralization.
5. In the future, RCN must ask itself the serious question of whether the current construction is future-proof. In terms of culture, there are big differences between the Netherlands and the BES islands and it should in no way be the intention to make the island Dutch. The ideal situation for the BES islands would be for the public entities to take on certain responsibilities, but this does not yet seem possible.
6. How the (digital) activities and facilities will be organized in the future must also be considered. Several units are looking at hosting and organizing the back office from the Netherlands because there is more knowledge and manpower available there. It is a recurring problem that there is insufficient knowledge on the BES islands, and it is also noted at SSO CN that the average turnaround time for senior positions is no more than a few years.

## 5.5 Fields of Interest

The input of the different units, mentioned by the participants of the interviews, are bundled together into six categories. These categories, or fields of interest, are the basis of the maturity model. The categories, together with the accessory characteristics, are further explained in chapter 6.

1. Interaction with the inhabitants.  
Every unit has mentioned that they provide their services for the inhabitants of the BES. An improvement of the cooperation must always lead to an improvement of the service provision for the inhabitant. The interaction with the inhabitants is therefore one of the six pillars.
2. Data Management.  
Every service and process brings data with it. Up to now, the administration of this data has been kept primarily on paper. Digitalization is an important subject of all units, where the future of providing service to the inhabitants comes with improving the data management of the units. For cooperation, it is of importance that the data management is improving and suitable for cooperation between units.
3. Services and Processes.  
All units are currently individually operating. There is minimal cooperation between the different units and services and processes are not aligned with each other. Multiple units indicate that coherence between the services and processes of the different units is missing, which is obstructive for setting up cooperation.

4. Government.

The governmental structure of RCN is non-existing. The different units are set up individually and overarching steering, or even a strategy and policy, is missing. The units have indicated that clearness about the governmental structure is needed for cooperation, especially the completion of the CIO role is of importance.

5. IT Systems.

To develop RCN as an organization of cooperating units, not only the data management should be improved. Also, the IT systems that support the services and processes of the different units do have to develop to improve the services and the cooperation between the different units of RCN.

6. Competences.

To complete the six categories, also the employees and the competencies of the organization are added. From the interviews, it has become clear that a mismatch of ambitions and competencies is hindering the development of RCN. The right resources are needed to set up a cooperation between the different units.

## Chapter 6. Maturity Model

The input from the different units, mentioned by the participants of the interviews, are bundled together into six categories. These categories, mentioned in chapter 5.5, are the basis of the maturity model. Every category contains several characteristics, that are indicators of the current level of maturity. The levels being defined as Ad Hoc, Structured, Managed, and Optimal, ranking from the most immature to the most mature level. The model contains four different levels, so the difference between the levels is clearly measurable. Next to that, the expectation is that RCN is scoring relatively low in the model because all units are yet not cooperating well. Therefore, only four levels are distinguished to keep the model easy to implement for units. The categories, together with accessory characteristics, are explained in the upcoming sections.

### 6.1 Interaction with the inhabitants

The first category is the interaction with the inhabitants. Every unit is providing its services for the inhabitants of the BES. This makes that every improvement of the cooperation between the units must lead to an improvement of the service provision for the islands. The characteristics that are set up for this category, are shown in the table below.

TABLE 6.1. CHARACTERISTICS OF INTERACTION WITH THE INHABITANTS.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Experience of inhabitants	Different	Categorized	Adequate	Suited for every type of inhabitant
Way of Communication	Individual units	Individual units, but according to a standard for RCN	Standardized per process-chain	Central portal or a central window
View on RCN	Individual units	Individual units, part of RCN	RCN as a service provider with different units	RCN as a service provider

The first category of interaction with the residents includes the experience of the residents. When the interaction with the residents is poorly developed, the experience of the various residents will be very different. One resident may be comfortable with the current service experience, but another may experience problems with the current service. A more mature organization will ensure that all residents have a satisfactory experience when interacting with the various units.

This experience by the residents relates to the way of communication towards the residents. In an immature organization, the way of communication is set up per unit. One unit has a portal, a second unit sends letters, while a third unit may have difficulty reaching residents altogether. When becoming more mature, a uniform way of communicating within RCN is a prerequisite. This does not have to mean that all communication takes place in one way, because both a digital portal and a central civil service are possible, but the way of communicating should be uniform throughout all units.



The third characteristic is the view on RCN. In an immature organization, the look at RCN will be different for the units. Becoming a mature organization implies that RCN will be seen as the general civil service for all services, where the difference between the units will not be distinguished by the inhabitants.

## 6.2 Data Management

The second category is data management. All units are service providers to the inhabitants of the BES and obtain big sets of data. Digitalization is an important issue for the units within RCN, as the future of providing service to residents is linked to the improvement of data management. The characteristics that are set up for this category, are shown in the table below.

TABLE 6.2. CHARACTERISTICS OF DATA MANAGEMENT.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Basic Administration	Administered per unit	Administered per unit, PIVA-V phase 1	Administered per unit, PIVA-V phase 2	Uniform administration
Connection RCN – Public Entities	Not	Strategic plan to organize and bundle data	Cooperation to synchronize administration	Central administration
BSN & DigiD	Not	Sedula-numbers	Possibilities to have DigiD	Same as NL

An important characteristic is the way of data management by RCN through the basic administration of the inhabitants of the BES. In an immature organization, this basic administration is managed per unit. Each unit has its version of the basic administration, which results in differences in the administrations. The Public Entities are working on a general public registry, named PIVA-V. With the different phases of implementation of PIVA-V, the basic administration of units is linked more with the administration of the Public Entities. In phase 2, a synchronization loop is providing automated correct information. While maturing, the goal is to achieve a uniform administration of all inhabitants.

The matureness of the basic administration is an indirect link to the connection between RCN and the Public Entities. In the first level of maturity, there is no connection between the Public Entities and the units of RCN. While maturing, the connection is set up with the same policy, which has to lead to clear cooperation with a central administration and permitted accesses for the different units.

Data management is easier with the online identification of inhabitants. In the Netherlands, every inhabitant holds a Burger Service Nummer (BSN) and a DigiD for all online civil services. In Bonaire, every inhabitant holds a so-called sedula, which is a variant of the identification cards we know in Europe. While maturing, online identification will become the same in the Netherlands, with all possibilities of online identification and verification.

### 6.3 Services and Processes

The third category is about services and processes. All units provide services to the inhabitants of the BES. Cooperation between units of RCN does not mean that the content of the services has to change. The maturity of services and processes is based on the connection between the units. The characteristics that are set up for this category, are shown in the table below.

