

In Intermunicipal Cooperation we Trust

Organisational Trust in Changing Times

[I Kommunalsamarbete vi Litar: *Organisatorisk Tillit i Föränderliga Tider*]

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Abstract

Developments in information technology within the archival sector have led to challenges in the establishment of informational trust. This paper explores how Swedish municipalities develop trustworthy relationships with other organisations when cooperating within this modern environment. The nature of intermunicipal cooperation has shifted from largely being a local matter between a few neighbouring municipalities dealing with local problems to focusing increasingly on larger scale archive-political issues (such as common standards). This shift has led to an increase in the institutional distance between cooperating parties which consequently affects how trust relationships are built and regulated.

The purpose of this paper is to highlight how interorganisational trust relationships are built and maintained in order to help facilitate the development of intermunicipal cooperation within the archival sector.

The question stated is as follows; *Changes within the area of information technology have affected the ways in which municipalities secure informational trust. How have these changes affected the methods in which municipalities create and develop organisational trust within intermunicipal cooperations?*

The research was conducted through a combination of literature analysis and qualitative case studies. The literature analysed consists primarily of academic research papers about both trust and intermunicipal cooperation. These papers have been collected from a number of fields, such as; archival science, computer science and organisational science. Three case studies are presented in this paper; Sydarkivera, R7 and Sambruk. All of the case studies are based in Sweden and are represented by politically steered organisations. Municipalities, county councils and regions are all represented within the trio. The case studies are investigated via a combination of interview and document analysis. The result of the case study investigation has been juxtaposed against the result of the literature analysis.

This paper presents the argument that the creation of formal agreements such as *Service level agreements* plays a vital role in the development and maintenance of trust relationships within municipal cooperations. Formal agreements are shown to act both as a control mechanism to prevent opportunistic behaviour as well as platform for the presentation of expectations within cooperations. The early demarcation of the organisation's expectations can consequently help prevent conflict occurring thus helping to bolster trust. This paper also shows that organisations can facilitate changeability within cooperations by keeping a balance between trust and control.

Keywords: Trust, Intermunicipal cooperation, Interorganisational trust, R7, Sydarkivera, Sambruk

Abstrakt

Informationsteknologins utveckling inom arkivsektorn har lett till utmaningar i etableringen av tillit till information. Denna uppsats undersöker på vilka sätt svenska kommuner och landsting som samarbetar utvecklar tillitsfulla relationer i denna moderna miljö. Kommunala samarbeten har gått från att huvudsakligen vara lokala angelägenheter med ett fåtal aktörer för att lösa lokala problem till att fokusera mer och mer på arkiv-politiska problem (såsom gemensamma standarder) på en större skala. Denna förändring har lett till en ökning av så kallad *institutional distance* mellan aktörer vilket i sin tur påverkar hur tillit skapas inom organisationella relationer.

Uppsatsens syfte är att lyfta fram hur interorganisationella tillitsrelationer skapas och underhålls för att på så sätt underlätta utvecklandet av kommunala samarbeten inom arkivsektorn.

Frågeställningen är; *Förändringar inom informationsteknologi området har påverkat hur kommuner säkra informationstillit. På vilka sätt har dessa förändringar påverkat metoderna som kommuner använder sig av för att skapa och utveckla organisationstillit inom kommunalsamarbete?*

Undersökningen utförs genom en kombination av dokument analys och kvalitativa fallstudier. Litteraturen består huvudsakligen av akademiska artiklar inom ämnen tillit och kommunalsamarbete. Artiklarna har samlats från en del olika fält såsom; arkivvetenskap, datavetenskap and organisationssvetenskap. De tre fall som presenteras i denna uppsats är; Sydarkivera, R7 och Sambruk. Samtliga fallstudier finns inom Sverige och är representerar politiskt styrda organisationer. Kommuner, Landsting och Region är alla representerade inom dessa tre. Fallstudierna undersöks via en kombination av intervju och dokumentanalys. Resultatet av denna undersökning jämförs med resultatet av den tidigare dokumentanalys.

Denna uppsats presenterar slutsatsen att skapandet av formella överenskommelsen såsom *Service level agreements* spelar en avgörande roll i utvecklandet och underhållande av tillitsfulla relationer inom kommunalsamarbete. Formella överenskommelser agerar både som kontrollmekanism för att förebygger opportunistisk beteende, såväl som plattform för att presentera partiernas förväntningar inom samarbeten. Denna tidig gränsdragning kan, i sin tur förebygger uppkommande av konflikt och således underlätta tillit. Denna undersökning även diskuterar hur organisationer kan främja flexibilitet inom samarbete genom att skapa en balans mellan tillit och kontroll.

Nyckelord: Tillit, Kommunalsamarbete, Interorganisational tillit, R7, Sydarkivera, Sambruk

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Introduction

As a result of the developments in information technology since the turn of the century, municipalities have been forced to develop measures in order to guarantee the long term informational trustworthiness of their archives. As these measures require resources and competence to complete, a factor which pulls strongly in the opposite direction making this difficult is the continued urbanisation of Sweden. This often leaves municipalities with insufficient resources to develop and operate digital archive solutions. Many such municipalities are choosing to work smarter and cooperate with other municipalities in order to consolidate resources and make higher level decisions. This is necessary due to the fact that today's archival problems are often on a macro scale leading to increased interrelatedness between municipalities.

In order for municipal cooperation in the development of archival systems to be successful, trust between cooperating municipalities must be established and maintained. In order to initiate archival development projects, municipalities need to feel relatively certain that their cooperation partners are going to meet their expectations. These expectations can include; economic commitment, the production of good quality work and the will to work in the best interests of the municipality.

Purpose

This paper will analyse how municipalities trust within the context of intermunicipal cooperation in digital record keeping technology. In other words, how do these organisations create trustworthy relationships while working together to solve informational trust issues. The focus of this paper will be on the intersection of informational trust and organisational trust with a somewhat stronger focus on the latter. An aspect that will be explored is how municipalities create trust within new intermunicipal cooperations.

Firstly the nature of informational trust will be defined and explored. Informational trust in archives is vital due to the fact that records are of little value to organisations and the wider public if their content is not trustworthy. Informational trust is defined by Duranti as trust in the authenticity, accuracy and reliability of records (Duranti, 2012:1). The second and principal type of trust that will be analysed here is interorganisational trust within the context of intermunicipal cooperations (IMCs). Habib defines the concept of interorganisational trust as, "predicting the future behaviour of a partner in a situation involving uncertain outcomes" (Habib, 2012:6). Interorganisational trust will be analysed from the perspective of the establishment of trust placed upon phenomenon such as; certifications, standards as well as the establishment of interorganisational relationships within IMCs. The ways in which organisations trust within today's modern cooperation forms will be

another focal point for this paper.

In this paper I will discuss the following question;

Changes within the area of information technology have affected the ways in which municipalities secure informational trust. How have these changes affected the methods in which municipalities create and develop organisational trust within intermunicipal cooperations?

Limitations and inclusions

This investigation will focus exclusively on the development of IMCs in Sweden. Whilst IMCs are not by any count exclusive to the Swedish nation it was deemed most relevant for the study to compare cases that face similar legal and societal conditions.

Cooperation involving the development of digital information technology is still a relatively new development. Whilst there are a number of such IMCs in full operation many of them are still under the process of development and thus their final formation is often partly undetermined. In the case of incomplete development in the case studies a note is included.

The FixaMinGata and UVAS projects that Sambruk developed do not directly involve archival functions. They are included in this study as they are an excellent example of how IMCs can regulate trust in the development of open source software.

Due to somewhat limited research within the area of trust from an archival perspective, literature from other subject areas will be used when deemed appropriate. The use of theories and insights from other areas of study in this paper has been fruitful.

Terminology

Benefit realising – In Swedish: Nyttorealiserings.

Cooperation – Two or more party's working together to achieve mutual goals (Goo, 2008:222).

CC – County council [Landsting]. County councils are politically steered organisations whose primary purpose is to administer an area's healthcare. County councils are similar to municipalities in that they are politically steered organisations that are responsible for services within a clearly defined geographic area.

Eard – Was an e-archive and e-register project led by The National Archives of Sweden. The purpose of this project was to develop FGS' (<http://riksarkivet.se/fgs-earkiv>).

FGS – Common Specifications for Government Agencies [Förvaltnings Gemensamma Specifikationer]. FGS's are common metadata standards that allow for the transfer of data

between organisations while retaining the authenticity of information.

IMC – Intermunicipal cooperation. Refers to the consolidation of municipal resources in order to solve a mutual problem or to reach some other mutual benefit.

Interoperability – The ability to safely transfer data between organisations or parts of the same organisation.

Interpares – The International Research of Permanent Records in Electronic Systems. Is a work group that's purpose is to create knowledge about the long-term preservation of authentic digital records (www.interpares.org).

Municipality – In Swedish: Kommun. Is a politically steered organisation that is responsible for the delivery of services such as schools and rubbish collection within a clearly defined geographic area.

OAIS – Is a broad framework for the development and day to day management of e-archives. It was originally developed by NASA.

