What lessons can we learn from the wicked problem of records management?

May 2021

ARKIVVERKET   pwc

Contents and reading guide

This report summarises lessons learned and reflections from the project "Arkivfloken". The name of the project means "the wicked problem of records management". When mentioning the project, we will refer to this as Arkivfloken. The chapters cover the following range of topics:

1. Introduction and purpose
A brief introduction to the report and the purpose of sharing our learnings for the benefit of others.

2. The story of Arkivfloken
A brief summary of the genesis of the Arkivfloken project, how the work was carried out and what the outcome was.

3. How can a state authority be an entrepreneur and tackle a conundrum for which no one is taking responsibility?
The National Archives of Norway has attempted to take on the role of an entrepreneur. Here we highlight examples and experiences of what the National Archives has done and how they have worked over the past year.

4. An ecosystem of measures to tackle the major challenges
In this chapter we discuss the recommended concept and how a solution to a complex issue such as Arkivfloken is best achieved through many targeted measures that must work together to create change, as in an ecosystem.

**5. How to create movement in a deadlocked market?**
It is a known challenge with few major suppliers and little innovation in the market for records management systems, and the National Archives has been particularly eager to create a new dynamic in this market. Here we examine the experiences and learning points the project gained along the way.

6. Can Arkivfloken be elevated to a mission?
The "mission" approach has its roots in the EU's research and innovation programme and is little used in Norway. It is intended as an approach to solving the greatest challenges facing society. In retrospect, we have discussed whether the Arkivfloken project could be an example of a mission.

In these boxes you can read key takeaways we have learned along the way
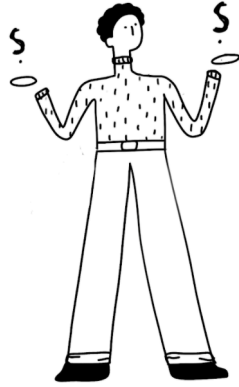
1. Introduction and purpose

During 2020, the National Archives of Norway carried out the Arkivfloken project, as part of their ambition to simplify records management in the public sector. The project followed the Norwegian Digitalisation Agency (Digdir) and DOGA's (Design and Architecture Norway) StimuLab model, which uses a service design approach to solve complex problems in the public sector. This document describes the process and lessons learned along the way.

It is a democratic problem that we do not have sufficient documentation of decisions and proceedings in Norway's public sector because this information is not recorded. The problem has accelerated with the increase in digital channels, where citizens and employees of public services engage in cross-channel dialogue that ranges from Facebook to email and face to face meetings.

At the same time, record keeping is time-consuming and challenging, and perceived throughout administrative organisations as a task "in addition to one's actual job". People find the systems difficult to use. In addition, public sector employees must make many discretionary assessments of what should be kept, and overall, keeping records is considered a major time drain. In 2019, the National Archives unveiled an ambitious vision to meet the challenge: *By 2025, no public sector employee will have to manage records manually.*

Our society is facing a number of complex and interconnected problems that individual actors cannot solve alone. We might refer to these as the big societal wicked problems that demand innovation, collaboration, innovation and working methods that break away from traditional project methodology and familiar administrative management structures.

CREATE VISION
Archive by design

no public sector employee
will have to manage records manually

2019   "ARKIVFLOKEN"   2020   2025

In recent years we have seen an increasing focus on innovation in the public sector, and new methods must be used to solve these societal conundrums. In the white paper report to the Norwegian Parliament on building an innovative public sector, innovation in the public sector is defined as follows:

> *"Innovation in the public sector can be a new or substantially changed service, product, process, organisation or mode of communication. The fact that the innovation is 'new' means that it is new to the organisation in question; it may already be familiar to and implemented in other organisations."*

Collaboration on innovation is necessary. One of the primary assertions highlighted in the white paper is that I*nnovation in the public sector often requires collaboration between administrative levels, sectors, the business community, civil society and education and research environments – as well as with the country's citizens*[1] . Here, the public sector has much to learn from entrepreneurs and founders who often rely on this type of collaboration and networking to succeed.

As part of their efforts to support the focus on innovation in the public sector, the Norwegian Digitalisation Agency (Digdir) and DOGA (Design and Architecture Norway) initiated the StimuLab scheme in 2016 to stimulate user-centric public innovation. Arkivfloken is partially funded by StimuLab, and its approach to tackling the records management issue thus has its roots in service design.

A design-oriented approach is exploratory in nature and is often a good option in cases where a traditional programme or project model based on clear goals and predictable deliveries cannot cope with the complexity of the problem. The Arkivfloken project is one example of this. This approach to solving the challenge faced by the National Archives of Norway is relevant across the public sector. Many of the lessons learned from the project will be relevant to others in administrative organisations who want to find new ways of thinking about cross-sectoral issues.

The purpose of this documentation of the Arkivfloken project is to share experiences from design-driven innovation in the public sector and to examine how it can contribute to new ways of thinking and more user-oriented public services. We hope that it proves both useful and inspiring

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[1]   White paper 30 (209-2020): 2.2.2 Ten main steps

2. The story of Arkivfloken

To make sure we're all on the same page, first we will give you the high-level story of the Arkivfloken project. In their strategy, the National Archives of Norway is focusing on two major initiatives. "Archiving by design" is one of these, and Arkivfloken is part of this initiative. The National Archives has high expectations for this initiative; their goal is that *by 2025 no public sector employee will have to manage records manually*. The story is told by Cassie Caseworker (a public sector employee) who once had a firm grasp of the amount of information in her own organisation, and what should be archived and kept records of. By 2020, her colleagues interact and work in a variety of systems and interaction channels, and she no longer has the control or capacity to archive all the information that har long term value.

Timewise, there is simply no way that she can manage if all this needs to be done manually. The vision is that in the future, employees in central and local public authorities will be able to devote all their time to their primary work responsibilities, and records management and archiving will be completely or partially automatic and integrated into the systems and solutions.

The National Archives realised that the path to achieving this vision was highly challenging and that there were multiple roadblocks. In the runup to the launch of Arkivfloken, the National Archives had faced years of frustration. They experienced that they simply couldn't move leaders and staff in the public sector to make major changes to the ways they managed their records

The seriousness of the challenge was underlined in a 2017 report on the subject by the Office of the Auditor General of Norway[1] , which stressed the systematic failure in how the public sector resisted to comply with the Archives Act in order to prevent documents from becoming publicly accessible under the Freedom of Information Act. This report inspired the National Archives to step up their efforts and take broader responsibility for the issue than their actual mandate demanded . The National Archives wanted to take a step back and gain a completely new perspective on what it takes to achieve change and innovation in the area of record keeping. They wanted to put the user at the centre and rethink their current systems and ways of working and received support from the StimuLab scheme to launch the Arkivfloken project.

Illustration: from preliminary project by DesignIt

2 The Office of the Auditor General of Norway: Document 3:10 (2016–2017) / Published 30.05.2017

Lessons learned from Arkivfloken

Who are the actors involved in this problem situation?

In the work of understanding this societal conundrum, we realised that the rich variety of actors involved — all of whom have different roles, responsibilities, needs and challenges associated with records management — complicates the picture.
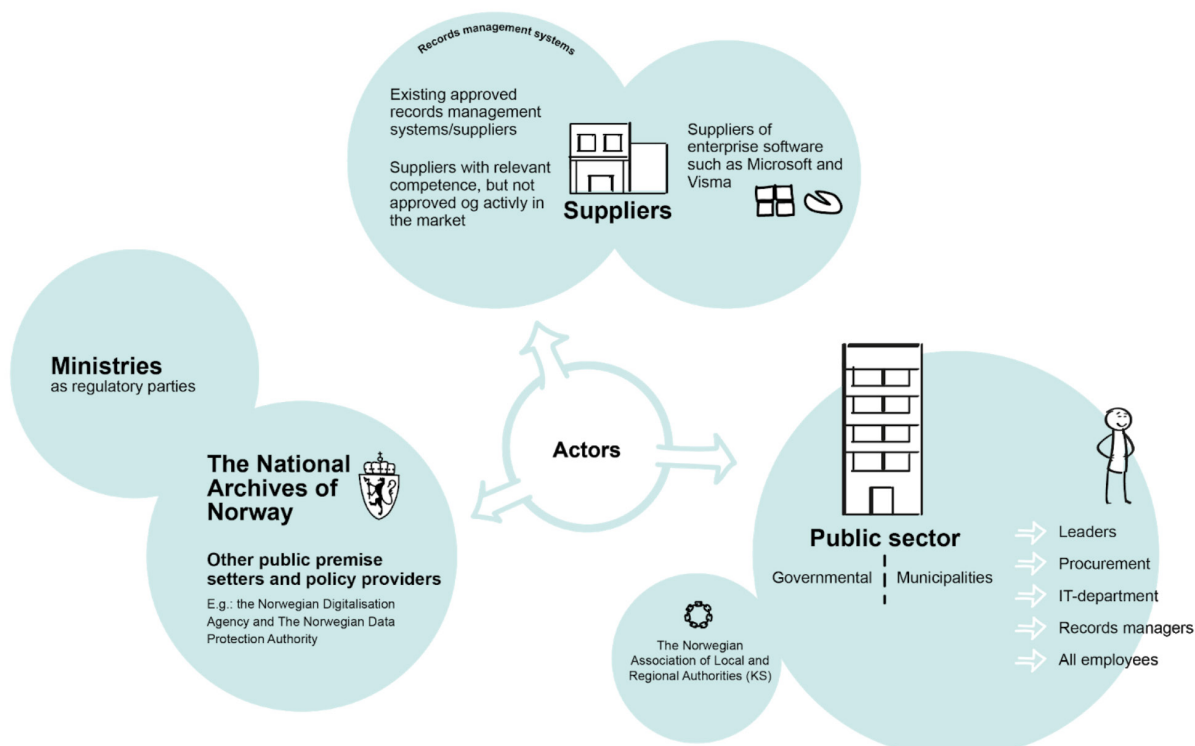

Figure: The actor map describes the most central roles in the Arkivfloken space.