TABLE 6.3. CHARACTERISTICS OF SERVICES AND PROCESSES.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Transparency	Not	Insights in relevant services around the unit	Insights in services of all units	Maximal insight of services and processes
Coherence between services and units	Not	Services are situationally linked	A certain degree of cohesion between services	Integrated services and processes
Process Landscape Design	Not	Processes are linked within and between units	Process Landscape Design is set up partially	Centrally administered

The first characteristic of the services and processes is the transparency between the units and between the units and RCN. In an immature organization, the services and processes are shaped per individual unit. Units do not know what the proceedings of other units are. While maturing, the transparency of services and processes is becoming clear, where it is easier for units to respond to the activities of other units.

Services and processes are also more mature when there is coherence between the different units and the services provided. Services and processes should be integrated, e.g. the inhabitant does not have to distribute their data to the different units, but this is processed within the different units of RCN. An example is moving houses for residents, where this mutation is processed automatically.

An instrument for managing different units is controlling a process landscape design. In an immature organization, a process landscape design is nonexistent, while the processes of a more mature organization are centrally administered and changes are tracked overhead.

### 6.4 Government

The fourth category concerns the government. The units have indicated that clearness about the governmental structure is needed for proper cooperation between the units. The first step of forming a central government is the completion of the CIO profile, to support the digitalization and further development of several units. The formation of this role is therefore one of the characteristics of the government. However, in the longer term, the government is not only about data- and information management. The characteristics that are set up for this category, are shown in the table on the next page.

TABLE 6.4. CHARACTERISTICS OF GOVERNMENT.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Structure of government	Individual silos	Individual, but supplemented with coordination	RCN supports all units with additional service	Clear organizational structure of RCN
Management	Managed per unit, overhead only from NL	Per unit, but supplemented with consultation (e.g. Info-Mgmt)	Clear separation in tasks and responsibilities of unit and RCN	Administrative responsibilities within RCN are executed
CIO-role	Not	Preparations with units about tasks and responsibilities	Clear CIO-profile, added with a joint roadmap of all units	Overarching CIO for additional services

The structure of government is determinative for the success of the cooperation between the units. As mentioned in the services and processes category before, the cooperation is not meant to change the content of the units, it supplements the current organization. The governmental structure for an immature organization is divided into individual silos. This means that every unit is self-sufficient and responsibilities only lie within the single unit. While maturing, a clear organizational structure is desired for RCN with uniform demarcations of governmental responsibilities.

The structure of the government goes along with the management of it. In an immature organization, the different units are positioned independently only with a head of services per unit. No overhead functions or advisory bodies exist, other than the mother departments in the Netherlands. A mature way of management of RCN contains administrative responsibilities within RCN, where the different heads of services still are in charge of their own units, but supplemented with advisory- and administrative tasks.

A specific aspect of government that is currently been worked on, is the role of the CIO for RCN. While maturing, a CIO has certain overarching responsibilities to supplement the units. Responsibilities in the long term are being in charge of overarching digitalization, IT architecture, program management, supplier- and contract management.

## 6.5 IT Systems

The fifth category concerns IT systems. To develop RCN as an organization of cooperating units, not only the data management has to be improved. Also, the IT systems that support the services and processes of the different units have to develop to improve the services and the cooperation between the units of RCN. The characteristics that are set up for this category, are shown in the table below.

TABLE 6.5. CHARACTERISTICS OF ITS SYSTEMS.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Administration	Individual on paper or in own IT systems	Individual registered in own or shared systems	Shared administration for participating units	Bundled within RCN as much as possible

Platforms	Per unit, or not existing	MijnCN is operating, the first units are connected	Shared platforms where units can join	Shared systems where possible
Authorizations	Not	Clear view on report functions	Authorizations for report functions in other's systems	Authorized cooperation

The first characteristic covers the administration. This aspect is not the same as the second category 'data management', which is about the data itself. This characteristic is about the IT system that is used for processing the data. In an immature organization, every unit is processing the data in its own way. One unit makes use of its own IT systems, where other units still process data on paper in folders. In a mature organization, the data is more coherent and the administration is bundled as much as possible.

IT is also about the platforms themselves. While maturing, the organization can make more use of shared IT platforms, where possible. A sidenote has to be made for the shared IT platforms because cooperation has to be set up to supplement the units, where the different units keep their autonomy on offering services to the inhabitant. One shared IT system is therefore not achievable, but sharing components and having general payment clauses are examples of shared IT systems.

The third characteristic of IT systems concerns authorization. When RCN becomes more mature as an organization, it brings authorized cooperation with it. This means that units are permitted to make use of report functions to request required data.

## 6.6 Competencies

The sixth category is about competencies. Next to the communication with the inhabitants and the establishment of processes and IT, it is about resources. Resources are of importance, especially on islands where it can be hard to find the right employees. The competencies have to fit the organization to make sure improvement can be made and cooperation can be set up. The characteristics that are set up for this category, are shown in the table below.

TABLE 6.6. CHARACTERISTICS OF COMPETENCIES.

Characteristic	Level 1: Ad Hoc	Level 2: Structured	Level 3: Managed	Level 4: Optimal
Shared Services	Units have to provide their own services	SSO is there to deliver services to all units	Clear distinction in tasks SSO and own responsibilities	Input of all units is bundled into shared services, provided by SSO
Ambitions	Too ambitious for the available resources	Clear view on ambitions and approach to achieve	Durable plans on ambition and commitment from all to achieve	Matching ambitions and resources

Resources	Insufficiently available on BES	Clear view on the needed resources to match the ambitions of RCN	Durable plans on matching ambitions and resources	Matching ambitions and resources
Connection RCN - BZK	No match in different intentions	RCN and BZK do have the same intentions for RCN	RCN can decide how to function on the BES islands	A clear and shared vision, well alignment between RCN and BZK

The first characteristic is about the Shared Services. At the first level, every unit does have to make use of its own services and facilities. In fact, this stadium is already set, where it is already known that the Shared Service Organisation is providing facilities for all units. In a more mature organization, the selection of available services is still provided by SSO CN, but more aligned with the needs of all units, where input sessions can help in defining both general and specific facilities, suited for all units.

The characteristics ambitions and resources are quite connected to each other. The ambitions of the organization do have to be facilitated with enough resources, think of both money and employees. In an immature organization, the ambitions cannot be fulfilled with the available resources and vice versa. In a more mature organization, these ambitions and resources will be more aligned, where enough resources are available to fulfill all ambitions and vacancies.