Organisation – A group of people with similar goals and values.

PAIMAS – Refers to the description of phases that help enable the delivery of authentic data between the information producer and the e-archive (Consultative Committee for Space Data Systems, 2004:1).

Resources – An organisations money and time.

SKL – Swedish Association of Local Authorities and Regions – In Swedish: Sveriges Kommuner och Landsting.

SLA – Service Level Agreement. This is an contractual agreement that stipulates the conditions under which services will be provided.

SLL – Stockholms County Council – In Swedish: Stockholms Läns Landsting.

The National Archives of Sweden – In Swedish: Riksarkivet.

The National Archive Act – In Swedish: Arkivlagen.

The Patient Data Act – In Swedish: Patientdatalagen.

The Swedish Local government Act – In Swedish: Kommunlagen.

Union agenda – In Swedish: Förbundsordning. This is a document that stipulates a municipal union's purpose as well the conditions under which decisions are to be made within the union.

XML – Extensible Markup Language. Is a code system that helps facilitate the interoperability of data between data systems. It is an open and flexible system that allows users to define the values of elements (Webopedia).

Method

Data for this paper will be collected using the methods of document analysis and interview and then be qualitatively analysed. The literature studied and referenced amounts to approximately 30 sources of information including peer reviewed articles, websites, books as well as workshops recorded via video. Peer reviewed articles were sourced by an internet search with the Primo search engine. The initial search words of *intermunicipal cooperation trust* revealed few relevant results. The search was then broadened by using the terms *interorganisational trust* and then *trust archival science*. These search terms achieved satisfactory results. Many useful information sources were subsequently uncovered via the reference section of articles found via these searches.

Document analysis is a method whereby the researcher selects the most relevant information from a text and subsequently compiles them in order to form an argument. Academic research was chosen as a preferential literary information source as it is quality assured by peer regulation. Documentation from the cooperative organisations was also a prioritised source as they represented an opportunity to gain insight into the organisations activities. Videos were also used as a source of information. A recorded workshop was used as an information source regarding benefit realising. This source was chosen because of its pedagogical nature and connection to a practical application. It was found via a google search using the term *nyttorealiserings [benefit realising]*. The video recording of Simon Sinek's lecture on the nature of trust is another exception. It was included due to the fact that he conveyed a perspective on trust that was not found within the academic sources. This video was stumbled upon unwittingly in my free time after searching youtube.com using the terms *trust Ted talks*.

Ascertaining how municipalities trust within IMCs can be a difficult task. This is due to the fact that trust is not always represented within an organisation's documents, it can just as well lay under the surface as a subjective feeling. In order to gauge the nature of the organisation's trust relationships it will sometimes be necessary to read between the lines. For example amongst the actions of organisations and the presence or non-presence of documentation.

Representatives from the three organisations were interviewed via telephone and/or questionnaire. The interview method was primarily used when the information was not available from the organisations website. It was in other words deemed preferential to cite a document than an interview reply. Questionnaire was primarily used as an interview form when it was preferred by the interviewee but was also used extensively for follow up questions.

The cases of inter-municipal cooperation in this study were primarily concerned with the development and long term operations of community cloud services. Cooperation was pertinent for small and large municipalities alike due to the high level of competence that the development of

these cloud services inherently demand. According to MSB the development of cloud services is a comprehensive process that needs to take many factors into consideration such as;

- The information needs of the organisation.
- Which information types the organisation has and the appropriate level of security for each information type.
- How the cloud service is going to be integrated into the current information systems in a trustworthy manner.
- How are the legal and practical needs of the organisation going to be fulfilled (MSB 2013:27).

Sydarkivera is a newly established municipality federation (January 2015) which involves ten small to medium sized municipalities based in the south east of Sweden as well as the region of Blekinge.

Sydarkivera has recently taken on the role as the member organisations archive authority.

Sydarkivera's primary role is to help develop the member municipalities archival operations, specifically via the development of a communal digital archive (Sydarkivera, Nyttoplan, 2015:4).

They also aim to raise the archival competency of the municipalities involved by executing education projects (Sydarkivera, Nyttoplan, 2015:22). According to Elin Jonsson, Sydarkivera's digital archive project is still in the planning stages though preparatory pilot projects have begun. Elin Jonsson is an archivist employed by both Våxjö municipality and Sydarkivera and is also an interviewee. She gave comprehensive replies to the seven question formula she was sent via email (appendix 1). A more comprehensive formula was not deemed necessary due to the generous amount of documentation that the organisation presents on their website.

The Sydarkivera organisation was chosen due to the fact that they are in the process of developing e-archives and are doing so through intermunicipal cooperation. It was seen as advantageous that the project was still under development as it allowed the observation of the early stages of trust establishment.

Sambruk is a well established, independent, member controlled organisation whoms primary role is to facilitate cooperation between municipalities in the delivery of e-services. Sambruk is involved in a large number of such development projects (Sambruk, Om Sambruk). The primary reason that Sambruk was included in this paper was the SGM framework that Sambruk uses to aid in the trustworthy development of open source software. This paper will cover aspects of the open source e-service projects *FixaMinGata* and *UVAS*. Whilst these projects themselves are not directly related to the subject of archival development they are nevertheless a useful tool to help shed light on the subject of intermunicipal trust within e-development.

Sambruk, in conjunction with 16 municipalities has further developed the open source web based application FixaMinGata (in English 'Fix my street'). FixaMinGatas purpose is to assist citizens with reporting problems with facilities that local governments are responsible for (for example street lights that are out of order or holes in the footpath). Communication between the municipality and citizens is two way, once the problem is fixed an email is sent to the citizen and a notice posted on the website that informs the public that the problem has been fixed. The application can either report by sending emails to the municipality that is to receive a report or the municipality can choose to incorporate the application into the current information system.

Sambruk, in conjunction with Trelleborg municipality and six other municipalities is in the process of developing a service called UVAS (also known as UKAA). The project is administered by member municipalities through Sambruk's cooperation concept (Sambruk, UKAA). UVAS is a multi-tenancy web based application that acts to aid in the documentation and following up of teenagers under the age of 20 that neither work nor study. Its primary function is to help consolidate case information and to automatically report to the National Agency for Education. Another function of the project is to provide reliable statistics to national databases.

I studied Sambruk via documentation available from their webpage as well as via an email questionnaire sent to Lotta Ruderfors, a project coordinator at Sambruk (appendix 3). Due to the generous amount of documentation available from their website extensive interviews were not deemed necessary. I have previously written a paper that heavily referenced Sambruk. The fact that I already knew about the existence Sambruk and had a contact within the organisation could possibly have affected my choice of case study.

R7 is a cooperation between nine county councils (CCs) located mostly in central Sweden. They have established a municipal union in order to develop, host and administrate a community cloud based e-archive for members; patient journals, register, personnel as well as general economic records. The operations and servers are based in and operated by Örebro CC. The R7 e-archive is an intermediate archive designed for records that are for seldom needed. R7 was chosen as a case study as it involved both modern archive development and cooperation between politically steered organisations. I conducted a short telephone interview with Leif Sandberg, the administrative leader of the R7 organisation. The interview took approximately 11 minutes and included 11 questions. Follow up questions were later sent and answered via email (appendix 2).

Aspects of these three case studies will be deconstructed and qualitatively analysed using an array of trust and IMC theories analysed in the literature study. The extent and nature of the IMCs interorganisational trust will be analysed according to their actions within the process of cooperation and to interview replies.

Disposition

Firstly the result of the literature analysis will be presented. This includes an in depth exploration of the concept and theories of trust and intermunicipal cooperation. Thereafter the three case studies will be presented on a case study by case study basis and juxtaposed against these trust and IMC theories. Finally the further discussion and concluding remarks sections will present the findings in a consolidated format.

Previous research

Despite its importance and burgeoning popularity the intersection between IMCs and trust is an underrepresented area of academic research. J.R Hulst shares this sentiment, “In spite of being relatively widespread, inter-municipal cooperation has hardly been subject to international comparative research.” (2009:264). There is on the other hand a number of good quality research papers that tackle the matter. Professor Luciana Duranti has written a number of articles on the subject of informational trust in the digital archives such as, *Trust in digital records: An increasingly cloudy legal area* as well as a well regarded article written in conjunction with the APA/C-DAC conference; *Digital Preservation and Development of Trusted Digital Repositories*. Unfortunately but for the possible exception of Duranti's work I have yet to discover research on the intersection between IMCs and trust within the context of archival science. This is the area where this paper will make modest inroads.

Castelnovo & Simonetta analyse the aforementioned intersection in the article, *Building Trust within Inter-Municipal Cooperation*. This article thoroughly explores the respective roles of the individual and the organisation within interorganisational trust relationships. Akbar Zaheers article, *Does Trust Matter? Exploring the Effects of Interorganisational and Interpersonal Trust on Performance* tackles similar issues in a similarly thorough manner. One area which he analyses more thoroughly than Castelnovo & Simonetta on the other hand are the ramifications of interorganisational trust.