Public sector - government and municipal actors

Central and local public authorities all have a responsibility for records management that entails documenting what happens in their proceedings or anything else that may have value for other reasons.

I Arkivfloken ser vi at man er avhengig In Arkivfloken we see that success depends on a variety of different roles. First and foremost, it is crucial that all the employees have access to user-friendly solutions that support their work. The success of an organisation in finding other solutions that safeguard records also depends on the management teams that initiate projects, establish internal priorities, undertake professional responsibility for systems, and make decisions about investments.

The procurement function, which is central to processes where new solutions are acquired, selects procurement methods and evaluation criteria - and in doing so it determines a number of factors that influence the selection of suppliers and new solutions.

The records management functions should be up to date on current regulations, guidelines and new opportunities for attending to considerations and principles for records management. At the same time, these functions play an important role in internal assessments of information and documentation created in the organisation's processes. They should also be involved in requirement specifications for new systems and solutions – not just the traditional records management solutions.

The IT department and its roles both in the selection of technology and as information managers, architects, developers etc., must translate principles for record keeping into digital formats and attend to them in systems and solutions, or else ensure good integrations.

Public premise setters and policy providers

There are several national premise setters that participate in determining various guidelines and expectations for the public sector, but overall, it is not easy for administrative organisations to navigate these.

As the country's foremost archival authority with responsibility for professional standards and guidelines, supervision and guidance with public archive work, the National Archives of Norway are a central premise setter and policy provider. The National Archives is tasked with implementing overall national policy in the field of records management and archives, and with contributing to the development and strengthening of records management in the public sector.

Other premise setters in the public sector, such as the Norwegian Digitalisation Agency and the Data Protection Authority, are also actors in the Arkivfloken by giving their own national guidelines for digitisation projects that partially overlap, and which together affect individual organisations.

The ministries, especially the Ministry of Local Government and Modernisation, the Ministry of Culture, and the Ministry of Justice and Public Security, are regulatory administrators for the laws that are particularly relevant to Arkivfloken.

The Norwegian Association of Local and Regional Authorities and the local archival institutions

Two the municipalities, the Norwegian Association of Local and Regional Authorities plays a central role as a development partner - in digitalisation, with joint solutions, and in archive and records management. In addition, municipalities often depend on cooperation and support from other local archival institutions, such as Municipal Archival Institutions and Kommunearkivinstitusjonenes Digitale Ressurssenter (KDRS), a digital resource centre owned by archival institutions from throughout Norway.

Suppliers

In this context, suppliers are the technology providers who either provide solutions and software for records management today, or suppliers who have relevant expertise and technology to innovate and deliver new solutions for tackling this in new ways.

These may include suppliers of professional systems, records management solutions, and today's Noark suppliers (see fact box). We also believe that there are a number of suppliers who have relevant expertise, but who have not prioritised or regarded this area of the public sector as an attractive market to enter.

All these actors have different interests, needs and challenges. As a result, records management in the public sector is an area that is currently characterised by difficult-to-use solutions, a great deal of manual work, a deadlocked market situation with a small number of large suppliers, a lack of documentation of work processes and decisions, and a general lack of innovation.

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Facts

▶ The Archives Act imposes a responsibility on public entities to maintain archives.

▶ Noark is a Norwegian abbreviation for Norsk arkivstandard, or "Norwegian Archive Standard", a standard for document management. The standard has been developed and maintained by the National Archives of Norway.

▶ Public sector is required to use Noark-approved systems for records keeping.

▶ The National Archives has an approval scheme for suppliers' solutions.

▶ Public organisations can use both temporarily approved solutions and those that have been granted final approval

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A user-centred process to untangle the conundrum

The Arkivfloken project used the "Triple Diamond" design process, which is a framework used in the Stimulab portfolio of design-driven innovation projects. The project was launched in February 2020 and completed in December of that year. The illustration below shows the most important activities conducted in the three phases of the project, from insights to recommendations.
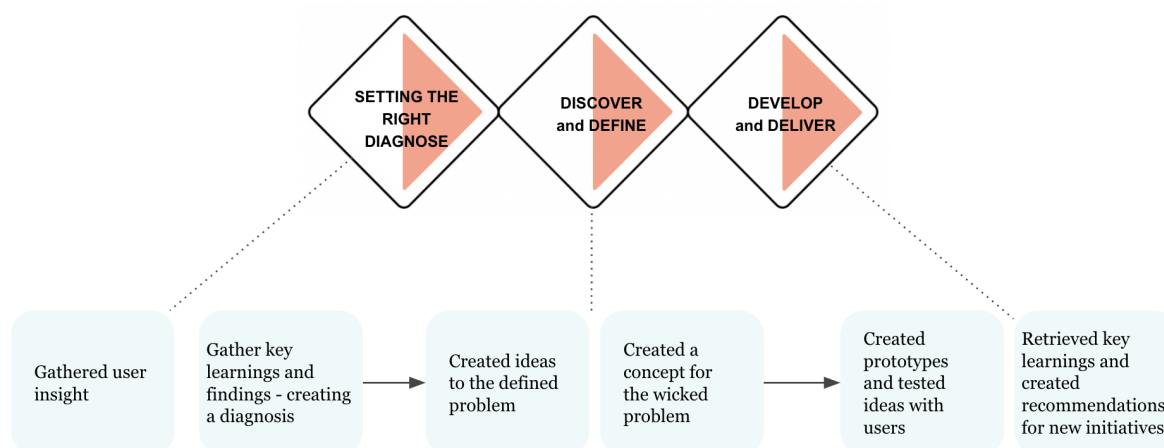
Figure: The project has taken a user-centred approach, and its process has aimed to involve a broad range of actors and users along the way

What we learned from users - insights

User insights gave the project a picture of some particular needs and challenges that lie at the heart of the wicked problem of records management. Here we have extracted an excerpt from these insights.

Insight made it clear how we have made it difficult for users in an organisation to successfully manage their records. Municipalities or governmental organisations are very different in terms of how they handle tasks, and in their capacity, and competence. Many felt ill-equipped to drive developments in their own

What problem should be prioritised?

The insights pointed to several closely interconnected needs and challenges. Part of the design process was about defining the issue on which the project should focus on. This question was raised and discussed with the project owner and the project's steering committee, and the National Archives wished to strive for an open and exploratory problem definition. They requested the project to find answers to the following questions:

How can the National Archives get the public sector to experiment and try out new approaches for the effective safeguarding and utilisation of documentation?

The project team explored how the National Archives can get:

▶ decision-makers to understand the value of documentation and demand new approaches to solving this

▶ suppliers to understand the room they have to manoeuvre and innovate, so that they contribute to new and better solutions

▶ the records management functions to promote the value of documentation and understand possible approaches, so that they become a driving force for change and development in their own organisations.
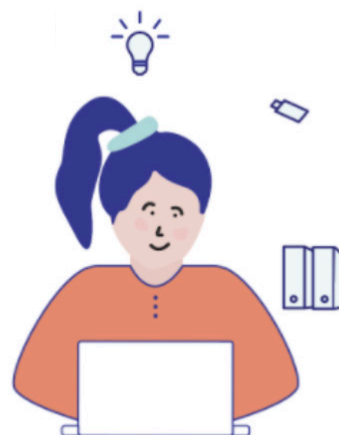
Creating and structuring ideas

The project involved a broad range of contributors who helped generate ideas based on the questions above. Participants ran the professional gamut from records managers, IT architects, lawyers and software designers to equally important resources from various central and local public authorities, as well as representatives from the supplier market. Through an iterative and analytical process, their ideas were structured and put together into a concept model (see figure below).

The concept outlines how the National Archives of Norway have an important role to play in inspiring administrative organisations to solve archival challenges in new ways. Where public sector actors may not have previously considered anything else than buying an approved system, we instead want them to understand that they have room to manoeuvre and "think new", and to independently consider how best to address the needs of the public sector organisation in systems and solutions, while taking archival considerations into account.

The concept model is a cycle and process in which the National Archives, possibly together with other actors, must take responsibility and support projects or initiatives in the public sector. This is necessary in order to achieve innovation and develop new solutions and software that design in principles for records management in other ways than today. In order to bring about change, the National Archives must provide support *before, during and after* such initiatives - to help launch them, support them along the way, and extract experiences that can be shared with others.

In order for public sector organisations to succeed with Archive by Design, and for public sector employees to avoid spending time keeping records manually in the future, the National Archives of Norway and other premise providers must work systematically to raise awareness and support the initiatives.

SHARE KNOWLEDGE
In order to inspire and raise awareness

We want public sector to **EXPLORE AND DEVELOP NEW SOLUTIONS** that supports their processes, and at the same time secure principles for records management

Identify and define needs. Start an initiative or project → Develop or procure → Implement or improve

HELP TO GET STARTED
trough raising awareness and setting a clear direction

EXTRACT LEARNINGS
and examples that can inspire and benefit others

GUIDE AND SUPPORT
public sector in their projects and initiatives

To succeed with innovation we must extract learning from public sector, systemize the learnings, and improve framework conditions. As well as increase competence in public sector records management functions in order for them to support the change.

IMPROVING FRAMEWORK CONDITIONS
Work systematically with improving the standards, new tools and guidelines that support Archive by design, based on learnings and experience

INCREASE COMPETENCE IN RECORDS MANAGEMENT FUNCTIONS
Work systematically with improving skills and knowledge of employees working in archives and records management functions.

The National Archives of Norway has to continuously improve their services

IMPROVE SERVICES
Improve the services of The National Archive with a user-oriented focus

Figure: Concept model showing how the National Archives of Norway are advised to work to solve the situation.