The connection between RCN and the Ministry of BZK is the last characteristic. This is about the alignment of the plans that RCN does want to fulfill and the level of possibilities that BZK can facilitate. In an immature organization, the intentions are not aligned, where a more mature organization does need the cooperation of BZK to make sure that the vision is agreed by both RCN and BZK.

## 6.7 Conclusion

With the above-mentioned sections, all fields of interest are now defined with three or four characteristics, measurable over the four distinguished levels. A well-balanced decision is made to define the characteristics as measurable guidelines, instead of concrete interpretations. This maturity model is built to last for the upcoming years, where the definite form of cooperation is not yet set. With concrete and precise interpretations, the model can probably not fit anymore in future cooperation, where the guidelines can last longer and be filled with more specific action points over time.

However, in the upcoming chapter, the current performance is measured, along with recommendations on both short- and long-term. Those recommendations are given, based on the current situation of chapter five, and further interpretations of the employees and the participants of the interviews.

## Chapter 7. Maturity Measurement

This chapter presents the application of the maturity model. The maturity model, together with the measurements of the current situation and the recommendations on the short and long term, will be the outcomes of the research for the Shared Service Organisation CN. In the table below, the complete model is presented. The application of the model, together with the advice for the short- and long-term, are presented in sections 7.1 and 7.2.

TABLE 7.1. MATURITY MODEL.

Category	Characteristic
<b>Interaction with the inhabitants</b>	<ul style="list-style-type: none"><li>• Experience of inhabitants</li><li>• Way of communication</li><li>• View on RCN</li></ul>
<b>Data Management</b>	<ul style="list-style-type: none"><li>• Basic Administration</li><li>• Connection RCN – Public Entities</li><li>• BSN &amp; DigID</li></ul>
<b>Services and Processes</b>	<ul style="list-style-type: none"><li>• Transparency</li><li>• Coherence between services and units</li><li>• Process Landscape Design</li></ul>
<b>Government</b>	<ul style="list-style-type: none"><li>• Structure of Government</li><li>• Management</li><li>• CIO-role</li></ul>
<b>IT Systems</b>	<ul style="list-style-type: none"><li>• Administration</li><li>• Platforms</li><li>• Authorizations</li></ul>
<b>Competences</b>	<ul style="list-style-type: none"><li>• Shared Services</li><li>• Ambitions</li><li>• Resources</li><li>• Connection RCN – BZK</li></ul>

### 7.1 Application of the model

The application of the model contains a measurement of the current level of maturity for every characteristic. These levels are then combined in a conclusion about the current level of each category. The theory behind maturity models is that every component of that model is in coherence with the rest. The effect is that the lowest level of maturity of the characteristics within a category is leading to the conclusion of that category.

Besides the measurement of the current level, an explanation for that level is given for all six categories. The current level and explanation are based on the input of all different units and verified with participants of SSO CN. A sidenote has to be given upfront, where the expectation of the given maturity levels is rather low because the model is written for RCN as an organization. This means that the units can score a higher level individually, but that is not of importance for this research, where the focus is put on possible cooperation between the units and the development of RCN as an overarching organization.

### 7.1.1 Interaction with the inhabitants

The results of the application of the maturity model in the field of interaction with the inhabitants can be found in the table below:

TABLE 7.2. PERFORMANCE INTERACTION WITH THE INHABITANTS.

Category: Interaction with the inhabitants	Current level	Explanation
Experience of inhabitants	1	The resident's experience is not uniform. Neither the experience of different citizens at the same unit nor the experience of a citizen at different units is equal. Where one citizen is helped quickly and adequately by the service provider, another citizen may encounter problems or experience difficulties and inefficiencies.
Way of communication	1	Each unit communicates with the citizens in its particular way. Where BCN is already working on the possibility to approach the citizen digitally, at the IND all services are still on paper. Hence, there is no uniform way within RCN to approach citizens.
View on RCN	1	Although all services fall under the National Service, the service providers are seen as different, individual agencies. From the citizen's point of view, there is no visible connection between the different service providers.

In conclusion, in regards to interaction with the inhabitant, RCN is not yet developed as an organization. The current state of maturity is still level 1 'ad hoc'. From the point of view of the inhabitants, all units exist as individual entities on the BES, and there is no cooperation between the different units. However, the experience of the inhabitants does not have to be bad at all. In contrast, the interaction at the individual units can be rather good, however, there does not consist a uniform approach overall units. The connection with the inhabitants is one of the main focal points of the units when it comes to the cooperation of the different units.

### 7.1.2 Data Management

The results of the application of the maturity model in the field of data management can be found in the table below:

TABLE 7.3. PERFORMANCE DATA MANAGEMENT.

Category: Data Management	Current level	Explanation
Basic Administration	1 - 2	For the basic administration, it holds that some units are still in level 1, where others are already developing towards level 2. Some of the units do have authorizations to have access to certain data from the public registry of the Public Entities. However, these units are still making use of their own basic administration of all inhabitants. There is little synchronization between the administration of units and the Public Entities.

<b>Connection RCN – Public Entities</b>	1	Aside from authorizing decisions and levying claims for the public entities, there is little to no cooperation between RCN and the public entities. The public entities are reluctant when considering cooperation with RCN, mainly due to the fear of losing autonomy. A plan to have a central basic administration for the BES that is accessible to all units has not been sufficiently developed.
<b>BSN &amp; DigiD</b>	2	All BES residents possess a so-called sedula, a BES identity document. BCN is now also in the process of providing DigiD for residents, but this is not yet a default.

In conclusion for the basic administration, the first steps have been taken to develop RCN towards level 2 of the maturity model and to stimulate cooperation. Individual units do have a plan on digitalization and making sure that the data management is developing. However, it is also very important for the public administration that good cooperation can be established with the public entities. This is essential to use and develop PIVA-V. The introduction of a BSN and DigiD on a large scale will also not succeed if there is no cooperation with the public entities.

### 7.1.3 Services and Processes

The results of the application of the maturity model in the field of services and processes can be found in the table below:

TABLE 7.4. PERFORMANCE SERVICES AND PROCESSES.

<b>Category: Services and Processes</b>	<b>Current level</b>	<b>Explanation</b>
<b>Transparency</b>	1	There is little to no transparency in terms of the services provided by all units. All services and processes are set up individually, and there is little collaboration between units.
<b>Coherence between services and units</b>	1	There is little to no coherence between the different units. Currently, the citizen is often responsible for sharing information between units. For example, citizens must collect their income statement from BCN if they want to apply for a residence permit.
<b>Process Landscape Design</b>	1	The processes of the units are individually organized. Different processes are not linked to each other. There is also no overview of all the processes carried out by the service providers, and it is not known to what extent information is distributed between the units.