There is an abundance of research on trust in the area of commerce, much of which is applicable for this study. In 2002 Jøsang and Lo Presti published the article, *Analysing the Relationship between Risk and Trust*. This article concentrates on the push pull effect of trust – risk relationships. Another perspective on trust relationships can be gleaned through Germain and McGuire's article, *The Role of Swift Trust in Virtual Teams and Implications for Human Resource Development*. This article tackles the problem of modern societies need for the immediate establishment of organisational trust. Geoffrey Yeos article *Trust and Context in Cyberspace* explores the roll of transparency in the establishment of trust. Goo & Huang's, *Facilitating*

Relational Governance through Service Level Agreements in IT Outsourcing investigates the relationship between service level agreements and interorganisational trust.

Other articles relevant to this study cover the background causes of and the politics behind IMCs. Victor Mazzalays article, *Subnational Regionalisation in Argentina: The Effects of Subjective Interdependence and the Relationships between Actors on Intermunicipal Cooperation*, explores IMCs on a macro level, under what conditions IMCs are needed and the constellations in which they are built as well as on a meso level, focusing on for example what role social capital plays within IMCs.

During the last few years there has been a surge of practical interest in the area of IMCs in regards to digital records management. A number of Swedish bodies have been created for the research and development of such projects such as Sydarkivera and R7. The Swedish Civil Contingencies Agency (MSB) has developed a guidebook (*Vägledning: Informationssäkerhet i Upphandling*) that partially tackles the subject of cooperation in digital records management. There are also larger knowledge creation project groups in progress such as the Article 29 Data Protection Working Party and InterPares Trust that are focusing on areas related to trust in the archive. The InterPares Trust workgroup focuses on informational trust in digital record keeping. They have a working relationship with the Mid Sweden University in Härnosand.

Background

Trust in information, people and organisations is crucial in order for societies to be able to function effectively or in other words, or as John Locke stated, “trust is the bond of society” (Yeo, 2013:214). It would involve too much time and effort for an organisation to deeply analyse the potential consequences of each and every impending interaction or transaction with another organisation. Therefore an important issue in regards to the conducting of business is the creation and maintenance of interorganisational trust relationships.

According to The National Archive Act (1990:782) municipalities are legally obligated to preserve and make public records openly accessible so that they are available for the use of current and future generations. Municipal organisations role in this respect is to preserve archival information in a way that maintains the informational integrity of data in order to ensure the trustworthiness of information. The preservation of informational trust is the backbone of archival science and indeed also of public organisations archival functions. This directly relates to what is sometimes referred to as the only theory of archival science, *Respect de fonds* or the *Principle of provenance*. This theory is based on the notion that archives communicate meaning via the preservation of original order or context (Hensen, 1993:67). When archiving paper documents

respecting the principle of provenance involves preserving the original physical order of the documents. Due to developments in information technology, specifically the rise of the use of digital information in public organisations the principle of provenance is proving harder to follow. In digital environments it is common for data to have multiple provenances making the preservation of contextual links a challenge for many organisations. There are also challenges in the long term preservation of digital information related to for example the storage of data in obsolete formats.

The introduction of digital archive technology has led to an increasing level of pressure being placed upon municipalities to perform more complex archival processes, “that require a large or increasing scale of production” (Hulst, et al, 2009:264). Many small municipalities lack the resources and specialist competence that is needed to tackle these challenges (Nergelius, 2013:22). A large contributing factor to this lack of ability is the process of urbanisation in Sweden which has left many municipalities with low populations, few resources and quite often a lack of IT archivist competence (Nergelius, 2013:5+12). According to Nergelius this is a rising problem as the number of Swedish municipalities with populations of less than 10 000 people are increasing by approximately two municipalities per year (Nergelius, 2013:7). Unlike central governments, municipalities only have a limited ability to raise taxes to increase funding (Citroni, 2013:209). For these reasons, municipalities seek alternative ways of meeting archival challenges such as the creation of IMC partnerships (Hulst & Monfort, 2011:122). IMCs involve the pooling of municipal resources and competency in an attempt to enjoy the inherent resource savings of economy of scale whilst also enabling an increased scale of production (Hulst & Monfort, 2011:122). The creation of IMC bodies generally leads to the creation of new municipal structures and the subsequent resolving of some older organisational structures (Nergelius, 2013:11).

Result

Literature analysis

Trust overview

After an initial general definition of the subject, the concept of trust will be divided into two categories with widely different character; Informational trust and Organisational trust. Whilst the concept of trust can be approached from a number of perspectives, Luciana Duranti's definition strikes at the core of the concept of trust;

“having the confidence to act without the full knowledge needed to act. It consists of substituting the information that one does not have with other information” (Duranti, 2014:61)

The philosopher Anette Baiers definition on the other hand implies that trust includes an inherent aspect of risk;

“Trust is accepted vulnerability to another's possible but not expected will” (Frowe, 2005:43)

This concept will be discussed in greater detail in the organisational trust section.

Geoffrey Yeos comments on the inherent subjectivity of trust are equally applicable to the application of trust to information sources as to the application of interorganisational trust;

“Trust is a matter of choice; I may choose to trust a particular resource and you may choose not to trust it” (Yeo, 2013:224).

According to Frowe, trust can be broken up into two categories; *Primary trust* which concerns parties that have made a conscious agreement to act in an agreed way and *secondary trust* which concerns trust in situations in which there is no preexisting agreement in regards to how the organisation should act (Frowe, 2005:36).

Informational Trust

Duranti refers to informational trust in terms of the *authenticity*, *reliability* and *accuracy* of records (Duranti, 2012:1). The term authenticity refers to the integrity of a record or whether the record is what it is purported to be. According to Luciana Duranti the integrity of records is based upon two principles, “the principle of non-interference and the principle of identifiable interference” (Duranti, 2014:55). In other words, if a record has been interfered with then this should be reflected in the metadata. According to InterPARES 2 the reliability of records refers to whether the information presented is a correct “statement of fact” (Lee, 2005:1). Accuracy on the other hand refers to the truthfulness of the facts that the record presents (Lee, 2005:1). The dynamic nature of digital records has led to challenges in securing these three factors (Lee, 2005:1).

Prior to the introduction of digital information technologies into municipality administrations the method of archive building in Sweden was relatively stable. Emil Hildebrands

archival description standard, the *Allmänna arkivsystemet* was introduced to Sweden in 1903 and was the archive description standard for municipalities and most other organisations for a period of more than 100 years. Indeed this method is still in use within many organisations. During much of this time period information was archived in formats that did not require special technology in order to be readable, for example paper and microfilm. It was relatively difficult for outsiders to corrupt this information as it was locked up in the archive under the care of the archivist. The representation of provenance was also relatively simple as documents were archived in their original physical order.

As a result of developments within digital record keeping technology and changes in societal attitudes, trust in the quality of records is changing in character. One of the contributing factors behind this is the shift in societies attitude towards professional trust. According to Ian Frowe, professional trust is based upon the legal and moral legitimacy of professionals. Legal legitimacy is defined as the amount of legal power at a professionals disposal and moral legitimacy being the credibility eschewed to professionals by members of the public (Frowe, 2005:42). The moral and legal legitimacy of professions are not mutually inclusive. There can be high legal legitimacy without high moral legitimacy and so on (Frowe, 2005:42). According to Yeo, high levels of trust were previously placed, "in professional experts and institutions" as guarantors of the trustworthiness of records (Yeo, 2013:214). The levels of professional trust eschewed in archivists and information sources today can be described as somewhat more sceptical. According to Yeo the waning of professional trust has exacerbated the effects of informational trust issues within digital record keeping (2013:217+218). Yeo notes on the other hand that whilst trust in the objectivity of records is waning there is often still trust in what the organisations tell us, or the *reliability* of information (Yeo, 2013:220).

While records were previously often trusted at face value due to the inherently objective, professional and trustworthy nature of public officers such as archivists, trust has now shifted towards trust in the objectivity of the informational sources themselves. David Weinberger defines the current situation of informational trust using the phrase, "transparency is the new objectivity" (Yeo, 2013:214). Today, trust in information is enabled largely through the records ability to provide solid evidence of its own provenance and integrity. When this traceability has been established information types can often be accepted at face value rather than analysing the individual merits of every transaction (Yeo, 2013:216).

Duranti explains that integrity is an especially important quality in digital environments due to the fact that the ability to duplicate exact copies of data sets is integral to the preservation of information (Duranti, 2014:55). In other words digital information is dependant upon being copied

in order to survive. Another development in digital record keeping that has resulted in the erosion of informational trust is the ability to alter and de- and recontextualise data. Whilst the ability to recontextualise data is often seen as one of the strengths of digitalization (see open data for example) the recontextualisation of data often leads to problems in ascertaining the provenance of data.

Brendan Asogwa presents a concise explanation of some of the most important issues affecting the long term accessibility of trustworthy digital information;

Changes in information and computer systems require that information be migrated to new technologies if the information is to remain accessible over time. This process of migration can affect the authenticity and reliability of information, as the process itself can change the content or structure of the records. Unlike paper records, which can be moved, filed, re-filed, copied and otherwise used and re-used without change, electronic records need to be managed and preserved in such a way as to secure their authenticity as evidence (Asogwa, 2012:206).