3. How can a state authority be an entrepreneur and tackle a problem that no one owns?

As a society, we have many problems we ought to solve, but for whom no one is clearly responsible - neither in the public sector nor in the private sector.

Records management is one such issue, where the actual goal of archive by design is clear, while the solutions require coordinated change in the National Archives of Norway (as a specialist authority and supervisory function), in governmental and municipal organisations (as users of records management systems) and in the supplier market.

In this context, the National Archives wanted to take ownership of the problem and undertake the role of an entrepreneur in the state in the push for solutions and change. The Arkivfloken project was initiated as one of several activities aimed at actively asserting this role.

The idea of an entrepreneurial state authority involves drawing on the hallmarks and working methods of contractors in the private sector and applying them to the public sector. The Norwegian Encyclopedia (Store norske leksikon) [1] defines an entrepreneur as *"An originator, founder, establisher, innovator. An actor, often an individual, that drives innovation or establishes a new enterprise. An entrepreneur manages to start a new business, often*

based on new technical solutions, and does so by finding allies and establishing collaboration in situations where others may be sceptical or even active opponents of change."

The National Archives has taken on an entrepreneurial role in several areas, and the Arkivfloken project has been an important contribution to the positioning of this role. As has been explained in the introduction to this document, the National Archives were responsible for a complex and demanding issue, which they chose to examine focussed on the user and using service design methodology.

It may be viewed as a classic entrepreneurial move to apply a design approach to an issue in which traditional methods have failed to bring about change. That entails expanding one's understanding of the challenge, creating room to redefine the problem, and establishing a new starting point in order to create more radical solutions.

Arkivfloken has helped to develop a position for the National Archives as an entrepreneur in the state

Insights from users highlighted a need on the part of public organisations for the National Archives to take on a clearer role in resolving this challenge.

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[1] https://snl.no/entrepren%C3%B8r_-_innovasjon

At the same time, users said that they want the National Archives to act as a partner in their efforts to unravel the problem. In addition, they saw a need for the National Archives to coordinate their efforts with both other sponsors and users in relation to professional guidance and digitalisation.

Arkivfloken has helped the National Archives to define their own role in their development as an entrepreneur - one in which they grapple with needs that no one else has met or addressed. The National Archives' project owner was clear that in taking on such a role, it was crucial to have the full support of executive leaders. This was particularly important as they considered tackling a societal challenge that seemed to many people to go beyond the mission and mandate of the National Archives alone, but for which they still considered the National Archives to be the authority.

"We had full backing from the Director General, and that was a prerequisite" -project owner

Another challenge is the lack of clarity as to who should fund such measures in the public sector. The benefits of successfully resolving the problem of archiving lie largely in the area of public administration, but they will also affect society - for example, by ensuring the proper documentation of public processes for residents, the media or academia. There are many such societal challenges that entail similar issues wherein the actor that tackles the issue is not necessarily the one that realises the benefits of the solved problem. The National Archives has been willing to invest resources in order to take ownership of this problem, but future funding remains a challenge. The findings of the project have contributed to greater insights

and increased support and have underscored the willingness of the National Archives to continue its work with the initiative going forward.

> Dare to take ownership of the problem, even if others realise the benefits. Work actively to build formal and informal collaboration, contribute to increased awareness of the need, and be sure to have full backing from senior management.

An entrepreneur has unwavering faith in her own idea and that it is correct. Similarly, the National Archives believe in the logic of the vision of archiving by design and its importance for society. This vision has been a cornerstone of Arkivfloken since the project's inception - a goal to strive towards without necessarily providing any guidance on how to get there.
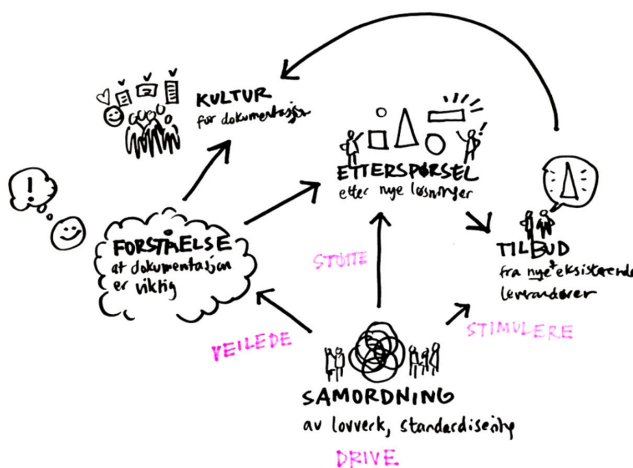
A strong vision is a prerequisite for taking on an entrepreneurial role, but at the same time it must be made concrete and tangible in order to generate backing and enthusiasm. A design-oriented approach is a powerful tool to make abstract visions concrete, breaking it down to something concrete, and what it will look like when the results are in place. The project has helped to clarify what it will take to achieve the vision of archiving by design. It has done so by creating a concept for how to work further to untangle the problem and determining concrete measures to attack the conundrum from different angles.

Illustration: Examples of user stories that exemplify the future and how measures can be adopted by the public sector

> Design helps to make abstract visions concrete. Use images and stories to show and convince people about how things will work when your vision becomes reality.

In the Arkivfloken project, an early decision was made not to challenge or develop the 2025 vision, but to instead use the project to develop and test solutions that were feasible in the shorter term. The purpose was to create momentum and concretise ideas with which the National Archives could then continue to work on when the design team finished the project.

The role of entrepreneur demands that one never lose sight of one's long-term vision, while providing continuous evidence that it will be realised. In light of this, the principle of "one step at a time and learn along the way" was recommended for further work. If the National Archives waits for new legislation and establishes new professional guidelines, standards, and supervisors necessary to succeed with archiving by design, it would take too long before the first benefits could be realised. On the other hand, if the National Archives dare to unveil new expectations and professional guidelines and share their examples, they can initiate the change on a smaller scale and even gain experience along the way that draws them closer to achieving the vision.

An extreme example of this dynamic is how Elon Musk tells us that he will make it possible to travel to Mars. While many see this as a utopian vision, SpaceX makes prototypes of (great-looking) rockets, some of which explode while others succeed. Small steps along the way create evidence that Elon can make the journey to Mars

a reality. Whether an experiment fails or succeeds, it can still strengthen faith in the vision and the possibility of achieving it.

In Arkivfloken, the decision was made to stimulate innovation by developing workable ideas and prioritising areas where small and large steps can reinforce each other. In the long term, the strategy of developing many concrete ideas will strengthen the larger vision and belief among all the actors concerned that together we can succeed in the realisation of archiving by design.
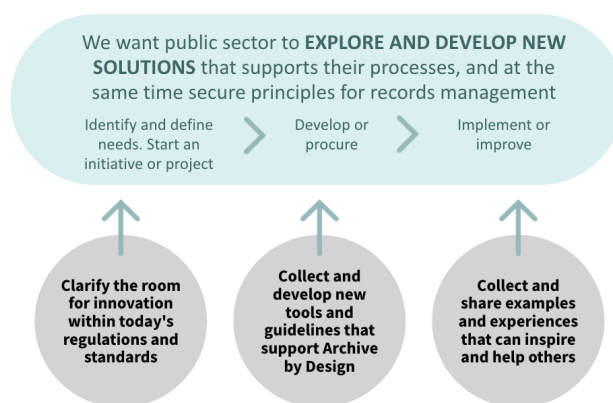
Figure: Measures that push towards the achievement of the vision in various ways

> The path to radical change lies in the interaction between conveying a strong vision and creating evidence that one makes gradual and methodical steps to make it a reality.

Both as part of the work on Arkivfloken and in other contexts, key stakeholders in the National Archives, both the project owner and the core team of resources, have invested a great deal of time in dialogue with other actors. Here they have both shared the vision and the idea and proposed formal and informal collaboration, although it is not yet clear how this should be concretised.

This represents the entrepreneur's tireless efforts to get the topic to the top of other parties' agendas. As an entrepreneur, the National Archives facilitates many meetings to "pitch" ideas and visions, without necessarily knowing for sure which ones will result in the most valuable relationships. The entrepreneur meets with those who have faith in the idea and contributes energy or resources to the work. It is not necessarily known who will be the first one to spark an idea, but in the end many enough people will have participated in the discussion for it to take root and generate broader engagement. For this reason, informal dialogues, relationship-building and networking play a crucial role in the process.

In their determination to demonstrate the topical nature of the records management issue, the National Archives has made great efforts to have a visible profile and have prioritised broadcasting the project, the focus and the vision in many forums and arenas. This has been a priority even if they have not had all the answers to how the goal should be achieved. The importance of good storytelling, the use of statements from users that convey the needs, and visual images in which people can recognise their own situation have been an important part of engaging others in the vision and in solving the problem.

Over time, the National Archives has found that it is demanding to have one foot in a vision of radical change while simultaneously being required to manage existing legislation in a prudent manner and grapple with push-back from professionals determined to protect the prevailing systems and organisations from significant change. This type of conflict is a known challenge that is rarely grounded in ill will, but rather in the fact that new thinking often challenges the existing and well-worn norms of what characterises good quality. For project participants, the need to constantly juggle current quality standards with rethinking the problem will slow down the ability to advance radical ideas.

The National Archives set up a core team that was completely released from their day-to-day operations. The resources of the core team were clearly informed that management expected them to think in completely new ways - this was their mission. In addition, they were keen to include resources in the project team that were often seen as defenders of today's professional approaches. They preferred to have critical voices closely connected to the process and involved along the way rather than to face resistance once radical ideas were launched as results from the project.

An entrepreneur pitches the idea 100 times before the first partner chooses to invest in it. Have perseverance, create relationships and don't be afraid to suggest collaboration, even if you don't know exactly where it may lead.

"We released people from their day-to-day operations, and they got a clear mandate to think completely new." -project owner

> Entrepreneurs are completely focused on a single goal. Free people from operational chores when they are tasked with thinking in radically new ways. Allow them to explore.