In conclusion, in terms of services and processes, RCN as an overarching organization is not yet developed. All units execute their services individually, and there is little to no collaboration. However, the core business of all units is stable, where individual units are working on optimizing processes. The essential thing that is missing, is that there is no mutual understanding of services and processes. It is not known what information is required for processes, nor what data is shared between units. The



links between the different units do still have to be made, but digitalization is making this process easier where systems can be connected, as can be seen in the example of the digital portal MijnCN, where BCN and the units SZW are brought closer together and working on more uniform visibility towards the inhabitants as well.

#### 7.1.4 Government

The results of the application of the maturity model in the field of government can be found in the table below:

TABLE 7.5. PERFORMANCE GOVERNMENT.

Category: Government	Current level	Explanation
<b>Structure of Government</b>	1	The organizational structure of RCN is missing. RCN represents the employment of the various service providers, but apart from that, units are individually presented. There are no overarching responsibilities or central points of contact.
<b>Management</b>	1	Like the structure, the management of RCN is still to be formed. There is no management on the BES that supervises the various units. There are only overarching contacts from the Netherlands. Units only report to head departments in the Netherlands.
<b>CIO-role</b>	2	Preparations have been made for the completion of a CIO profile. Several units are providing input to form the tasks and responsibilities of an overarching CIO. This CIO will respond to the changing demand for digitization and automation in the coming years. A joint roadmap is however lacking.

In terms of governmental structure and management, RCN is still at the very beginning, which is normal for individual operating units. The meaning of RCN is still developing during the past ten years, and besides the general employment of all units, there is no government within RCN for all units. This is, however, hard to develop, due to the political shape of RCN. RCN is set up by a set of Dutch Ministries, and an adjustment of the structure of RCN does need the permission of all Ministries. The first focus for all units is to decide which way they want to go, and how to achieve this, where all units can be satisfied voluntarily.

#### 7.1.5 IT Systems

The results of the application of the maturity model in the field of IT systems can be found in the table on the next page.

TABLE 7.6. PERFORMANCE IT SYSTEMS.

Category: IT Systems	Current level	Explanation
<b>Administration</b>	1 - 2	The level of administration of the different units varies. Some units still carry out almost all their administration on paper, while others have several digital systems for processing processes. Digitization is an important issue for all units in the coming years.
<b>Platforms</b>	2	Several units are working hard to put a digital portal into use. MijnCN is now online, in which the Tax and Customs Administration is offering its first digital services. SZW is also working hard to digitize its services. However, there are also many units not yet working on this.
<b>Authorizations</b>	1	Next to shared systems and platforms, progress can be made with authorizations to have permission to make use of other's data. An example is the authorizations to make use of the basic administration of the Public Entities. Besides these authorizations, units do not have the permission to share data automatically and have to ask for data per mail.

In conclusion, some of the units are already developing on IT systems towards level 2 in the maturity model. However, this development is still mainly individual, where cooperation is limited. The biggest cooperation is the implementation of MijnCN, the online portal where the units can provide their services to the inhabitants. Also, the administration of individual units is digitalizing more and more but is still individually regulated.

#### 7.1.6 Competences

The results of the application of the maturity model in the field of competencies can be found in the table below:

TABLE 7.7. PERFORMANCE COMPETENCES.

Category: Competences	Current level	Explanation
<b>Shared Services</b>	2	Since 2016, SSO CN is an individual organization, part of RCN, to provide the units with shared services. This is mainly about HR, purchase, facilitating workplaces and functionalities, IT, and back-office. However, the alignment between SSO CN and the units can be improved, where the needs of the units match better with the facilities that SSO CN can provide and vice versa.
<b>Ambitions</b>	1	The ambitions are too high for the available resources. RCN is a really big organization on the BES islands, where a lot of employees are needed, but especially the management roles are hard to fulfill.

<b>Resources</b>	1	As described by the ambitions, resources are not enough available on the BES islands to match with the ambitions. Not all management roles can be filled, and the employment contracts are short.
<b>Connection RCN – BZK</b>	1	RCN is part of BZK, so should have a clear and strong connection. However, ideas on the BES islands are sometimes different. RCN is limited to the political structure, and therefore limited in its possibilities.

In conclusion, the competencies do have to develop to mature RCN as an organization. A better alignment between ambitions and resources is needed to perform what the organization is standing for. This is easier said than done, due to the limitations of available resources on the BES islands. Also, a better alignment between RCN and the Ministry of BZK is needed to achieve the goals of RCN.

## 7.2 Recommendations on the short- and long-term

The recommendations are given based on the interpretations of the current situation, the input given by the employees of SSO CN, and the participants in the interviews. To a lesser extent, the evaluation of the maturity model, especially levels 3 and 4, is also taken into account to form the recommendations.

### 7.2.1 Interaction with the inhabitants

The recommendations for SSO CN and the other units of RCN in the field of interaction with the inhabitants can be found in the table below:

TABLE 7.8. RECOMMENDATIONS INTERACTION WITH THE INHABITANTS.

	<b>Short term</b>	<b>Long term</b>
<b>Experience of inhabitants</b>	In the short term, it must be investigated how the inhabitants of the BES experience contact with the service providers within RCN. Residents have different experiences with the services and the individual experience between the different service providers also differs. The inefficiencies and points for improvement must be made clear so a plan for a better customer experience can be launched.	Several units indicated that more uniformity must be sought from the units towards the inhabitants. The image that residents have of the BES must become general and uniform. Residents must know how to reach the National Service and its services and the services they can expect from the National Service.
<b>Way of communication</b>	In the short term, information must be obtained from the inhabitants on the need for communication with the National Service. Units are currently setting up their own communication channels with the inhabitants, but the general request of the inhabitants must be made clear, to which the way of communication can be adapted.	In the long term, each resident must be approached in a way that ensures they are well served. This does not have to mean that there will be one way of communicating with the residents (only a portal or central office), but that the contact options will be suitable for all residents.