Another aspect concerning the trustworthiness of digital information is the fact that to ensure integrity and provenance even the metadata itself must be deemed trustworthy (Yeo, 2013:225). Ian Frowe states that if we seek to reduce risk by using mechanisms even the mechanisms must be trusted (2005:38).

Data that an organisation has created or administers is often not for the exclusive use within that organisation, it often needs to be shared with other organisations in a trustworthy manner. In any case, in accordance to The Archive Act (1990:782) information produced in municipalities needs to be made accessible to the public for the purposes of democracy and future research. So organisations need to be able to share and reproduce data in a way that secures its informational integrity. organisations have been dealing with this via the authentication of documents for hundreds of years by measures such as markings and registers for example. The volatile nature of digital data in regards to both context and content in conjunction with the information explosion that has occurred during the last few decades has resulted in integrity challenges that have not been experienced previously.

A serious problem that organisations face is the threat of information losses through the lock-in of information in databases due to obsolete standards and lack of export ability. This is one of the largest issues in the R7 and Sydarkivera case studies that will be presented here.

As previously stated the securing of informational trustworthiness of digital data sources requires relevant know how and in many cases the investment of substantial amounts of time and money. In many cases organisations make these investments in conjunction with organisations that have not previously been encountered. This leads us to the subject of interorganisational trust.

Despite the fact that trust has shifted away from professional objectivity towards the transparency of information itself, ultimately chains of trust inherently lead to trust in organisations.

Organisational Trust

The ability to apply collective action is an important enabler within human society. Collective action is dependant upon the existence of trustworthy communication and relationships. Without the ability to judge the correctness and sincerity of potential transactions the ability to coordinate collective action is severely paralysed (Frowe, 2005:38). Frowes statement here can be likened to the *prisoners dilemma*. According to the prisoners dilemma cooperation between two criminals results in a satisfactory outcome for both parts, but betrayal by one party will result in severe consequences for the other party and relatively good results for the betrayer. As the trust relationship between the criminals is weak and the result of betrayal is severe the chance of success is also weak.

Due to the fact that individuals and organisations cannot completely control another party's actions trust inherently involves aspects of risk and uncertainty. Should there exist complete control of another party's actions then the act of trust is superfluous (Frowe, 2005:38). The same can be said of the opposite situation, if there are no expectations of the other party's actions then trust is not needed either (Perks, 2003:339). According to Jøsang & Lo Presti the amount of trust that should be eschewed can be determined by comparing three factors;

- The amount of damage that can occur in the case of failure is compared to;
- The risk of the failure such as failure occurring.
- These two factors are then compared with the potential rewards of trusting (2002:5).

Jøsang & Lo Presti also state that there is a direct correlation between the concepts of trust and risk;

“The concept of trust is particularly useful in a context of relative uncertainty where a relying party depends on another party to avoid harm and to achieve a successful outcome.” (Jøsang, 2002:9)

Jøsang & Lo Presti also state that, “risk and trust pull in opposite directions to determine a user's acceptance of a partner” (2002:2). Where there is high probability of risk or a serious consequence of failure there is a relative need for higher trust. Some risks on the other hand are so serious that trust is not possible despite potential economic or qualitative gains (Jøsang, 2002:2).

Levis *Transactional Cost Framework* outlines the resource tension between trust and enforcement. In other words, the risk of trusting is compared to the costly and time consuming alternative of enforcement. According to Castelnovo & Simonetta trust is a facilitator within IMCs that require, “continuous adaptations in the ways of production and supplying of services” as the

establishment of controls for all aspects of cooperation is, “difficult or too expensive” (Remenyi, 2008:5). High interorganisational trust is thus inherently economically positive in the case of reaching agreements as they are made more quickly and with lower transactional costs. This is based on the assumption that high trust environments organisations do not need to build in comprehensive safeguards against organisations potential, opportunistic behaviour (Zaheer, 1998:144).

Levi also introduces the idea of *institutional distance*. This builds on the idea that the establishment of trust between similar institutions involves less risk than cooperation between institutions that are more different or have a larger institutional distance. This is due to the fact that similar organisations are likely to have similar goals and values (Lubell, 2007:239). For example, neighbouring municipalities are likely to share a short institutional distance whereas a municipality and a CC from different regions are likely to have a larger institutional distance.

Much like the theory of institutional distance the *Advocacy Coalition Framework* is based on the idea that trust between organisations relies on the similarity of policy-core and secondary beliefs of the truster. Policy-core beliefs are the “process and goals of policymaking”, or the '-isms' whereas secondary beliefs are of the “concrete beliefs about elements of a policy domain” (Lubell, 2007:239). Municipalities are more likely to cooperate and trust when they share the same policy-core beliefs. Secondary beliefs about policy domain may not promote trust and cooperation if the policy-core beliefs of the organisations are not aligned (Lubell, 2007:239).

The decision to trust in a transaction or another organisation is not always based upon objective trust/risk reasoning. Subjective factors such as the, “mood in the particular context” or gut feeling can also be involved (Jøsang, 2002:7). Luciana Duranti makes a similar point explaining that interorganisational trust often depends upon party's abiding by unwritten cultural rules rather than only following the letter of the law (Duranti, 2014:34). Simon Sinek provides an excellent example of the social aspect of trust. He hypothesises that two business people meet and agree on the terms of a deal. The first party stretches out her hand for a handshake that the other party refuses to shake. Due to the social faux pas of the second party the trust instilled in that party is likely to be lower than if he had followed the social convention (Sinek, 2011).

There are varying views on the relationship between personal and organisational trust. Interpersonal trust is often based upon subjective criteria such as feelings and communication skills as well as the emotional bond between the party's concerned (Remenyi, 2008:9-10). According to Skytt and Winter, trust relationships can be developed through personal contact over a number of years in both professional or social capacities. Maskell and Malmberg theorise that strong personal trust is transferrable to the realm of organisational trust (Skytt, 2011:38). As the person is trusted, so

is their judgement in coworkers and cooperation partners. Castelnovo & Simonetta claim on the other hand that trust within IMCs can be seen to exist on two separate levels; *interpersonal trust* and *interorganisational trust*. The existence of strong interpersonal trust between for example two managers from different organisations does not necessarily translate into strong interorganisational trust between those organisations. The opposite can also be stated, there can exist strong interorganisational trust in for example organisational policy without the existence of strong interpersonal trust between managers (Remenyi, 2008:7). According to Zaheer interorganisational trust is somewhat of a misnomer as organisations themselves do not trust, it is individuals within organisations that are involved in trusting (Zaheer, 1998:141). According to this line of thought interorganisational trust thus refers to the level of trust eschewed between a large number of individuals within organisations (1998:143).

Trust relationships between organisations have traditionally been based upon the establishment of interorganisational and interpersonal relationships. According to Duranti, interorganisational trust can be analysed from the perspectives of *reputation*, *performance*, *competence* and *confidence*. Reputation refers to how trust-worthily the organisation has performed in the past. According to Castelnovo & Simonetta reputation is linked to the term predictability which is the ability for a party to forecast another party's probable action (Remenyi, 2008:6). Reputation can be determined for example through independent reviews or via word of mouth. Performance, refers to, “the relationship between the trustee’s present actions and the conduct required to fulfil his or her current responsibilities as specified by the trustor” (Duranti, 2014:62). Or in other words, how trustworthily has the individual or organisation acted in past transactions. Competence refers to the organisations ability to perform a process. For example, trust that they have the infrastructure and the knowledge to complete the required task. Confidence on the other hand refers to the organisations will to fulfil that task in the required way (Duranti, 2014:62). For example, an organisation may have the ability to create a program that is going to fulfil our needs but do we believe that they are going to develop the program on time and to the best of their ability? According to Castelnovo & Simonetta confidence is related to the term *benevolence* which refers to belief that the other party, “is motivated to act in one's interest” (Remenyi, 2008:6). Lubell confirms the previous theorists stance when stating that qualities that promote trust between party's are; a history of trustworthiness, having similar goals and interests as well as having relevant competence. In other words the organisation, “is willing and capable of keeping promises” (Lubell, 2007:239).

According to Habib, in many cases it is not sufficient for the service provider to state what they can achieve, they need to, “credibly represent its ability to meet the consumer’s requirements” (Habib, 2012:7). A strategy used to provide evidence of trustworthiness is the certification from

other trustworthy party's (Habib, 2012:7). In this case, trust in an organisation can be strengthened by association to other trustworthy organisations and standards. An issue connected to this form of trust is that trust chains can become excessively long and indistinct (Huang, 2013:12). For example, organisation A is trustworthy because they they are certified by organisation X. Organisation X is then certified by organisation M which is served by B standard and organisation J and so on.