Illustration: Input from users during prototyping

As an entrepreneur, you must pursue many ideas and tracks that don't necessarily lead anywhere, and managers must demonstrate a great deal of openness and understanding for this process. This can prove challenging in the public sector, where responsible governance and good control are deeply ingrained in the culture.

"If we had been criticised by management for not getting everything done, we would have totally lost the spark!" *-project participant in the National Archives*

Leaving room for dead ends (and getting out of them quickly) is essential when one chooses to take an exploratory design approach to unravelling a conundrum. It is in the nature of the methodology that one deliberately "throws solutions at the problem" until something sticks.

For this reason, the work on Arkivfloken has been characterised by a "trial and error" mentality. Mistakes have been allowed, and steps were taken without always knowing what the next step would be or whether it would be necessary to try again. At the same time, it turns out that a certain degree of certainty ultimately yields faster results. Project participants in the National Archives believe that it would have taken longer to achieve results if they had taken a command-and-control approach. They settled on a minimum

of project formalities, and the project manager demonstrated confidence, flexibility and an understanding that not everything would necessarily go as planned. Their own reflection is that this trust was essential, especially with such a large and unclear problem. One lesson gleaned from this process can thus be to dare to do away with the traditional project model. As designers often say - trust the process, and the results will come.

Design methodology employs a variety of techniques to make sure that trial and error actually produce results. Open questions are posed early in the process with the aim of achieving a broader understanding of the problem, but work is structured and visual and maps are synthesised that allow one to focus on specific points with potential for innovation. One takes the liberty of leaping quickly to solutions but makes simple prototypes to test out the idea with users right away. In this way, one can quickly disprove or confirm hypotheses in order to legitimise a larger solution to the problem.

"Our focus has been on progress and getting things done." -project manager in the National Archives

> Management must allow room for trial and error. It may be more important to focus on progress and getting things done than to do things overly correctly and formally.

When Arkivfloken started, many of the challenges of archiving by design were well known to the National Archives. At the same time, there was a need to see these issues in context and understand how the various actors involved experienced them. How do software providers experience the market, and do they see incentives for innovation? How do managers working in public organisations experience the challenges of records management? What does it take to meet the needs of the employees who work in the public sector, and that today needs to keep records daily?

By engaging in dialogue with the various "users" of records management systems, it became possible to understand where there was room for innovation and what barriers must be overcome to enable better solutions. By understanding the perspectives of the various user groups, it also became possible to become more specific about solutions and how they can fill the opportunity space.
Inclusion of the roles and experiences of the various actors was important throughout the project. This entailed collecting insights from many perspectives, broad involvement in the development of ideas, and testing and prototyping solutions with a broad group of stakeholders.

The design process attaches great importance to including users in the process, not to mention taking their subjective experiences seriously as legitimate premises for development work. Not only does involving users in the entire process yield better solutions, but it also increases the legitimacy of the work and contributes concrete stories about how the results will provide benefit and create value for everyone involved.

Vi har jobbet med å finne behovene og de gode ideene her

Arkivverket

Leverandører

Arkivloven NOARK

Saksbehandlere og ansatte i stat og kommune

Virksomheter underlagt arkivloven
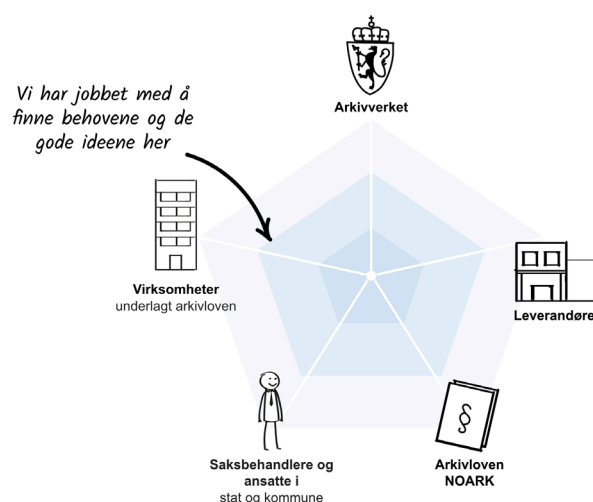
> Invest in seeing the challenge through the eyes of all the parties involved. Understanding how each actor experiences the problem (and how they can communicate this to others) makes it easier to find solutions that make sense to everyone.

4. An ecosystem of measures to tackle the major challenges

Wicked problems that have taken root in the public sector tend to have many actors and differing objectives involved. There will rarely be a "silver bullet" that presents a solution to the entire challenge, but rather a series of measures and change processes that will pull together towards a goal or vision. The wicked problem of record management addresses a challenge that is a problem for society as a whole and for the entire public sector. To address challenges of that scale, many actors must be able to change their behaviour, and one must view this as an ecosystem of measures and changes. An ecosystem is characterised by an "environment" in which all the constituents interact. For an ecosystem to function, all its constituents must contribute. By applying this way of

thinking to changes in the public sector, we can get a picture of how solutions to major challenges are best solved by having more actors join in and play their respective roles.

A need for many customised solutions for many different needs

The National Archives of Norway realised early on that to find a useful and lasting solution, one must ensure that the solutions are adapted to the needs of the various organisations in the public sector. One mustn't start by designing a single common solution; rather, all the solutions should be integrated from day one.
In defining the opportunity space in the Arkivfloken-project, it was
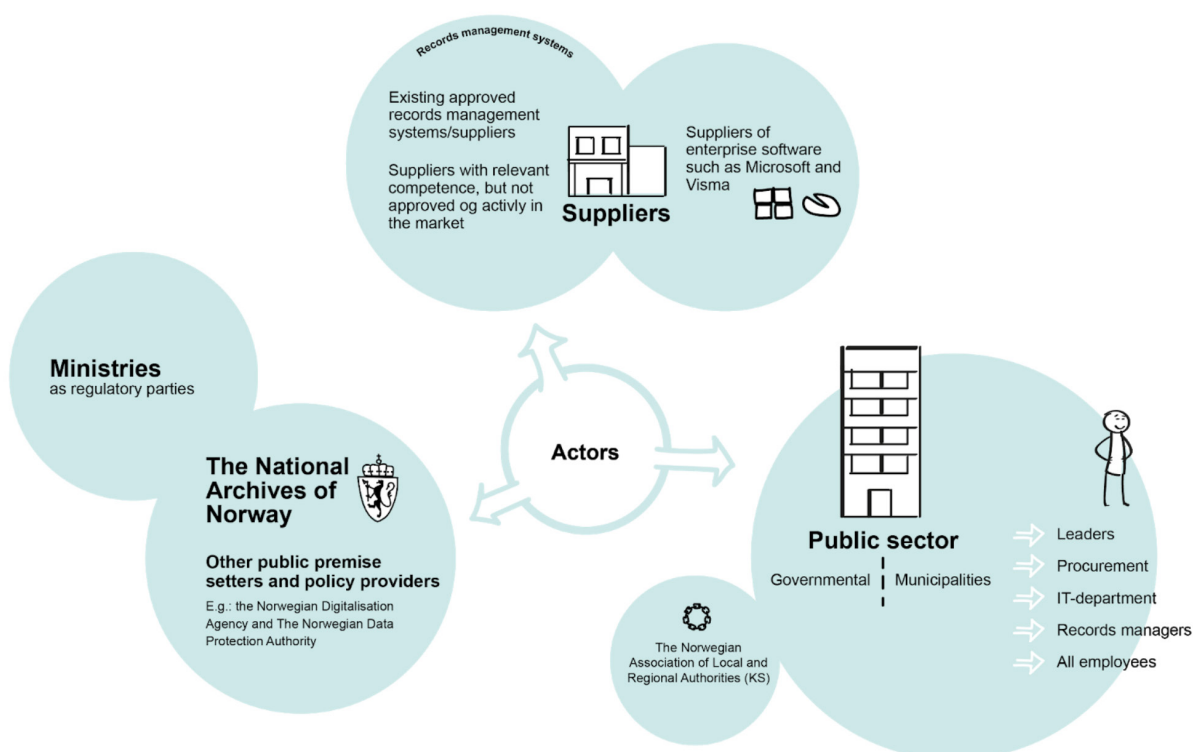
Figure: Actor map in the Arkivfloken

therefore important to gain a common understanding of the most important actors and premises that play roles in the challenge and in the solution. The triple diamond model applied by Digdir and DOGA's StimuLab projects facilitates a thorough exploration of this type of space. All these actors constitute part of the challenge; this also makes them possible partners in developing new solutions.
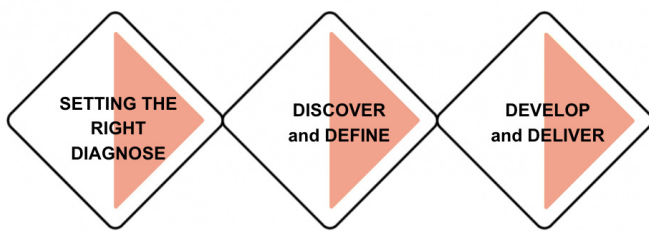
Illustration: Digdir and DOGA's Triple Diamond model

When endeavouring to grasp a challenge of this magnitude, the investigation process must allow for ample breadth. In the Triple Diamond' model, the entire first phase is dedicated to exploring and clarifying which problem needs to be solved. In order to succeed in unravelling the entire actor network, as well as understanding the challenges that these various actors bring with them, we need comprehensive insight. The diagnose-phase in Arkivfloken included interviews, co-creation and workshops with actors who are part of the ecosystem. The function of the first phase, the diagnosis phase, is to allow the project team members to familiarise themselves with the current situation, delving both broadly and deeply into the topic, so that the issue is adequately explored, and the team can be confident that the project understands, defines and addresses the right problem. In challenges like this one, we must organise myriads of insights into a system that provides an understanding of how they relate

to each other. It is usually when we situate the insights in particular contexts that we find the most effective interventions. The diagnose phase yielded space for breaking down the complexity of the challenge and creating concrete interventions that can create lasting change.