<b>View on RCN</b>	<p>It must become obvious to residents what the National Service consists of, and how the various units relate to each other. At present, the resident is usually the link between the units. And they often have to request and submit documents themselves between units. The resident should, however, have insight into the links between the various units. It must become clear what documentation citizens need for the various services and where they can turn to for this service.</p>	<p>In the long run, an overall vision of the State Service must be known to all citizens, where the different units are seen as a coherent organization. The inhabitants must know where they stand and where they can go for the various services. The service provision must also be better connected to the inhabitants, whereby the option of digital service provision must always be available.</p>
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### 7.2.2 Data Management

The recommendations for SSO CN and the other units of RCN in the field of data management can be found in the table below:

TABLE 7.9. RECOMMENDATIONS DATA MANAGEMENT.

	<b>Short term</b>	<b>Long term</b>
<b>Basic Administration</b>	<p>Several units are now authorized to use relevant and specific data from the population register of the public bodies. This way, the units are more assured of up-to-date data about the inhabitants. However, little or no synchronization is taking place yet. In the short term, the focus must lie on both the wider dissemination of authorizations for the various services of the service providers and the synchronization of the population registers, so that mutations in the population register become more widely known within the units and the register remains up to date.</p>	<p>In the long term, it will therefore be most beneficial for the BES islands to have a standardized, uniform version of the population register. The format of a central population register on the BES islands is comparable to that of a small Dutch municipality. In the Netherlands, authorized ministries and implementing organizations have access to specific parts of these population registers, so in terms of format, it is also possible to organize this centrally on the BES islands.</p>
<b>Connection RCN – Public Entities</b>	<p>To be able to take steps in terms of the connection between the National Service and the Public Entities, it is first of all important that the mutual cooperation between the units of the National Service takes more shape. From the cooperation of units within the Public Service, it is possible to work towards more involvement in the operational management of the Public Service and the Public Entities. A strategic plan will be needed to further centralize the population register and</p>	<p>In the long term, it is most optimal for all government institutions as well as for the inhabitants themselves to have a central population register on the BES islands. This means that the resident no longer needs to be the connecting link between the various service providers, but the service providers are in better contact with each other. This requires that the Rijksdienst and the Public Entities can stand side by side as two organizations, but can also work together and benefit from each other.</p>

	make it more widely accessible to the units of the National Service.	
<b>BSN &amp; DigiD</b>	Currently, every resident of the BES islands has a sedula number, a unique number with which the residents can identify themselves. With this unique key, it is easy for the Rijksdienst to work with a central population register. In the short term, however, it is necessary to clarify within the National Service how the Public Entities will further develop the population register and how the National Service can respond to this in the future.	In the long run, it is a logical step to be able to identify in the same way as in the Netherlands. This means that every inhabitant has a unique BSN number and, by means of DigiD, has digital access to the services of the Rijksdienst. By using the same systems as in the Netherlands, it will also be easier to share knowledge and systems.

### 7.2.3 Services and Processes

The recommendations for SSO CN and the other units of RCN in the field of services and processes can be found in the table below:

TABLE 7.10. RECOMMENDATIONS SERVICES AND PROCESSES.

	Short term	Long term
<b>Transparency</b>	In the short term, there must be improved transparency between RCN service providers. At this moment, almost no consultation takes place between the different service providers, and there is also no central organization that gives priority to making processes transparent. In the short term, it is advisable to look at the consultation structures within various chains of RCN and to see where there is a need for transparency and cooperation.	In the long term, certain internal transparency must exist within the Rijksdienst, so that processes can be optimized, services can be connected to each other and thus the process for the citizens can be simplified. This means that priority should be given to cooperation between units and that openness should be the priority in the development of better services.
<b>Coherence between services and units</b>	Currently, there is little or no connection between the services and processes of different units. In the short term, the main focus should be on setting up voluntary cooperation between the different units. Based on a common goal, one can then look at involving more units and more services within the National Office.	In the long term, coherence between the various service providers is essential to be able to improve services and respond effectively to the wishes of the inhabitants. After establishing cooperation between the various units of the National Service, one can also look at actively involving the various Ministries in the Netherlands, and involving the Public Entities on the BES islands, in a way that both the National Service and the Public Entities can agree on. In the long term, it can also be examined whether a central organization can support the

		realization of more coherence between the different units.
<b>Process Landscape Design</b>	In the short term, it is good if all units work out for themselves how they are going to shape the future of their services. Digitalization of services is an important issue for several units of RCN, but before processes of different units can be linked to each other, it must be clear where services are going to develop in the coming years and what effect this will have on the inhabitants.	In the long term, a process landscape design is intended to connect processes and services as much as possible and to make transparent how data is interwoven throughout the organization. However, it is still too early for this. First, cooperation must be in place, it must be clear how digitalization affects service provision, and how a population register can contribute to connecting units.

#### 7.2.4 Government

The recommendations for SSO CN and the other units of RCN in the field of government can be found in the table below:

TABLE 7.11. RECOMMENDATIONS GOVERNMENT.

<b>Category: Government</b>	<b>Short term</b>	<b>Long term</b>
<b>Structure of Government</b>	This thesis can be seen as the first inventory of where certain units within RCN want to aim for in terms of cooperation. With this cooperation comes initiatives and agreements, also in the area of management. At this moment the organizational structure of RCN is set up individually, but in the short term, a larger inventory should be made at the different chains within RCN of what units are currently lacking and which umbrella structure they would like to be part of. The goal is to create sufficient support among the units, so voluntary cooperation can be set up.	In the long run, progress can only be made within RCN as an organization if a good organizational structure is established. This means that units do not only stand on their own but that they also have certain responsibilities towards the Rijksdienst. In addition, units can make use of the advantages of an umbrella organization, such as shared knowledge, shared data and systems, and better coordination, which ultimately benefits the inhabitants of the BES islands.
<b>Management</b>	Besides the lack of an organizational structure, there is also a lack of management that can contribute to the cooperation between the various units. In the short term, it is necessary to make agreements on how to set up cooperation between the different units, but also to ensure that the autonomy within the units is maintained, and to ensure that the units know that responsibility for the service still lies with themselves.	In the long term, stable cooperation between the various units of RCN requires umbrella management. This management oversees the quality of services, the data and systems, the connection between the Rijksdienst, the public entities, and the ministries in The Hague, and, of course, the connection with the inhabitants of the BES islands. Management must serve as an umbrella, and as a toolbox for all units, without units losing their autonomy over services and processes.