Mazzalay states that interorganisational trust can be attributed to the establishment of social capital, “which is formed by norms of reciprocity and networks” as well as by “sustained interactions over a long period of time” (Mazzalay, 2011:457). Goo & Huang comment that organisations that embark on comprehensive cooperations with other organisations tend to focus on the establishment of strong relationships prior to commencement (2008:223). These established networks allow the flow of information and resources within IMCs (Mazzalay, 2011:457). The existence of social capital and trust between organisations has been shown to help reduce conflict in the case of opposing views (Mazzalay, 2011:457-458). According to Mazzalay the establishment of social capital is built upon, “frequent daily relationships, the exchange of information, and trust.” (2011:458). It is on the other hand common that the cooperating organisations are separated by great distances often making physical meetings prohibitive (Goo, 2008:227).

It is on the other hand not practical for all working relationships to be built around the traditional concept of time based trust. Modern forms of cooperation such as project work also require trust to operate but often require the fast establishment of trust in order to produce value within the relationship (Perks, 2003:341). Goo & Huang state that, “trust is more essential between strangers than when party's have interacted repeatedly” (2008:227). The establishment of this initial trust is often referred to as *Institution based trust* (Goo, 2008:227). Relationships may have the scope for development over time but initial trust allows constructive work to begin immediately. The *Swift trust theory* can be used to help understand the development of modern trust relationships. According to Germain, this entails that trust in a project group is initially assumed based upon external factors such as social skills. The organisation then has the opportunity to calibrate trust in relation to subsequent actions of the party (Germain, 2014:357). Example of these actions is promise keeping and demonstrating future commitment by investing (Perks, 2003:340+343). Similarly, according to Mark Lubell the *Generalised Trust Framework*, humans will generally enter new relationships with an individual or organisation with a presumption of trust. This trust is then reevaluated and adjusted according to the subsequent actions of the individual or organisation (2007:238).

Luciana Duranti refers to the phenomenon of *trusted oversight* (2014:32). Despite the initial existence of trust the future actions of the party is monitored in order to ensure future compliance

within the relationship. Huang and Nicol similarly state that party's should, "Trust, but verify" (Huang, 2013:3). Finally Frowe presents the theory of *cognitive-* and *non-cognitive trust*. Cognitive trust involves gathering information about the trustworthiness of a person in order to adjust future trust levels whilst non-cognitive trust is unconditional trusting (2005:39). Indeed the development of swift trust, the generalised trust framework, trusted oversight and cognitive trust are very similar in nature. They all feature cyclical development of trust; trust is established, calibrated then reestablished and so on.

According to Frowe the failure of an organisation to complete a task to the agreed level does not automatically lead to subsequent reduction of trust levels (2005:41). The failure to deliver may for example have been unavoidable and exposing the great lengths in which the organisation went to avoid failure may instead lead to an increase in trust levels between the organisations.

Inter-municipal Cooperation

Intermunicipal cooperation refers to cooperation over municipal boundaries in order to solve a task with better qualitative and/or quantitative results than what could be achieved by an individual municipality (Goo, 2008:223). According to Mazzalay, "Intermunicipal cooperation occurs when two or more municipal governments join forces to solve shared problems or realise common objectives" (2011:454).

Giulio Citroni refers to the IMC movement as the corporatisation of municipalities (2013:208). According to Nergelius, IMCs are usually created from a bottom up approach. In other words when municipalities face similar problems they seek relevant cooperation partners rather than cooperation being prescribed at a state level (2013:39). According to Citroni, municipalities also create IMCs with consideration to finding the optimal cooperative organisation size for delivering services to citizens (Citroni, 2013:210). Mazzalay states that the existence of trust between organisations does not necessarily result in an increased chance in establishing an IMC (2011:458). IMCs can be either single or multi-purpose and cross vertical or horizontal organisational boundaries (Rudie, et.al, 2009:272+279). Sydarkivera for example is a single task IMC that crosses both horizontal and vertical organisational boundaries as it involves both municipalities as well as a regional organisation and has the single task of the archival management. Sambruk on the other hand is a multi-purpose, horizontal and vertical IMC as it is involved in cooperation over an array of areas, between both municipalities and businesses.

In archival terms IMCs are often seen as a solution for small municipalities to complete complicated or expensive tasks despite a lack of human and monetary resources. On the other hand they can also be created by municipalities in order to achieve better quality service to the public or

indeed to operate more effectively (Hulst & Monfort, 2011:122). IMCs are often regional by nature although cooperations such as the R7 group has shown that this is not necessarily a precondition to the existence of IMCs.

According to Mazzalay there are a number of factors that affect the probability of the establishment of an IMC. The first of which being, “interdependence and convergence of objectives between localities” (Mazzalay, 2011:456). Interdependency means that cooperation between entities is essential in for the completion of objectives (Mazzalay, 2011:456). The convergence of objectives is, as the term suggests, the existence of a task which two or more municipalities are likely to complete in a similar way. Hulst & Monfort agree that interdependency plays a role in the creation of IMCs;

“Inter-municipal co-operation with respect to the co-ordination and planning of local policies serves as a strategy to cope with the presence of strong natural, social and economic inter-dependencies in a region” (2011:138).

Socioeconomic interdependence can act as an enabling factor or a hinder to the establishment of IMCs. Interdependency can either be seen as an enabling factor or a factor that creates negative tension between the party's (Mazzalay, 2011:457). An enabling factor is a factor which promotes cooperative action whilst negative tension is a factor which refers to the existence of competition and wariness towards the other party. Another prerequisite for the establishment of IMCs is the independence of policy creation (Rudie, et.al, 2009:264).

IMCs can be organised in a number of ways. One way being the development of IMCs within existing municipal structures by the creation of agreements such as when two municipalities cooperate in the joint employment of an archivist. Another way of developing IMCs is via the creation of municipal federations with representatives from the cooperative party's (Mazzalay, 2011:454). According to Nergelius these municipal federations are supported by The Swedish Local Government Act (3 cap. 20-28§§)(2013:21). These bodies can be publicly owned, privately owned or a combination of the two though all of the case studies presented here are publicly owned (Citroni, 2013:208). These bodies are primarily funded and controlled by the municipalities thus municipalities are able to exert political pressure on the bodies policies. The creation of municipal bodies is a result of the breaking down of strict municipal boundaries, “in favour of more flexible organising principles and policy instruments” (Citroni, 2013:208+211).

The nature of IMCs within the Swedish municipal archive sector seems to be shifting towards the creation of larger organisations that cooperate on a more archive-political level. In 2002 Hans Ramstedt wrote a magazine article concerning some of the difficulties that small municipalities in northern Sweden had concerning the delivery of archival services to their citizens.

The primary issue at the time was seen to be a lack of qualified archivists in the region. According to the article, municipalities in this region chose to cooperate by sharing in the employment of archivists in order to cover the basic archival staffing needs of the municipalities (Ramstedt, 2002:1). The cooperation between municipalities in this case was of a tactile nature involving the sharing of a limited physical resource. Obviously, the archivist being a physical thing can not be placed in more than one municipality at a time. Today whilst archivist staffing is still an issue in some areas, the balance seems to have shifted away from staffing issues to larger scale technical difficulties. Cooperation here is within non-tangible issues such as file- and metadata formats and export protocols. Today there is a growing number of IMCs with an e-archive development focus, some are established and whilst many others are in the starting blocks.

Case studies

R7

R7 was founded in order to help solve informational trust issues. The future access and integrity of CCs patient- and organisational data was at risk. The CCs were responsible for records held within hundreds of outdated information systems. These were challenging to keep operational due to their age and had weak searchability due to the large number of unintegrated databases in operation. According to Leif Sandbergs presentation these older information systems required running repairs in order to remain functional, a situation that was unsustainable. Relevant competence in these older information systems had become increasingly hard to find and was also expensive. The integrity of the hosted data was at risk due to the fact that the organisations did not have the knowledge or resources in order to export the data to new systems and formats. There was also no long term plan for the preservation of the organisations digital records. The CCs in conjunction with R7 investigated how this data could be extracted, transferred and stored in a matter that would secure long term informational trustworthiness.

R7 came to the conclusion that the CCs data could be exported according to the protocols developed during the eArd project. The databases were converted to XML format according to the standard metadata formats for the particular information types. XML format has the advantage of being an open and simple code language that enables the long term integrity of the data while reducing the risk of operator lock-in. According to Sandberg, metadata parameters or FGSs have been developed for each information type; patient data, log data, economic data and personnel data (Sandberg, Interview). The CCs can be said to be interdependent in this regard. Searchability is uniform across all information types both within and outside the organisation. The usage of standard metadata formats here enables collective improvement for all CCs involved as it allows the

searchability of several organisations systems simultaneously. This is particularly useful for research purposes.

R7 cooperate in this process via the collective development and recycling of data export process documentation. This allows for stronger efficiency within the organisations as the need for double work in developing these processes is reduced (Sandberg, Oct 2014:25). The fact that the organisations act on the documentation produced by other organisations implies a large amount of competency trust in the creating organisation. In other words they trust that the organisation that developed the process are capable of producing quality work. They also trust that the document producer shares the information in good will and does not wish to harm the receiver. On the other hand the CC that produced the documentation trust that the sharing of knowledge and resources will be reciprocated.