> Through the exploratory and iterative work facilitated by the Triple Diamond model, we can explore, understand and break down complex issues into parts. Devote enough time to uncovering the most important points where we can create change.

To resolve a complex situation, it is a good idea to think about the challenge from the perspective of several different roles. This allows us to define various measures that affect the involved actors, thus enabling more people to contribute to improving the situation. The purpose is to ensure interaction between the measures - and thus also between the actors - so that each issue is highlighted and drawn forward. This demands that we consider the needs and measures in context. This interconnectivity can be described as an ecosystem.

> Big challenges don't always have one big solution. Break down a big challenge and tackle it with multiple concrete measures, rather than thinking that a "silver bullet" is the solution.

In order for public sector organisations to succeed with Archive by Design, and for public sector employees to avoid spending time keeping records manually in the future, the National Archives of Norway and other premise providers must work systematically to raise awareness and support the initiatives.

SHARE KNOWLEDGE
In order to inspire and raise awareness

HELP TO GET STARTED
trough raising awareness and setting a clear direction

We want public sector to **EXPLORE AND DEVELOP NEW SOLUTIONS** that supports their processes, and at the same time secure principles for records management

Identify and define needs. Start an initiative or project → Develop or procure → Implement or improve

EXTRACT LEARNINGS
and examples that can inspire and benefit others

GUIDE AND SUPPORT
public sector in their projects and initiatives

To succeed with innovation we must extract learning from public sector, systemize the learnings, and improve framework conditions. As well as increase competence in public sector records management functions in order for them to support the change.

IMPROVING FRAMEWORK CONDITIONS
Work systematically with improving the standards, new tools and guidelines that support Archive by design, based on learnings and experience

INCREASE COMPETENCE IN RECORDS MANAGEMENT FUNCTIONS
Work systematically with improving skills and knowledge of employees working in archives and records management functions.

The National Archives of Norway has to continuously improve their services

IMPROVE SERVICES
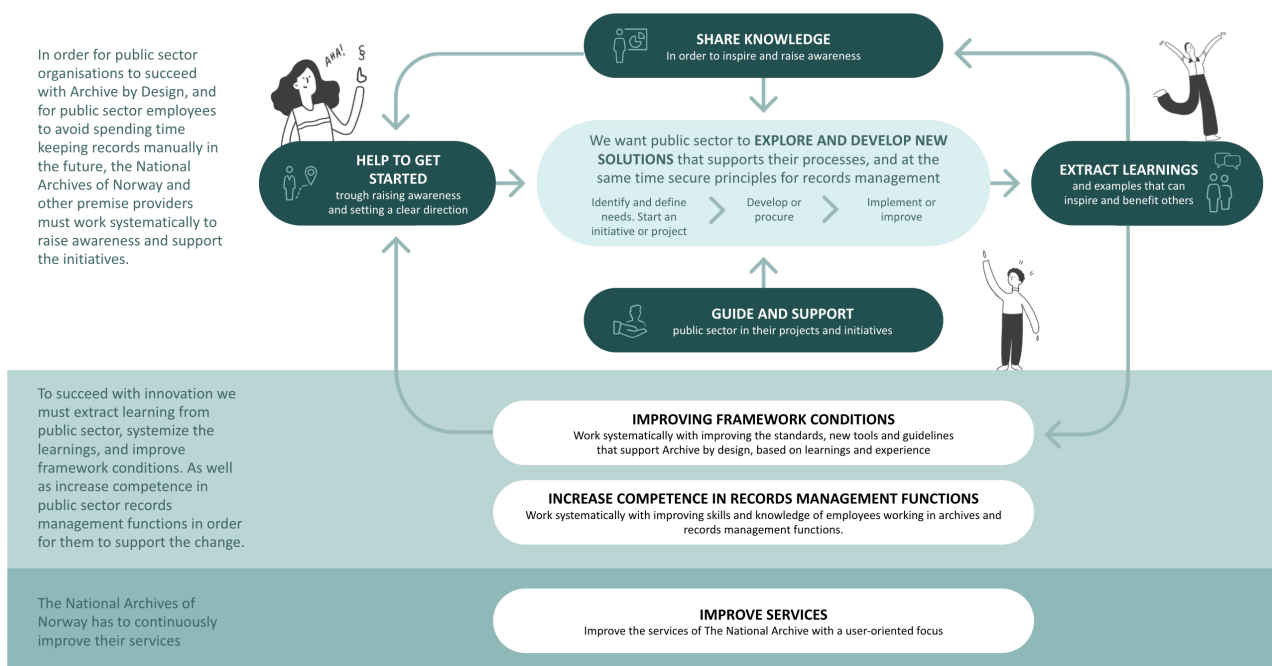Improve the services of The National Archive with a user-oriented focus

Figure: The concept model describes how the goal is to get more public organisations to explore and develop solutions that meet their own needs and processes, while at the same time meet the requirements for records management.

To illustrate how the actors can work to solve this wicked problem, a concept model was developed (see figure). The purpose of the concept model is to illustrate how to get the public sector to *experiment* or even to dare to *explore* how they can create systems and solutions that meet the requirements for records management and support the organisations' needs and operational processes in the best possible way. In order to succeed in innovation in such a complex area, different governmental organisations or municipalities must try their hand at finding the solution that is right for them. It is important that the National Archives plays a role in extracting and disseminating lessons learned in this area, so that more people can understand the potential of more customised solutions. The solution will not be the same for everyone, but for many of those involved, the tools and process will be similar. To ensure that future solutions meet the necessary requirements for records management, there must be a clearly defined common goal.

> By defining a common process and a common goal that will guide us towards a solution to the challenge, we facilitate a change process that can be driven over time.

Innovation that will involve the simultaneous action of many actors requires the understanding of all those involved. The National Archives will play an important role in working with users and other actors to generate willingness to change and move. To ensure the necessary level of quality in the data and information that should be managed, organisations that are encouraged to create more customised solutions need to understand the purpose and the necessary conditions for keeping records and archiving.

> In order for change to be created and for everyone to go in the same direction, the actors must be capable of sharing a common understanding of the challenge.

An ecosystem consists of many parts that depend on each other. To solve complex challenges such as in Arkivfloken, one must understand and design for these dependencies. By thinking about the measures as elements of a complex system, one can see how a series of measures can reinforce each other. The concept model shows the ecosystem in Arkivfloken. It describes measures that affect each of the roles, which together constitute a cyclical model wherein awareness-raising, change, learning and sharing (which in turn leads to more awareness) form a cycle. In this cycle, increasing numbers of public organisations can get involved and take responsibility for putting in place better solutions for looking after archival considerations.

> By thinking about the measures as an ecosystem, we can see how important it is that the actions connect and reinforce each other. Put measures into a system and describe relationships and dependencies.

The approach to solving the records management problem consists of numerous small and large measures, and it demands the involvement of multiple actors. Radical change will not be tied to the individual measures, but rather to the major overarching change. The radicality lies in the overall change towards which the National Archives is working, while the road to this end

result consists of many concrete measures, such as "establishing an approach to standardisation that encourages actor involvement", with the aim of user-orienting the further development of standards in order to create greater room for change. Collaboration and user involvement are nothing new, but the goal is to establish a standard that creates the necessary space for achieving innovation. It is important to have a well-defined vision that can serve as a "destination" for the project and ensure that the measures all move in the right direction.

> Innovation is not always about solutions, but rather the change we enable. The change and the goal towards which we are working are new, while the measures that take us there do not always have to be innovative.

To succeed with the change we want, some organisations must take the lead. These will most likely have the necessary will, expertise and capacity, and must want to find the best solutions for their operations. The work with Arkivfloken showed that it will be important that the National Archives finds organisations in the public sector that want to lead the way and inspire others and have the resources to do so. Their experiences will be valuable for all those that follow.

The adoption of innovation is often illustrated by an adoption curve. Central and local public organisations can be divided into innovators, early adopters, early majority, late majority and laggards, and that also holds true within the field of archiving. We believe that some will be quick to try to find an approach to archive by design within their own organisations, while others will adopt a "wait and see" approach. The work to achieve archiving by design is thus an ongoing effort that must continue in the years ahead.
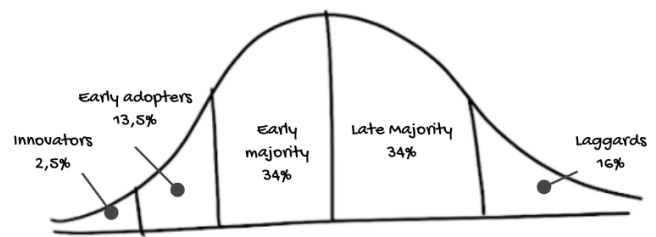
As more and more organisations adopt the mindset of archiving by design and incorporate the approach in their own organisations, the level of overall value creation will also increase. Let us look again at the example of the adoption curve: the big realisation of benefits will occur when one reaches early adopters, as well as when one achieves an early majority and a late majority of the public sector. It will therefore require patience and long-termism to realise the benefits associated with archiving by design throughout the entire public sector.

Figure: Adoption curve

Let enthusiasm be your guide! There is no common starting line where everyone begins the process of change on equal footing; someone must take the first leap, lead the way and demonstrate the opportunities.

5. How to create movement in a deadlocked market?

Deadlocked market situations are not uncommon. In a deadlocked market there are a few companies that dominate and enjoy benefits at the expense of the buyers and competitors. In such cases, the inherent market structure is not competitive. A monopoly situation is one such example. A form of market failure exists, or the market may be inadequately designed to deliver on the needs of the customers. This can and does occur because the customers' purchasing processes are cumbersome, resource-intensive and are considered unattractive by the suppliers. This has negative consequences on a number of factors that affect the entire industry's ability to innovate, deliver quality and offer varied goods and services at a reasonable price.