<b>CIO-role</b>	In the short term, the CIO profile must be further finalized so that several units within the civil service will further support the plans for the creation of a first umbrella function. In the short term, a CIO for the civil service can take the lead in the ever-increasing demand for digitization and automation, so that in the future a standard can be offered and smaller units can also join in the digitization of services.	In the long term, a CIO will become part of the Rijksdienst's management team. This means that the CIO will be assigned certain responsibilities and can assist units in their information management. In addition, in the long term, the CIO can work on a joint roadmap, on the one hand, to bring units closer together, and on the other to guarantee continuity.
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### 7.2.5 IT Systems

The recommendations for SSO CN and the other units of RCN in the field of IT systems can be found in the table below:

TABLE 7.12. RECOMMENDATIONS IT SYSTEMS.

<b>Category: IT Systems</b>	<b>Short term</b>	<b>Long term</b>
<b>Administration</b>	In the short term, all units need to assess whether the method of administration is still future-proof, for each service and for each process. For most units, it is possible to digitize their services, but at the moment the knowledge or the money is lacking. To improve service to the BES residents and achieve good cooperation between units, it is important that services and processes can be linked and that data can be registered online as much as possible.	In the long run, there is no future for paper-based administration. It is out of date to offer services exclusively on paper, requiring residents to come to the counter. In addition, it is not possible to further develop cooperation between units if all administration is still done on paper; IT systems are essential for the future.
<b>Platforms</b>	The Tax and Customs Administration and the SZW units are currently working hard to convert the services to the MijnCN portal. Talks are also underway with the IND and the Public Bodies about integration into the portal. In the short term, it is important that the progressive units, which are already working with the portal, get their services working in the portal, as well as working on the implementation of a digital platform for the residents of the BES islands. It is not self-evident that these services will also be offered online in the future, and this change should also be given attention among the inhabitants.	In several years, most of the services of the Tax and Customs Administration and the SZW unit will have been implemented in the MijnCN digital portal. It is therefore important that there is clarity about the hosting and technical and functional management of these systems. It must be made clear whether SSO CN can contribute to the management of these systems or whether another organization should be set up under the responsibility of a CIO for the civil service that can support the portal.

<b>Authorizations</b>	In the short term, 'quick wins' can be achieved by making more use of authorizations. This can be done by using so-called reporting functions in the IT systems of different units, whereby a unit can be authorized to view certain data of another unit for the purpose of service provision. This will benefit the residents, as the units will be better connected easily, and the residents will have less need to act as a link between the units.	In the long run, only a shared IT system offers a solution. This makes use of the same data, and services and processes can be viewed or used more easily between the different units. The employees of the various units are authorized to use the residents' data in a secure manner, which makes the services easier for the residents.
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### 7.2.6 Competences

The recommendations for SSO CN and the other units of RCN in the field of competencies can be found in the table below:

TABLE 7.13. RECOMMENDATIONS COMPETENCES.

<b>Category: Competences</b>	<b>Short term</b>	<b>Long term</b>
<b>Shared Services</b>	In the short term, it is necessary to review and perhaps modernize the coordination between SSO and the various units within RCN. SSO was established as an independent organization in 2016. The focus in the past year has been much on general services and shared services, but the experience is that from the different units there is a growing demand for specific services. This is an important effect of digitalization because up to now this has been handled individually and wishes from various units differ from each other.	In the long run, there must be a clear separation between general and specific services. The general service will mainly be a further development of the current service, supplemented with a clear overview of the tasks and responsibilities of SSO, which is also known to all units within RCN. Specific services are more focused on the demands of one unit or a set of units that want to tackle something together. In addition, more intensive cooperation between units also provides certain responsibilities towards RCN as an umbrella organization. It is up to the units within RCN where these responsibilities end and which services will be taken up by the units themselves, by SSO, by RCN, or by an external party.
<b>Ambitions</b>	In the short term, more clarity must be created about the ambitions of RCN as an organization. Because the various units are not sufficiently attuned to each other, all department heads follow their own plan and there is too little harmony to be able to propagate a joint and solid image of RCN as a Rijksdienst. Topics that need to be discussed are the image of RCN	In the long term, the ambitions and available resources must match one another. This means that there is enough FTE present for all the intended tasks within RCN and that there is a plan for retaining employees and knowledge better and longer. Currently, there is still a strong culture within the units that plans can be executed one day, but ambitions must



	towards the inhabitants, the possible introduction of a shared population register, and whether or not to outsource heavy ICT tasks to the Netherlands or external parties with more knowledge.	be described more clearly, with a clear and realistic goal and an intended time frame.
<b>Resources</b>	In the short term, the problem of too few available resources cannot be solved immediately. However, a particular pattern can be discerned: while there is an abundance of applicants for government positions at MBO level on the BES, the shortage is mainly in vacancies at HBO and WO levels. In addition, many students move to the Netherlands to study and then do not return to the island but remain in Europe. Therefore, it would be advisable to start a discussion with students and secondary schools on how RCN could support the training of personnel and let students return after their studies.	In the long run, it is questionable whether all intended functions within RCN can be fulfilled and executed on the BES islands. Therefore it is advisable to not only look at the development on the BES islands but also at the role of other parties, including organizations in the Netherlands. As already described in the ambitions, ambitions, and resources must match one another in the long term.
<b>Connection RCN – BZK</b>	RCN was established several years ago as a service provider for the residents of the BES islands by the cooperation of Dutch Ministries. However, the reality is that all units within RCN operate very individually, and there is little cooperation between the units. In the short term, the urgency will not be so much in adjusting the connection with the Ministry of BZK, but first, within RCN it must be examined how units can cooperate voluntarily.	In the long run, the connection between RCN and the Ministry of Inland Affairs and Kingdom Relations is of great importance, because this is the best entry point to Dutch politics. The system remains difficult in that the BES islands are part of the Dutch Kingdom, but have their own laws and regulations, their own Public Entity, and their own Governor. The goal, however, is to involve the Ministry of BZK more in the services of RCN, and through better cooperation to make use of more resources.

## Chapter 8. Discussion, Conclusion & Recommendations

In this chapter, the discussion, conclusion, and recommendations of this research are described. Section 8.1 discusses this research. Section 8.2 presents the conclusions of this research and answers the overall research question.

### 8.1 Discussion

This section describes the verification and validation of this research. It also provides the limitations, the generalization, and recommendations for future research.

#### 8.1.1 Verification & Validation

The data, used in this research, is collected from literature, interviews, and a panel of employees. The used literature is partially collected with a systematic literature review. Therefore, the used literature is relevant for the research. However, it is limited to the given search strings, which I had to make decisions on beforehand. This makes that the literature can be specific, where a broader scope could give other insights as well. I would still state that the used literature is suitable for this research because the search strings are decided in consultation, to come up with a proper scope. The used models are a solid basis for the maturity model, applied at RCN.