One of the more important issues that R7 helps to deal with is the integrity of personal information in digital environments. Asogawa states that;

Databases containing personal financial and medical records, for instance, may be extremely useful to the individuals themselves, but without proper security protections that information may also be accessed by others, thereby threatening the privacy of the owners (Asogawa, 2012:207).

According to Leif Sandberg cooperation can make tasks such as abiding by the Patient Data Act easier (Sandberg, R7 powerpoint, 2014). The intermediate archive containing patient data is only accessible through the local Sjunet system via secure access controls. Sjunet is a secure network that is completely independent from the conventional internet (Sandberg, 3/6/2014). This extensive security feature is only possible due to the sharing of resources of a number of organisations. It was acceptable for the R7 members to cooperate with Sjunet due to the fact that they are trustworthy due to their similar primary-core and secondary beliefs.

The Patient Data Act stipulates that access to patient records is restricted and that patients have the right to block access to their records. These restrictions require, among other things extensive security measures in regards to access to sensitive patient data. This has resulted in tight access restrictions to parts of the e-archive both inter- and intra-organisationally. Although all data is stored collectively in Örebro CCs server hall the organisations are only allowed access to their respective records. Furthermore, CC personnel have only limited access to their own CCs records. Personnels access authorisation to information types in the database is restricted according to user profiles and physically controlled via SITHS cards which are scanned and controlled against security software.

Analysing these access protocols against the transactional cost framework it is clear that the CCs have invested a large amount of resources into control mechanisms. Although the CCs may

well have been willing to entrust other organisations access to their patient data. The Patient Data Act effectively restricts the extent of possible interorganisational trust within R7. Although the organisations, except for the possible exception of Örebro CC do not have physical custody of their own records as a result of cooperation the integrity of data is likely to be bolstered as more resources for security and support of record keeping are available. The organisations use trusted oversight as a method to regulate trust in this situation, the organisations trust in R7's benevolence but have the opportunity to inspect operations in order to ensure compliance.

According to Leif Sandberg each of the CCs within R7 are still legally responsible for the compliance of data handling within the collective e-archive facilities. Whilst R7 provide collective inspection of the e-archives it is still possible for the municipalities to inspect the facilities themselves. Despite this it is, according to Sandberg, rare that a member chooses to inspect the archive independently. This demonstrates a high level of trust in R7's competency in inspection and confidence that they will fulfil their obligations in agreed manner. This can also be seen in the light of a trust – risk relationship. The gain in effectivity by trusting in R7's inspection function was deemed by most CCs to outweigh the risk and consequences of a breach of the law and/or loss of citizen confidence. Trusted oversight can be seen as a form of control here, helping reduce the risk of R7 reneging on their responsibilities. It seems as though trust here depends at least partly upon the existence of interorganisational trust relationships.

There was similarly high level of organisational trust in the conducting of risk analysis reports prior to the start of the project. According to Leif Sandberg a majority of R7's members chose to trust the risk analysis that R7 undertook. Two of the CCs on the other hand chose to complete their own risk analysis. Due to the large economic and organisational commitment that member CCs make within R7 this demonstration of interorganisational trust from the majority of members can be seen as significant. Failure of the project could have had expensive and embarrassing consequences for the organisations. It seems clear that for most municipalities the risk and the potential consequences of not completing their own risk assessment was worth the resource savings.

The R7 organisation cooperates with other organisations in order to solve problems regarding the divergence of formats and standards. According to Leif Sandberg, due to cooperation with Stockholm CC (SLL) R7 were able to take advantage of the developments in standard information type formats and export protocols. The use of these formats leads to collective benefits for the whole of the CC archive sector. These benefits rely on the continuing interdependency between both R7's organisations and other CCs. According to Leif Sandberg CCs are technically able to withdraw from the cooperation but considering how much R7 and other CCs have invested

in the projects the risk is not deemed to be particularly high. CCs also trust in the long term actuality of these standards so that their investment can be realised. The reputation of The National Archives of Sweden as a long term actor in the area can play a part in this trust.

According to The National Archives of Sweden multi-lateral cooperation between different archive organisations was crucial for the development of information- and archive systems that can support open standards (Riksarkivet, 2014:13). This is due to the large amount of expertise and resources that is needed for the development of such projects. R7 also cooperates closely with Region Skåne and SLL and has a more general partnership with The National Archives of Sweden, ENSAM and the Swedish Association of Local Authorities and Regions (SKL)(Torgén & Sandberg, 2013:13). The R7 organisation chooses to trust in format- and metadata standards developed by these organisations when developing their collective e-archive. Trust in this case refers to the competence of and confidence in the organisations involved. The National Archives of Sweden and SLL for instance have built up a capital of reputation based trust within the Swedish archive community. They are often seen as highly competent organisations within the area of digital record keeping. Whilst R7 is a newly created organisation the CCs represented within R7 have already established long term relationships with The National Archives of Sweden. Due to the fact that even SLL operate under The National Archives of Sweden supervision the competence of their work can be deemed as trustworthy by association. R7's confidence trust seems also to be well placed as SLL and The National Archives of Sweden have little motivation to act in ill will against R7. In fact, due to the interdependent nature of these organisations a negative result in the development of R7's archive would likely also affect the reputations of these organisations negatively. R7, SLL and The National Archives of Sweden can also be said to have similar goals and values or the same policy-core beliefs.

Despite the fact that the members may trust R7 on an informal level formal agreements are created for some functions. Service level agreements (SLA) were signed between member CCs, with Örebro CC as the service provider as well as with the R7 organisation itself. One of the SLAs that was created covers R7's system support function. This document outlines; the scope of R7's and members respective obligations to the system support function, the scale of the services that are to be provided and how the process of support is to be conducted. An example of scope in the SLA is that the individual CCs are responsible for first line support and that R7 is responsible for second and third line support. An example of the scale of the cooperation is the opening hours of the support function and the minimum response times to reported problems. An example of a service process that is outlined is; when second line support is needed then first line support is to make initial contact with second line staff.

Leif Sandberg was asked how the CCs were initially convinced of the trustworthy nature of the R7 organisation. He answered that the establishment of R7 was a decision taken by CC directors (Interview). The initial seven CCs are part of the Uppsala – Örebro health service region (Sjukvårdsregion). According to their website, the region has a working group comprised of CC- and regional directors (<http://svn uppsalaorebro.se/ltdirektorer.html>). The establishment of interpersonal and interorganisational trust (or wariness) between the CCs here had thus already been established through frequent personal contact and cooperation over a long period of time. Trust levels here have been honed by cognitive trust development cycles. This effectively gave the R7 organisation a head start when building initial interorganisational trust.

Sydarkivera

Sydarkivera state that they aim to help member municipalities develop completely digital processes. It is hoped that this will lead to more trustworthy information transactions and a greater stability of long term information. These benefits will be achieved by tending to suitable formats and standards when developing the communal e-archive system and by the organisations adherence to a functional preservation plan (Sydarkivera, nyttoplan, 2015:21). The development of an IMC here increases the availability of specialist competency and monetary resources available for development of e-archives.

Sydarkivera are in the process of developing data export and validation protocols to contribute to the informational trustworthiness of their members archive functions. According to Jonsson PAIMAS validation controls and the FGS export protocol will most likely be implemented here (Sydarkivera, lägesrapport, 2015:2). The National Archives of Swedens eArd report, explains that the use of FGSs can lead to better; interoperability, future compatibility and a stronger ability to apply the law (Riksarkivet, 2014:4). According to Jonsson, the levels of validation control that are to be applied to the e-archive will depend largely on the information type being exported. Validation control is defined as the testing of information delivery, to ensure that information has not been corrupted en route. Whilst at time of writing the specific methods have not been decided upon, methods such as checksums are according to Jonsson likely to be relevant in this case.

Cooperation in the area of data export protocol development is especially fruitful in this case as many of the member municipalities use the same information systems. The municipalities are thus able to share their knowledge about these older information systems. When necessary, Sydarkivera are also likely to be able to investigate system export for several municipalities at a time. Through cooperation the municipalities were, “able to use good examples to avoid unexpected hinders and risks” (Sydarkivera, lägesrapport, 2015:1). In other words the municipalities saved

resources by avoiding the need to develop their own processes from scratch while at the same time reducing the risk of failure. The sharing of competency and knowledge between organisations is dependant on a strong trust relationship with Sydarkivera and between municipalities themselves. Cooperation here is based upon the presumption of mutual benefit, the expectation of reciprocity, trust in the competency of the developer and confidence in their benevolence.

Sydarkivera have chosen to perform a collective *benefit realising* investigation prior to the commencement of the e-archive project. Benefit realising has recently been introduced into public sector organisations by the Swedish E-delegation department. Benefit realising is an investigation that aims to identify the potential qualitative and quantitative benefits of projects in order to help the organisation focus on realising them (Sydarkivera, nyttoplan, 2015:23). Benefit realising also involves predicting the possible positive and negative outcomes of proposed changes within the organisation. One of the organisational goals investigated by Sydarkivera was the quality assurance of information or in other words the ensuring of authenticity and correct handling of information (Sydarkivera, nyttoplan, 2015:15).