As a market matures, it consolidates and the degree of innovation among suppliers will often decrease. Products and services become more and more standardised and the barriers for new suppliers are high. The market for records management systems suffers from all these symptoms. The National Archives of Norway themselves has described this market as deadlocked; a few large suppliers control the majority of the market in the public sector, and there has been little innovation in recent years.

Traditionally, an approach to dissolving deadlocked markets has been either for the authorities to intervene and regulate, or for other actors to disrupt the market with radically new solutions with advantageous cost structures that allow them to quickly take over. The National Archives wanted to take an active approach and help to resolve the market situation in order to achieve innovation and find new ways of thinking about the safeguarding of archives in the public sector. Here we take a closer look at the insights and experiences we gained about this issue during the project.

Although the Arkivfloken project itself did not have the ambition of solving the market situation in the archiving field, the StimuLab model has the potential to help resolve deadlock situations. This type of project is based on examining the issue more broadly than usual and is based on the premise that one should challenge established truths.

During the Arkivfloken project, this was particularly evident in the revelation of several deeply cemented misunderstandings between actors that prevent innovation. Several measures are now underway to develop the dialogue between the National Archives, public sector and suppliers in a more dynamic direction.

> In deadlocked markets, it pays to work in an exploratory way, rather than basing the work on assumptions about what is deadlocking the market.

Background of the deadlocked market

The market for record management systems is not dynamic, and a few large suppliers receive the majority of public sector contracts.

To address this problem, the design team that carried out the Arkivfloken project included an economist, an IT architect and a specialist in public procurement. This made it possible to shed new light on the challenge and identify ways to commence the work of resolving the situation.

The dialogue and involvement of various actors throughout the project - ranging from suppliers, consulting firms that advise in the field, and the administrative organisations themselves - helped to clarify the complex situation that is deadlocking the present market.

In the diagnosis phase, the various ways in which the actors described the situation created a clearer overall picture. Their diverse perceptions of the challenge have been cemented over time and contribute to a behaviour between the actors that makes it difficult to trigger new dynamics in the market.

▶ At the governmental and municipal levels, this behaviour is characterised by a desire to comply with the regulations and the resultant need for security that steer decision-makers away from developing innovative solutions. At the same time, it is resource-intensive to introduce new ways of solving principles for records management into software and solutions. Copying the requirements of others in order to prepare a procurement creates a false sense of security that it will save time and ensure quality.

▶ Suppliers experience a lack of demand for innovative solutions and find that there are few incentives to invest in developing new systems in this market.

▶ For their part, the National Archives finds that the public sector has too narrow an understanding of their actual room to manoeuvre and innovate within existing regulations and standards. They want organisations to take a more active role in utilising the opportunities at their disposal.

> Problems look different from different points of view. The design process provides insight into what each individual group of actor's experiences in a deadlocked situation and why they act as they do. This in itself helps to trigger new opportunities.

In a situation like this, design methodology is valuable because it is based on how individuals and institutions experience a situation and how this drives behaviour. These insights are not solid analytical facts, but they create an understanding of why the actors do what they do. In a deadlocked situation, simply understanding the other party's position may be enough to trigger a new and more constructive dialogue.
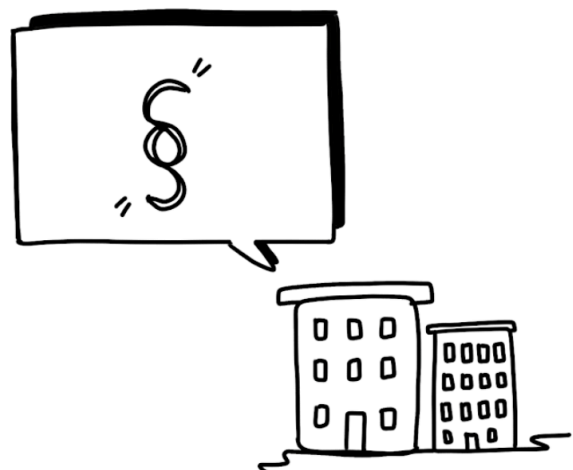
> It is important to underscore the importance of establishing a common understanding of the situation among the actors, so that they can all participate in a constructive and innovative dialogue.

In the project, this insight created an exciting discussion in the National Archives, where it became apparent that myths and misunderstandings about Noark were a conservative force in the market. We can communicate more strongly that the regulations and Noark offer more room to manoeuvre than many expect. More support can be offered to suppliers to develop innovative solutions that fulfil the regulatory requirements. In the exploring and defining phase of the project, the project team chose to dig deeper into the hypothesis that myths and misunderstandings about the regulations stood in the way of innovation. This was done as part of a prototype representing a fictional website, which contained an explanation of myths and facts about the Archives Act.

Myter og misforståelser om arkivlov

Det er en del myter om at dagens arkivregelverk setter begrensninger for innovasjon og det å tenke nytt rundt løsninger for arkiv i forvaltningen. Her gir vi deg en oversikt over noen av disse mytene, med noen fakta om hvilket handlingsrom som faktisk finnes i regelverket.

Myte:
Alt som er arkiv skal inn i Noark, og Noark-systemet er det eneste arkivsystemet vi har.

Fakta:
Alle informasjonssystem kan være arkivsystem. Ditt arkivsystem er det systemet du bruker som primærkilde når du trenger informasjon eller dokumentasjon på det som har skjedd, er blitt sagt eller vedtatt. Arkivregelverket stiller visse krav til et arkivsystem, men det er ikke gitt at dette må være basert på Noark-standarden.

Hvordan kan vi løse det? Les mer

Myte:
Journalføringsplikten er vanskelig, og er til hinder for at vi kan lage nye, brukervennlige løsninger.

Fakta:
«Journalføring» handler om å føre en logg over dokumentene som brukes i ulike prosesser, hvor en registrerer informasjon om når det skjedde, hvem som var involvert, hva det dreide seg om, og hvilke andre dokumenter som hører til samme prosess. Dette er opplysninger som finnes i de fleste dokumenthåndteringssystemer. Hvis du kan lage en dokumentliste med disse opplysningene, har du en journal.

Hvordan kan vi løse det? Les mer

Myte:
Vi skal ha Noark, og da må vi kjøpe ett av sak-/arkivsystemene som er i markedet.

Fakta:
Noark er en overordnet standard, som ikke spesifiserer en spesiell type system. Det er stor fleksibilitet i bruken av standarden, og det er mange måter å realisere kravene i standarden på.

Hvordan kan vi løse det? Les mer

Illustration: As part of a prototype, we printed out myths about the regulations that we tested on users. Debunking myths were very well received by the users; some mention that explaining myths clear up misunderstandings they themselves have had.
"... had we not read the myths; we would have thought everything had to go into the record management systems". - Public sector user and employee

First, the prototype attracted engagement and interest among representatives and users in the public sector, so we learned that this was a relevant message. Secondly, the project team learned that communicating about the regulations in layman's terms created more willingness to rethink records management. Where the format of a regulatory framework often creates a risk-averse attitude in readers, everyday language triggers a more active attitude.

The prototype showed us that when the goal is to facilitate innovation and new thinking, the National Archives has a great deal to gain from good communication that explains public organisations' room to manoeuvre.

> By experimenting and testing different forms of communication between the actors, one can quickly confirm (or disprove) hypotheses about what will trigger a new dialogue.

In working with Arkivfloken, the supplier market was involved in all phases of the project, from insights to ideas, to prototyping and sharing recommendations for the way forward. The other actors involved reacted positively to their involvement, as it creates a sense of openness, transparency and predictability that there may be changes in the field, that they can provide their input, and that new market opportunities will arise.

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it creates a sense of openness, transparency and predictability that there may be changes in the field, that they can provide their input, and that new market opportunities will arise.

For example, the Head of Tech and Digitalisation at employer's union Abelia was a member of the project's steering committee. The project thus received important input and signals on how the market can be engaged and how best to consider the interests of suppliers in order to contribute to the development of the market.

At the same time, one must be aware that it is resource-intensive for suppliers to maintain a close relationship with the Archiving Authority, and that one must balance the expectation of participation with the real opportunity for influence.

> It is valuable to involve representatives of the supplier market, but in doing so it is essential that they feel that they have real influence in the process.

During the project, the project team felt that market players contributed a genuine desire for co-creation and innovation. The active involvement of suppliers increased the value of the work, but one must also maintain a critical perspective when considering which specific interests might be guiding the contributions of the individual supplier. If you succeed in generating good involvement, you create interest in the market for potential new market opportunities, and you can stimulate new suppliers to come in and change the dynamics.

One result of Arkivfloken was the idea to create StandardLab. The purpose of StandardLab is to understand how the National Archives can further advance standardisation efforts in collaboration with the suppliers and users. The project welcomed the involvement of suppliers and public sector organisations that have developed solutions themselves, with the invitation:

"Join us and tell us how we can facilitate innovation in the area of records management and archives. Through good standards, we want to make it easier to create user friendly solutions."