The interviews are held with a semi-structured layout. The registration of the interviews and insights into the processes of the units were structured, while the topics about cooperation between units and the future of RCN were more semi-structured. Participants of the interviews received the notes and answers of the interviews and checked them on correctness and completeness. It occurred that different participants gave answers on cooperation in the same direction. During the second interview, the input for the model is discussed with the different participants to check on correctness.

While finishing the interview, a preview of the model is tested on the participants. The input is used to improve the model, to maximize the supporting base between the different units. Also, advice from the information management advisors of RCN is used to build a reliable model.

The expert panel has also been involved in validating the maturity model and the performance measurement. The employees have given feedback on the model, related to clearness. The model has been scoped to information management, where the information managers of SSO CN could give their input to this model.

#### 8.1.2 Limitations

During the research, a couple of limitations are faced. The timeframe of this research on Bonaire was set, so a selection of units was made and this cannot be seen as a limitation. However, when we created this assignment in collaboration with SSO CN, an idea was set to scope the research to the chain of units within the department of justice and security. COVID-19 made that it would be difficult to start this research on cooperation and information management in a chain of units that are not working to digitalize service provision. Instead of the department of justice and security, choices have been made to conduct this research at the bigger units within RCN, to ensure that the participating units are already working on digitalizing and improving information management. This gave an easier connection to the improvement of cooperation.

Another limitation to the research is that one of the selected units never answered to participate in this research. One of the units, that in my opinion, was very suited to give their vision on the raising digital portal and their future contribution to it. This made that the research has been limited to three units instead of four. To fill this gap, it has been decided to invest more time in involving the experiences of employees of SSO CN.

The last limitation is that, due to the timeframe, only a selection of models from literature could be used. This made that this maturity model is based on several models, but could have gotten other inputs when other literature had been used. However, the selection of literature has been done deliberately, without randomly selecting maturity models and articles.

### 8.1.3 Generalisation

This research has been conducted for SSO CN and RCN in general. This means that literature and data from interviews and other employees are collected to set up a maturity model to test the matureness of RCN. However, aspects of the model can be used for similar-structured organizations as well. If organizations, containing multiple self-operating units, want to improve on cooperation and overarching information management, the literature used in this research is also applicable. The maturity models that are used for the input of this model are focused on continuous improvement, distinguished levels of matureness, and the alignment of business, strategy, and IT.

The next step of this research is partly generalizable, where a measurement of the current situation and the current needs, is applicable for all organizations. The way of semi-structured interviews is not specified for RCN, but questions about the future of the organization have to be set up concerning the type of organization. In this research, six fields of interest are defined. These fields of interest are based on literature and interviews, and are partly applicable for other organizations, in a way that the fields are applicable for RCN, but every organization does have to decide whether these are the best measurements for their type of organization. This holds as well for the characteristics that are connected to the fields of interest.

The third part of the research is measuring the current matureness of the organization. The structure of this research can be used in general, however, a general outcome of the measurement does not exist. This part is therefore specific for every research. To conclude, the structure of the measurement, and the outcomes of this research can be used as a reference for other maturity measurements.

### 8.1.4 Future Research

To design a maturity model and measure the matureness of the organization was not the original plan for this research. The original idea was to map the process landscape design of RCN. During the preparation to do so, a suitable way should be found to map the current situation of the processes within RCN. This headed to conversations about the future of RCN and the possible cooperation between the different units. At that moment, the conclusion was that a process landscape design would come too early, because units are not cooperating at all, and a lot of processes are done manually and individually. Processes of individual units could be mapped, but this would not develop the cooperation between units at this moment. Therefore, it was decided to develop a maturity model to assess the overall performance of RCN and to place the process landscape design at the right level of that model. This will be taken into account with future research:

For future research, a lot of steps can still be taken. This research is conducted for RCN, but only four units are taken into account. The first step of future research can be taken by including more units. However, the expectation is that other units are not that far in setting up cooperation between RCN. Therefore, this future research should be more focused on identifying both individual and shared desires.

The maturity performance showed that a lot of levels are still at the beginning. Therefore, a lot of short-term recommendations can be executed. To combine this with future research, research can be conducted on the effects of execution. Besides that, research can also be done on performance measurement in a couple of years, where the performance measurement can be conducted in the same way again.

When RCN as an overarching organization with cooperating units is developed to level 2 or 3 in general, research can also be conducted on developing a process landscape design. This contains a full identification of manual and digitalized processes and possibilities for data-sharing and process optimisation for both inhabitants and units.

## 8.2 Conclusion

This research aimed to answer the research question: *“What are the needs for cooperation between the units of RCN and the development of a supporting base, and how can these needs be combined in creating a maturity model?”* This conclusion goes through the sub-questions and answers the overall research question.

The literature study has given useful grips on improving the information management and cooperation of the units of RCN. The literature has learned the following aspects that are of importance for RCN:

- Improving the matureness of RCN means that the organization has to develop in levels. One field of interest cannot excel, where other levels are still at the beginning. They all have an impact on each other.
- Improvements do not always have to be giant projects with complex problem statements, but can also exist of small improvements in good mutual agreements. Matureness within RCN does not have to start between all the units, but it can also start between two or three units, based on continuous improvement.
- Information management is one of the most important chains that connect the units altogether, so the alignment of IT is the first connector that all units do have to agree with, including SSO CN.
- The maturity model on its own is not able to change the organization, it is also about cultural transformations. The employees do have to agree with the content and do want to adjust.

The interviews were conducted for gathering data on the current situation, and for developing and evaluating the maturity model. The most important thing that came out of the interviews about the current situation, is that the different units are thinking quite the same about the possible future of RCN. However, the bottleneck is that units often do not understand each other, or are afraid of losing authority. It is therefore of importance to mention that all possible cooperation must only focus on offering benefits by sharing knowledge, data, systems, and overarching structures, without losing ownership over own services and processes.

The insights in the current situation have given the following six fields of interest: 1. Interaction with the Inhabitants, 2. Data Management, 3. Services and Processes, 4. Government, 5. IT Systems and 6. Competencies.

The six fields of interest are then filled with characteristics, measurable over the four different levels of matureness. More information about the characteristics can be found in chapter 6. An overview of the levels and the characteristics can be found in the table below:

TABLE 8.1. MATURITY MODEL.