Benefit realising investigations can be seen as a measure taken by organisations in order to manage risk according to Jøsang & Lo Prestis trust – risk relationship. The municipalities have chosen to trust in Sydarkivera's competence as an investigator. They have also shown that they have confidence in the benevolence of Sydarkivera. Benefit realising can also be seen from the perspective of Lubells Advocacy Coalition Framework theory. The investigation ensures that the respective organisations policy-core and secondary beliefs are aligned. In this case due to the small institutional distance between the organisations it is likely that policy-core beliefs are already aligned. It is the secondary beliefs, the, “concrete beliefs about elements of a policy domain” that can be divergent (Lubell, 2007:239). In this case benefit realising can help members align these secondary beliefs to avoid potentially damaging assumptions in the planning stage and the resulting reduction in interorganisational trust.

According to Elin Jonsson, the preliminary plan is that it is likely that one or more of the Sydarkivera members will host the communal e-archive in house. The justification for the internal nature of storage is the perceived need for a, “high level of transparency and control over both logistical and physical storage” (Elin Jonsson, Interview). The current project development environment are municipal data halls within the region (in Växjö and Karlskrona). The consideration to host the communal archive in house can be seen as a reflection of the challenges involved in the trustworthy outsourcing of data storage.

Although according to Elin Jonsson the development of Sydarkivera's inspection protocol is still under development. Due to Sydarkivera's roll as the archive authority of the IMC, according to

the The National Archives Act, Sydarkivera will be responsible for archival inspection. The municipalities will on the other hand have the opportunity to inspect Sydarkivera's handling of the data that they have delivered to the archive. This can be analysed from Duranti's trusted oversight paradigm (Duranti, 2014:32). The municipalities believe that Sydarkivera will probably act responsibly, but by having oversight they are able to adjust trust levels according to Sydarkivera's actions over time. The possibility of control can also act as a motivator for Sydarkivera to act diligently.

The ability to perform trusted oversight here relies on the inspectability of Sydarkivera's archival facilities. Due to factors such as privacy and location it is often impossible or impractical to inspect archive facilities when outsourcing cloud based data storage services. According to Habib, the location and accessibility of servers is a concern for many organisations (Habib, 2012:1). If information is stored on a server in a second or third country there is not likely to be scope for regular inspections even if it were allowed by the company. Due to security reasons the inspection of servers in outsourced environments is often not allowed. This is due to the fact that the organisation in question is often not the only party that has information stored on the server. Giving organisations access to servers could thus compromise other party's information. Due to the geographic location and the fact that Sydarkivera are not likely to share the server environment with outside organisations they are able to be inspected by the municipalities. It is on the other hand probable that due to the high level of organisational trust between the municipalities that the independent inspection of the facilities will seldom be necessary. Unlike commercial data hosts who rely primarily on their reputation as trustworthy hosts and formal agreements to facilitate trust Sydarkivera is able to use transparency in conjunction with trusted oversight (as well as formal agreements) to facilitate trust (Habib, 2012:7).

Potential trust in Sydarkivera's inspection operations also relies partly on trust to outside inspection standards. Sydarkivera are planning on working towards the OAIS TDR ISO 16363:2012 inspection standard. This is a widely used standard that can be said to have attained a high level of reputation trust. The trustworthiness of Sydarkivera's inspection function is thus strengthened by association to the OAIS organisation and their reputation of trustworthiness (Habib, 2012:7). This relationship can also be said to constitute a trust chain where the municipalities trust in the OAIS standard via Sydarkivera's trust in the standard.

According to the eArd report most small and medium sized municipalities are not realistically able to develop their own metadata standards making FGS a very good option for municipalities (Riksarkivet, 2014:13). This is due to the fact that municipalities often have a weak ability to develop their own standards as well as weak ordering competence (Riksarkivet, 2014:13).

The use of FGSs can be said to constitute a relationship of interdependence between municipalities (and other public departments). For the the FGS standard to create most benefit it should be utilised by as many municipalities as possible. organisations data is organised and described in a uniform fashion and presented in the NAD national online archival inventory. This allows the collective benefit of searchability of many public organisations simultaneously (Sydarkivera, nyttoplan, 2015:17). Trust is placed in the competence of the standard developers. Due to the fact that The National Archives of Sweden are a well regarded organisation and their FGS and eArd standards are also well regarded the levels of trust are likely to be very high. The municipalities themselves also have an existing long term relationship with The National Archives of Sweden and have developed trust cognitively over time. Although the Sydarkivera organisation is newly established it is possible that their existing municipal trust in The National Archives of Sweden is transferred to Sydarkivera.

Elin Jonsson stated that municipal unions are a useful tool for making strategic decisions on an overarching level for several organisations at the same time (Interview). The union agenda helps define these strategic decisions, outlines the conditions under which cooperation is to occur, describes how decisions are to be made and how disagreements are to be solved. These documents have both a control function and a trust building function. Contractual agreements prevent organisations from acting opportunistically within the union by outlining rules as well as penalties for breaching them. The agenda also helps develop trust by preventing Sydarkivera's municipalities from making potentially incorrect assumptions about the nature of the cooperation thus avoiding conflict which can undermine interorganisational trust. In Sydarkivera's case cost sharing arrangements (among other policies) are established in the union agenda both to prevent opportunistic behaviour and to prevent conflicts at a later date (Sydarkivera's Förbundsordning, 2015).

According to Sydarkivera's website a relatively large number of physical meetings are held between the municipalities and Sydarkivera (<https://Sydarkivera.wordpress.com/>). These meetings are held on a political level where municipal leaders meet to discuss union policies as well as on a more practical level between Sydarkivera's representatives and the municipalities archivists and registrars. These physical meetings can help establish swift trust and interpersonal relationships through the expression of social competency (Germain, 2014:357). This trust can then be built upon cognitively over time.

Sambruk

The hosting of the FixaMinGata and UVAS systems is outsourced by Sambruk to the private hosting company GleSys. The reliability of the hosting service is important here as failures in uptime or information integrity can reflect badly upon the municipality and affect levels of citizens secondary trust. According to their website, public users of FixaMinGata are offered the opportunity for their name and email address to be kept confidential to users outside of the municipality and the FixaMinGata organisation (<http://www.fixamingata.se/privacy>). There is a trust relationship between the municipalities and Sambruk as well between the user and the municipality that this agreement is held. According to Claes-Olof Olsson, the FMG project leader, Sambruk signed a formal agreement with GleSys on behalf of member municipalities. The municipalities involved in the cooperation have informal trust in Sambruk's outsourcing competency and the ongoing supervision of GleSys. This is possible due to ongoing cyclic cognitive trust development on an interorganisational level.

According to the UVAS project plan the process of project development involved an economic risk to the investing municipalities. The most poignant risk factor that was identified was a key person leaving the project, which has already occurred once. The other two risks that were most likely, according to their analysis, were that technical problems would affect the project negatively and that unrealistic member expectations would hamper the project (Sambruk, UVAS Projektplan). The existence of such a comprehensive project plan can be said to ground these expectations, align secondary beliefs and help bolster intraorganisational trust.

Both applications have come into being by the further development of already existing open source software. In order to regulate trust between municipalities and software developers in Sambruk's open source projects the SGM framework was created. This was deemed necessary due to the unclarities in the area of intellectual property rights when outsourcing the development of open source software. The protection of intellectual property rights stretches as far back as to the initial specifications that the municipality or municipal body presents to the developer. This is due to the fact that these investigations often represent large investments to the IMC. This is important as when the ownership of intellectual property rights are unclear it can lead to the unwilling transfer of proprietary rights to the software developer. This can consequently lead to developers charging the ordering party and future customers royalties for program developments that have been funded by the ordering party itself. According to Sambruk, the SGM framework also helps reduce the risk of operator lock-in and other such limitations. The SGM framework also outlines intraorganisational policies. Sambruk state for example that software is to be developed using open formats and are to be made available for the use of all Sambruk's members (Sambruk, Varför

SGM?).

SGMs function is to explicitly state each respective party's obligations and rights in regards to cooperation while also acting as a control mechanism (Sambruk, Varför SGM?). The use of SGM as a control function can be compared to the use of SLAs in the creation of interorganisational trust. By the IMC formally and explicitly outlining expected behaviour the development of positive trust relationships is facilitated. Trust building is supported by reducing the risk of organisations committing unintentional wrongdoings. This can be analysed through the advocacy coalition framework. The formal agreement provides organisations the opportunity to demonstrate the similarity of their policy-core beliefs and an opportunity to their align secondary beliefs (Lubell, 2007:239). According to Goo & Huang formal agreements also act concrete relationship commitment levels to projects leading to increased levels of trust and social investment and a decreased risk that party's will engage in opportunistic behaviour (Goo, 2008:217+227). Relationship commitment is also bolstered through the explicit communication of, “economic consequences for violating explicit terms of the contract” as well as economic benefits for remaining in the relationship (Goo, 2008:217+221).