The starting point for StandardLab was the insights Arkivfloken had gleaned about the existing standard. They saw that there is a need to challenge the prevailing situation, because the standard and the way it is managed do little to promote innovation. There was a desire to work in a user-centred manner, to ensure that development takes the needs of suppliers and users into account. In addition, StandardLab can enable the National Archives to conduct more active administration of the standard than is done today. StandardLab is one of the measures that the National Archives wishes to prioritise further. Among other things, they sought funding to establish the project in their initiative proposal for 2022.
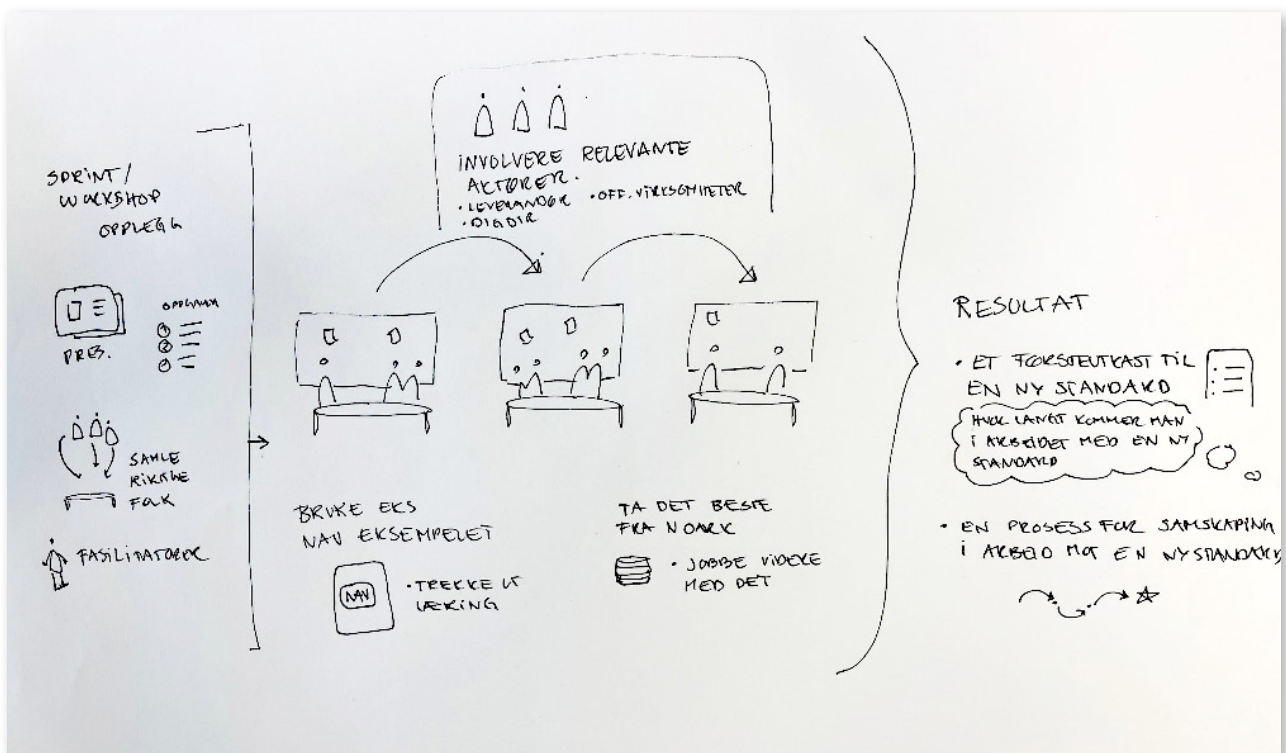

Illustration: sketch for the StandardLab idea, where one works in a co-creative and involving way with standardisation efforts by gathering the right professionals for several workshops or meetings
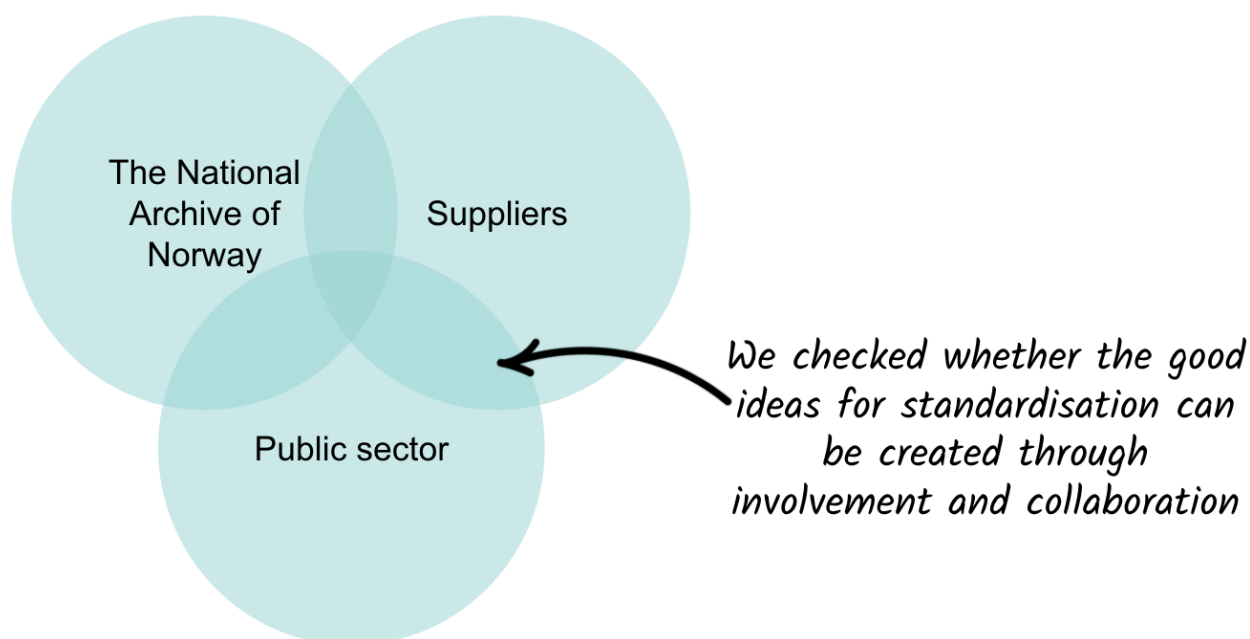
The National Archive of Norway

Suppliers

Public sector

We checked whether the good ideas for standardisation can be created through involvement and collaboration

Figure: Actors in the StandardLab prototype

The project has made it clear that there is no single radical measure that can transform the market while simultaneously safeguarding the mandate undertaken by the National Archives. At the same time, understanding how the actors involved experience the situation has given the National Archives the opportunity to work purposefully to unlock the market.

Principles have been established on how to work with suppliers in the future and there is now a stronger focus on regular dialogue and strengthening communication about the opportunity space within the regulations and the standard. Not least, the National Archives wishes to tie in the supplier dialogue with guidance from central and local public authorities, to raise awareness about best practice among those who purchase solutions in the market.

As a premise setter, it is important to understand how the framework you have set is experienced by other actors and how to change or communicate in new ways about the frameworks you oversee.

6. Food for thought: Arkivfloken as a *Mission*

The Arkivfloken project has taught us valuable lessons about how to work to address complex issues in the public sector. To round off these reflections, we wish to ask ourselves whether a project like the Arkivfloken can be elevated to an even more ambitious level in the future, and if so, how one might proceed. These thoughts will also be transferable to other public sector wicked problems that require attention.

The Arkivfloken project culminated in the autumn 2020 with a description of 8 actions that will individually contribute to achieving the vision of archiving by design. Put into context, these measures will build on each other and reinforce the opportunities for achieving this goal by 2025. Several of the measures have already been set in motion and will be implemented in 2021.

Early in the project, a choice was made that the measures defined in Arkivfloken should fall within the mandate for which the National Archives is responsible. At the same time, it is clear that the potential for resolving this societal problem will increase if public organisations take joint responsibility for the challenge.
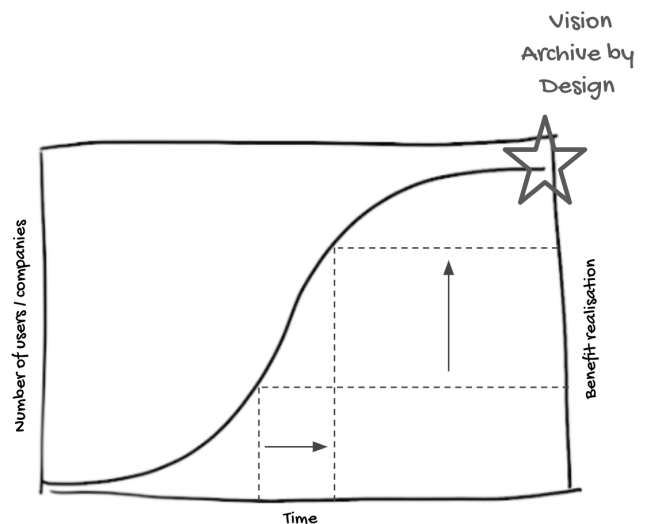

Figure: The Arkivfloken and adjacent initiatives in the National Archives shall together drive the adoption of archiving by design, thereby realising benefits.
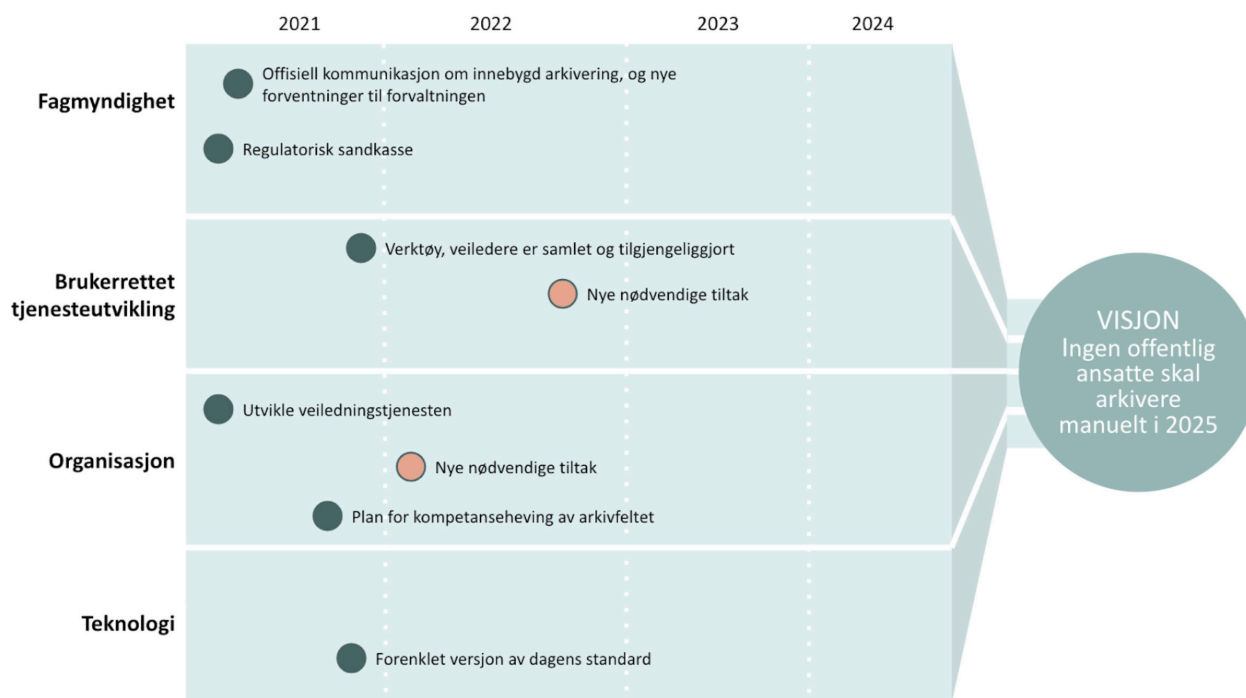
Figure:
Arkivfloken defined measures in four dimensions that the National Archives can control to achieve the vision. If you look beyond the National Archives' area of responsibility, you can build on measures owned by other actors that will increase your chances of success. Please note that these measures are not actually planned out in time, they are rather intended as a general illustration of the idea.