Category	Characteristic
<b>Interaction with the inhabitants</b>	<ul style="list-style-type: none"> <li>• Experience of inhabitants</li> <li>• Way of communication</li> <li>• View on RCN</li> </ul>
<b>Data Management</b>	<ul style="list-style-type: none"> <li>• Basic Administration</li> <li>• Connection RCN – Public Entities</li> <li>• BSN &amp; DigiD</li> </ul>
<b>Services and Processes</b>	<ul style="list-style-type: none"> <li>• Transparency</li> <li>• Coherence between services and units</li> <li>• Process Landscape Design</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>• Structure of Government</li> <li>• Management</li> <li>• CIO-role</li> </ul>
<b>IT Systems</b>	<ul style="list-style-type: none"> <li>• Administration</li> <li>• Platforms</li> <li>• Authorizations</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>• Shared Services</li> <li>• Ambitions</li> <li>• Resources</li> <li>• Connection RCN – BZK</li> </ul>

In the fourth sub-question, the current performance of RCN is measured, and short- and long-term recommendations for the organization are given. The measurement is done by giving an indication of the current level, and an additional explanation on the selected level. An overview per field of interest is given in the table below:

TABLE 8.2. PERFORMANCE MEASUREMENT.

Category	
<b>Interaction with the inhabitants</b>	The inhabitants are not provided with services uniformly. All units are executing their processes in their own way, and the inhabitants do not experience any coherence between the units, the units are positioned as individual silos.
<b>Data Management</b>	The public entities are working on a basic connection between the public administration and the different units. Also, identification numbers of inhabitants and DigiD are in development. However, the connection between the units and the public entities is minimal, which has to be improved before the public administration can be improved.
<b>Services and Processes</b>	Transparency between the different units is minimal. This is due to that the units are only linked to the head departments in the Netherlands, instead of

	with each other. Transparency between the services is necessary for improving cooperation between units.
<b>Government</b>	The governmental structure within RCN was minimal till last year. RCN does mainly exist of being the employer for all units, however, developments on a CIO-role make that a basis of management has been made.
<b>IT Systems</b>	Progress has been made on the digital platform and the administration of units is mostly organized, however, improvements have to be made in authorizing units to be able to work together and to profit from cooperation.
<b>Competences</b>	The competencies are not yet aligned, mostly due to the discrepancy between resources and ambitions. The organization that the units have in mind is out of reach, due to missing employees and missing future vision.

Altogether, all questions built up to the main research question: *“What are the needs for cooperation between the units of RCN and the development of a supporting base, and how can these needs be combined in creating a maturity model?”*

The most important need is that all units keep in mind that they all operate with the same idea, to serve the islands. Interviews with the different units have taught that the service provision of the units does not have to change. All units keep their authority but have to be able to adjust. These adjustments do not have to be big improvements, but can be started with mutual cooperation between a few units, extended with small improvements, and a growing supporting base between the units of RCN. The needs of the units of RCN do have to be bundled, as is done in the maturity model, to see the coherence between all desires and to support development over all fields of interest. RCN has to be the label and the umbrella over all units and can assist the units as a toolbox. This toolbox should cover the six fields of interest of the maturity model and contain:

1. General visibility towards the inhabitants;
2. A healthy connection with the public entities and a shared basic administration of all inhabitants;
3. A network of services where units can make use of;
4. An overarching government that focusses on and assists in the needs of all units;
5. A general IT platform, whether or not connected with the Netherlands, where units can execute all their services; and
6. The right connection between ambitions, resources, and cooperation with the Ministry of BZK.

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## Appendix – Interview Protocol

Subject	Aspect	Vraag
<b>Kennismaking</b> Achtergrond	Persoonlijk	<ul style="list-style-type: none"> <li>Hoe lang werkt u al bij RCN?</li> <li>Wat is uw huidige functie?</li> <li>Heeft u ooit andere posities binnen RCN gehad?</li> </ul>
<b>Unit</b> Identificatie van de verschillende processen, benodigde gegevens en communicatie	Structuur	<ul style="list-style-type: none"> <li>Hoe ziet de organisatie structuur van de unit er uit?</li> <li>Uit welke afdelingen bestaat de unit?</li> </ul>
	Diensten en processen	<ul style="list-style-type: none"> <li>Welke interactie met de inwoner vindt er plaats? Welke diensten levert een unit?</li> <li>Welke (hoofd)processen voert de unit uit?</li> </ul>
	Gegevens	<ul style="list-style-type: none"> <li>Wat is de benodigde informatie om ieder proces uit te kunnen voeren?</li> <li>Van welke systemen wordt er gebruik gemaakt?</li> </ul>
	Samenwerking	<ul style="list-style-type: none"> <li>Met welke andere units of instanties wordt samengewerkt?</li> <li>Welke informatie heeft met nodig van hen?</li> <li>Welke informatie deelt u met andere units?</li> <li>Gaat deze samenwerking altijd goed?</li> <li>Welke samenwerking mist men nog?</li> </ul>
	Algemeen	<ul style="list-style-type: none"> <li>Zijn er nog andere factoren van invloed op deze processen?</li> </ul>

<b>Rijksdienst</b> Visie op RCN vanuit de verschillende units, waar zit ruimte voor verbetering of verandering	Huidige situatie	<ul style="list-style-type: none"> <li>Hoe zou u de huidige situatie van RCN beschrijven?</li> <li>Wat is uw mening over deze huidige vorm?</li> </ul>
	Positie van units	<ul style="list-style-type: none"> <li>Hoe is naar uw mening de verhouding tussen de verschillende units op dit moment?</li> <li>Waar positioneert u de eigen unit?</li> </ul>
	Samenwerking met moeder-departementen in NL	<ul style="list-style-type: none"> <li>Hoe ziet de samenwerking tussen uw unit en het departement in NL er uit?</li> <li>Is de unit in het organogram van het moederdepartement opgenomen?</li> <li>Aan wie rapporteert het unithoofd?</li> </ul>
	Toekomst van RCN	<ul style="list-style-type: none"> <li>Hoe ziet u de toekomst van RCN voor zich?</li> <li>Welke mogelijke veranderingen in het informatie management zou u willen voorstellen?</li> </ul>



		<ul style="list-style-type: none"> <li>• Zou dit effect hebben voor uw eigen unit?</li> </ul>
<b>Overige</b>	Problemen en oplossingen	<ul style="list-style-type: none"> <li>• Zijn er nog andere problemen of oplossingen die u zou willen aankaarten of die van belang zijn voor dit onderzoek?</li> </ul>
	Afstuderen	<ul style="list-style-type: none"> <li>• Heeft u nog opmerkingen of tips voor het verbeteren van deze opdracht? Of aandachtspunten?</li> </ul>