Use of the SGM framework as a control function can also be analysed from Jøsang & Lo Prestis trust – risk paradigm. As the consequences of a breach in primary or secondary trust with a software developer involves the endangerment of the proprietary rights to a substantial investment the controls used here must be robust. Trust with the absence of a formal agreement would not likely be a viable option here. Even if a strong interorganisational relationship had been established between the ordering party and the software developer, the serious financial consequences of failure make informal trust in this matter unlikely. According to Levis transactional cost framework theory controls come with costs both in regards to the creation and policing of agreements (Lubell, 2007:239). The establishment of a strong, interorganisational trust relationship here can, on the other hand, have the effect of reducing the cost of changeability where appropriate. Whilst core principles are protected by formal agreements less critical details can in this case be regulated by informal trust.

Further discussion

As demonstrated by these case studies, trust in confidence and competence plays a large role in facilitating operations and development within IMCs. According to Halliday, “trust can be an act not only a behaviour” (Perks, 2003:344). With this statement she means that trust as an action can function as a catalysing agent for transactions and the initial or further development of trust relationships. For example municipalities trust in Sambruk's outsourcing ability, when Sambruk deliver a positive result trust in the organisation is consequently able to be strengthened. Despite the fact that many of the organisations within R7, Sydarkivera and Sambruk had already established long term personal or organisational relationships prior to the building of the IMCs or project groups trust still acts as a catalyst for the further development of these relationships.

Trust in the case studies presented here can be said to be conducted on both a *meso scale* and a *macro scale*. Meso scale refers to cooperation between a small number of organisations while a macro scale refers to cooperation between organisations on a more overarching level (Skytt, 2011:29). Collective development on a meso scale is utilised by IMCs in order to save time and money by reducing the amount of double work that is conducted by the organisations and to facilitate access to special competence. Examples of such actions here are; the collective development of knowledge creation such as data export protocols, benefit realising and risk analysis and the sharing of labour such as R7's inspection function. In some cases here it would have been unrealistic for individual organisations to complete the development unilaterally. Sydarkivera for instance has members that have access to limited resources and competency. Trust on a meso scale is shown in the case studies to be regulated via a combination of formal agreements and interorganisational relationship building.

The use of SLAs and other formal agreements is an important tool for the facilitation of interorganisational trust. Formal agreements are often used as a control measure in the case of newly created relationships and transactions where one or more party is exposed to excessive levels of risk. SLAs also have an important non-control function. Formal agreements have been shown to help develop interorganisational trust relationships by explicitly conveying each respective party's responsibilities and expectations of action within the partnership and by revealing and aligning the organisations shared values and interests (Goo, 2008:218+221). This act of clarification aids the internalisation of informal understandings and helps organisations reduce the risk of committing unintentional wrongdoings that can potentially lead to a reduction in trust levels. Importantly, the initial trust they enable gives partys the opportunity to form cognitive judgements of trustworthiness and adjust future trust levels accordingly (Goo, 2008:218). According to Goo, the creation of SLAs can also help increase the performance of IMCs by improving coordination (Goo, 2008:221). Of

course the usefulness of formal agreements in trust building is dependant on the organisations' ability to verify the delivery of the agreed service (Habib, 2012:3). For example, an important factor behind CCs trust in R7's inspection service is the possibility for the organisations to verify service level delivery.

Organisations are said to trust on a macro scale when contributing to the development of collective solutions on an overarching level. This form of trust seems to have increased in order to meet the needs of larger scale cooperations and greater institutional distances within IMCs. Cooperation here involves organisations contributing towards collective branch development in order to serve their own archive development. Organisations involved in macro development can be said to be interdependent as collective action is necessary in order to develop individual organisations archival functions and the success or failure of individual organisations development affects the group as a whole. A major source of macro collective action seen in the case studies is the development and use of nationwide archival standards, for example the FGS standard which allows national integration of document types. Organisations trust that the standard is functionally sound and that organisations are going to continue to use the standard in the future so that the organisation can receive a good return on their investment. Trust in this case can be bolstered by the establishment of three types of trust regulation.

Reputation based trust, where the organisations previous behaviour is analysed by other organisations, for example The National Archives of Sweden has a track record of competency and benevolence. Trust by association is the process whereby organisations adopt trust capital via the endorsement of other trustworthy organisations. For example Sydarkivera's inspection function gains trust capital by its association to the well regarded OAIS organisation. Sambruk's members for instance trust in Sambruk's initial judgement of the external hosting company GleSys. The third way this is achieved is via the establishment of trust chains. Trust chains involve gauging the trustability of an unknown outside organisation via the judgement of a known and trusted organisation. These help bolster organisational efficiency when dealing with external service providers as organisations avoid creating trust relationships for the sake of completing transactions. An example of a trust chain in the case studies presented here is; R7's members trust in the competence of W3C (the developers of the XML format) via the R7 organisation and The National Archives of Sweden (XML, Webopedia).

A characteristic of the fast changing nature of IT development is the increased changeability of organisational needs. Changeability is an important factor for R7 and Sydarkivera as development is ongoing and partly undetermined. Creating formal agreements often involves a tradeoff in decreased flexibility and increased control costs compared to reliance upon informal

agreements. Accommodating for changeability is often seen as a daunting task and is thus regularly avoided by organisations whom instead choose to rely on primary or secondary informal trust (Goo, 2008:227). According to Sabherwal, best performance in this respect is reached via establishing a balance between trust and control (Goo, 2008:227). The case studies established such a balance by controlling critical areas of development with formal agreements while leaving less critical aspects of development to trust. For example Sambruk's SGM framework controls the proprietary rights of developed software via formal agreements but when developing according to the *grey box* method developers competence and benevolence is trusted with less constricting control methods (Sambruk, Varför SGM?).

Concluding remarks

Today over a decennium since Ramstedts article was published, judging by the case studies investigated in this paper, the focus of cooperation seems to have shifted somewhat from cooperation on a physical level towards larger scale cooperation on a more abstract level. Despite this, organisations today cooperate with the same goals that IMCs had previous to the digital age; the accurate and trustworthy description of organisations activities. The difference being that today the solution to informational trust issues involves non-tangible things such as standard formats and metadata standards which demand cooperation on a sectorial wide macro scale. These problems also require extensive resources and rely upon collective action to solve as organisations are interdependent.

There is not enough evidence from pre-digital IMCs to be able to empirically state exactly how methods of trust regulation in today's archival IMCs differ in comparison to IMCs conducted prior to the introduction of extensive cooperation around digital records. However when analysing the content of today's IMCs and their comprehensive use of external standards and certifications the general trend of trust regulation seems to be moving more towards the establishment of trust chains and somewhat less towards the creation of interorganisational relationships. The establishment of relationships is however still the most important factor in trust regulation. The core of human trust has likely not changed in thousands of years and it doesn't look like changing any time soon.

Future research

Whilst the subject matter of trust transfer between individuals and organisations was touched upon briefly in this paper, the subject is largely underdeveloped. A subject matter in this area that could warrant future research is how trust in organisations, people and standards can be transferred to IMCs.

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Appendix 1.

Email questionnaire.

Elin Jonsson, archivist at Sydarkivera and Växjö municipality.

9/3/2015

1. Is the e-archive going to be outsourced or is Sydarkivera planning to host themselves?
2. If you are going to host yourselves where are the servers likely to be housed?
3. How is inspection of the e-archive going to work? Will it be communal? Will the municipalities have the opportunity to complete inspections?
4. Who is going to own the; Metadata? Hardware? Software?
5. How will the exported information be verified?
6. What advantages have you experienced in cooperating with so many party's?
7. What challenges have you experienced in cooperating with so many party's?

Appendix 2.

Telephone interview.

Leif Sandberg, Administrative leader at R7 and Uppsala County Council.

5/3/2015

1. Who is responsible for auditing? Are there issues with access there?
2. How could the organisations leave the cooperation?
3. Who owns the metadata, hardware and software?
4. Are the servers shared logically?
5. How much do the organisations cooperate around risk analysis?
6. Leif Sandberg says that they use standardized formats for long term storage. What solutions? FGS?
7. What methods are used to protect information? Sharding? Duplication? checksums?
8. Is the same function kept? Searchability?
9. How good is the reliability of the service?
10. Is it linked to NPÖ? Potential to share information with other actors?
11. What challenges did you have cooperation wise? Did all organisations have the same needs?

Follow up question via email:

How did R7 build confidence within the county councils for the project?

Appendix 3.

Email conversation.

Lotta Ruderfors, project coordinator at Sambruk.

31/3/2015

Do you know whether or not you have an SLA med FixaMinGata's server host?

Has Sambruk cooperated with GleSys previously?

5/3/2015

Do you know who hosts FixaMinGata's and UVAS' data? Is it within the municipalities or is it outsourced?

16/2/2015

I am in the process of writing a c-level thesis about municipal cooperation in the development of community clouds. I have found county councils that cooperate in this area but I have yet to find municipalities that do so.

Is this anything that your organisations works with? Or do you know of any organisations that do?

(At this stage I was planning on writing a paper about organisational trust within the development of community clouds. The information that I received as a result of these questions was also deemed relevant for the current paper.)