If you look even more ambitiously at the conundrum, it is worth asking whether one can mobilise even more broadly in the future and elevate the challenge to a "mission" around which society can unite.

In the context of the EU, the "mission approach" has been actualised as a way of addressing major societal challenges. The approach describes criteria and offers advice on how to tackle challenges in ambitious ways that transcend interests and sectors. It demands innovation in many areas towards a common overarching goal.

As a project, Arkivfloken is not a mission, but the wicked problem of public as a *societal challenge* meets many of the criteria that justify defining it as a mission moving forward.

The project provides us with a valuable understanding of what can qualify as a mission, as well as what it takes to elevate a *societal challenge* to a mission. At the same time, the project may shed light on the question of whether a mission-oriented approach is the right prescription to drive innovation in Norwegian public administration.

The big challenge that concerns each individual citizen is that a lack of archiving poses a democratic problem. This deprives citizens and others of access and the opportunity to follow the dialogue between citizens and public authorities.

To meet this challenge, we must mobilise a broad and explicit need within the public sector to invest in digitalisation and new ways for designing records management and archive principles. This will drive the National Archives' administration of regulation going forward and stimulate competition and innovation in the supplier market.

Transforming the perception of the records management function from a "necessary evil" into a "must-have" that creates value for an organisation beyond mere compliance with the regulations requires targeted communication work and a high degree of dialogue on the part of the National Archives. It is even more important that demands and inspiration must come from other actors - from citizens, from the businesses with which we cooperate, and from leaders at the Governmental organisations and municipalities.

One question that has emerged in Arkivfloken is whether ownership of the National Archives should rest solely with the Ministry of Culture, or whether other ministries should also set requirements and help to drive the initiative. All ministries have "users'' of record management solutions, and one can therefore imagine that ownership could be shared across multiple ministries.

The challenge is twofold – we must both strengthen ownership of the problem and stimulate the need for new solutions. If this can be mobilised, the market will follow.

The specific mission has been clearly stated by the National Archives since 2019: "By 2025, no public sector employee will have to manage records manually." This is a strong, understandable and ambitious vision, but at the same time it is a little narrow from a mission-oriented perspective. Strong missions require broad social relevance, while records management affects each individual citizen, it will be challenging to engage most citizens in actively supporting this mission.

However, it is still possible to argue that this is a mission, precisely because

it greatly affects the work life of *all employees in central and local public authorities*. This will have broad social relevance in society, not only because it affects many people in public administration, but because trust in all organisations in the public sector is an important fundamental principle in society. The ability to ensure access and control of public processes and decisions has rarely been more important than it is right now, in a world in which many countries are seeing passionate push-back against public authorities, not least as a result of the COVID-19 pandemic.

As a mission, the Arkivfloken requires actively engaging the million Norwegians who work in the public sector and convincing them that records management is relevant to their daily work. Many of these people experience the challenges of managing records in their job, and if we can turn this into a "talking point" in the public sector, we can generate the necessary engagement to elevate this initiative to the status of a mission.

Through cross-sectoral mobilisation, we can reach beyond the public sector and engage research communities, professional organisations, and innovation communities in developing new solutions and approaches to meeting documentation needs. A joint effort to safeguard democratic rights will yield opportunities for growth and concrete value for all these actors.

***As a societal challenge,* the problem of public records management meets the criteria for a mission in many ways**
Here we will briefly describe how this wicked problem can be defined as a mission, as well as some of the activities that can be strengthened on such a journey.

1. *It is ambitious, inspiring and broadly relevant to society*
The problem is defined as a democratic challenge, something that affects all dialogue between citizens and the public sector. The project has contributed to the development of user-oriented communication. This is something that must be reinforced through the ongoing work, so that the users (public sector employees) understand the value of research and development and the tangible difference new solutions will make in their daily work.

2. *It has a clear direction and is targeted, measurable and time-limited*
The National Archives has a clear vision of establishing "archiving by design" in all Norwegian public sector organisations by 2025.

Through the Arkivfloken, 8 measures have been defined that the National Archives can continue to drive forward, and which in combination contribute to achieving this goal. By expanding our ambition beyond the mandate of the National Archives and involving multiple ministries and agencies as premise setters, we can also define clear goals within the fields of research and development, among users in central and local public authorities, and through stimulating initiatives in the supplier market.

3. *It entails ambitious but realistic research and development activities*
Governance must be institutionalised, with leaders from across academia, the business community, and user groups. These leaders should advise on funding, the prioritisation of measures, evaluation and experimentation with new ways of working.

The project's steering committee has had a broad range of representatives from national and local administration organisations and the business community. Moving forward, this can be expanded to include research communities and innovators as well as end users.

4. *It demands innovation across professional disciplines, sectors and actors*
Solving the conundrum requires innovation across the IT and public sectors, across central and local public authorities, and across national regulatory and administrative actors

The project has helped to increase formal and informal consultation with special interest organisations and users, which is seen as necessary to spur the development of concrete proposals for projects. This can be further strengthened, systematised and broadened given increased efforts to solve the challenge.

The implementation of missions requires breaking down silos and coordinating measures between actors. Arkivfloken has helped to develop principles for further work on the coordination of sponsors,

which will help to systematise this work.

Missions require establishing structures for smoothly exchanging employees from different ministries, agencies and other instruments in order to promote experimentation and take risks. The project has so far included participants from Norwegian Labour and Welfare Administration (NAV), the municipal sector, Digdir, the Norwegian Mapping Authority and the Municipality of Oslo, among others. In a mission context, we must also provide more room for long-term cross-sector internships and learning opportunities and allocate ample time to resources tasked with building a bridge between actors in the development work.

5. *It drives many "bottom-up" solutions*
Solving the conundrum demands innovation from competing software suppliers and from various public actors who have the capacity and expertise to come up with good solutions. The solutions and examples of archiving by

It is also worth mentioning that the National Archives has established their own regulatory sandbox to work on the initiative, and they have prioritised a desire to establish StandardLab, which was one of the ideas that came out of the Arkivfloken project. The aim of StandardLab is to increase the involvement of various actors in the development of new standards in this area. These are examples of other ambitious measures that aim to stimulate bottom-up work, and which will make strong contributions to untangling the present conundrum.

Arkivfloken has been identified by Digdir and DOGA as one of the most complex projects in the StimuLab portfolio. At the same time, it is not unique as a challenge, and it is expected that an increasing number of these kinds of complex societal challenges will need to be addressed. Sharing learning and experience about large and small aspects of this issue can benefit others. We hope the National Archives' open reflection on this work and their experiences proves valuable to others. Perhaps this work can inspire others who face a societal problem to consider the mission-oriented approach and use it to glean a wider range of perspectives?
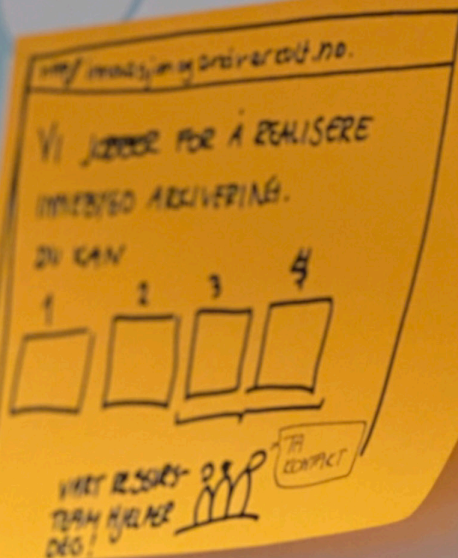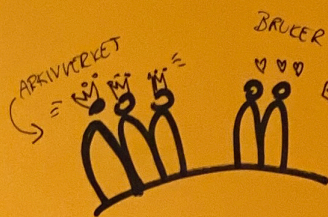
This report has been prepared for The National Archives of Norway in connection with the Arkivfloken project. The report has been translated to English in collaboration between The National Archives of Norway and PwC. PwC was a supplier and service design team during the project.

Our assessments are based on factual information that has emerged in dialogue with the employees and users of the National Archives and other relevant actors, as well as on documentation made available to us by the National Archives. PricewaterhouseCoopers (PwC) has not conducted any independent verification of the information that has emerged, and we do not ensure that it is complete, correct and accurate. PwC has not carried out any auditing or inspection of the operations of the National Archives.

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