Menon Economics

REPORT

BENEFITS OF PLAIN LANGUAGE IN NORWEGIAN MUNICIPALITIES

By Simen Pedersen, Maja Olderskog Albertsen, Bjørn Ingeberg Fesche and Iselin Kjelsaas

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Preface

On behalf of the Norwegian Association of Local and Regional Authorities (*kommunesektorens organisasjon,* abbreviated KS), Menon Economics has quantified benefits of plain language in Norwegian municipalities.

The project was led by Simen Pedersen, with Maja Olderskog Albertsen, Bjørn Ingeberg Fesche and Iselin Kjelsaas as project members. Elise Grieg has validated the statistical analyses and Siri Vikøren has quality assured the language.

The work was carried out between November 2020 and November 2022. Our contact persons at KS were Anna Holm Vågsland and Marianne Bugge Nordberg. Heidi Bunæs Eklund of NTB Arkitekst assisted the municipalities with rewriting selected texts in plain language.

We would like to thank KS for a very interesting assignment and excellent cooperation. We would also like to thank the employees of the City of Bergen and Tønsberg Municipality for their support. Their efforts have been essential in helping us measure effects and benefits of plain language.

Toltaltekst translated the report into English. The translation was funded by the Language Council of Norway under an agreement with KS and Menon Economics.

Cover photo of signs in Sandvika taken by Bjørn Lyster.

November 2022

Simen Pedersen
Project manager
Menon Economics

Table of contents

Executive summary

The new language act entered into force on 1 January 2022. The revised act contains a clause on plain language: Public bodies shall communicate in plain and correct language adapted to the target group. Since 2015, the Norwegian Association of Local and Regional Authorities (kommunesektorens organisasjon, abbreviated KS) has worked on a project to promote plain, clear communication in the municipal sector, based on the Language Council of Norway's plain language guidelines. The overarching goals of plain language are to save time by improving understanding, both for the caseworker and user, promote trust and security among citizens, and support the rule of law and democracy.

Qualitatively, it is well established that plain language has positive effects, both for citizens and caseworkers. Many municipalities, however, may find it difficult to prioritise plain language projects when the benefits are uncertain. Based on the assumption that plain language in the municipal sector generates a number of desirable outcomes, it makes sense to encourage municipalities to implement such projects by highlighting and quantifying the benefits for caseworkers. In this case, the aim is therefore primarily to map the benefits for caseworkers. It is also important to map these benefits in their own right, as improvements in municipal casework ultimately benefit society as a whole.

Based on rewrites of two municipal texts aimed at recipients of municipal services, we find that plain language generates benefits in Norwegian municipalities. The benefits we have identified are relatively certain, though modest in scale. The value of plain language is greatest if the rewritten texts can be shared between municipalities and reused.

We have quantified benefits of plain language

The purpose of the project is to measure the effect of the plain language rewrite on the amount of time caseworkers spend on various tasks. We have attempted to identify potential relationships between the plain language rewrite and a decrease in caseworkers' time use, where such relationships exist. This means that we have attempted to statistically prove a causal relationship between the cause (plain language rewrite) and the effect (a decrease in the number of enquiries / time spent by caseworkers). The identified causal relationships (the effect of plain language) are then assigned a value in NOK (the benefit of plain language). The estimated benefit is based on the following texts being rewritten in plain language:

- Invoices to recipients of health and care services in Tønsberg Municipality
- Municipal housing support form in the City of Bergen

We have limited the measurement of benefits to the time saved by switchboard staff in Tønsberg and caseworkers handling municipal housing support applications in Bergen. It is worth noting that recipients of health and care services and applicants for municipal housing support have also saved time and benefited from faster case processing. These benefits may have increased trust in the two municipalities.

Caseworkers save time because the text was misunderstood before the plain language rewrite. The misunderstandings mean that caseworkers have to spend more time on a case than they would have to if the text was not misunderstood. This could, for instance, be due to users who misunderstand the text calling the municipality's switchboard or submitting an incomplete application. In order to measure the effect quantitatively, we need data that capture the additional work that misunderstandings entail for caseworkers before and after the plain language rewrite. It is a great advantage if the text being rewritten is widely used and often misunderstood, as this provides a robust statistical basis for the

measurement. It should also be possible to quantify the costs the municipality incurs as a result of misunderstandings.

Rewriting invoices in Tønsberg results in an average of 2.5 fewer enquiries per day

Rewriting invoices for recipients of health and care services in Tønsberg in plain language appears to help more people understand their content. Fewer misunderstandings of the invoice probably mean fewer phone enquiries to the municipality's switchboard. We estimate that the effect of rewriting the invoices in plain language results in an average of 2.5 fewer enquiries to the switchboard per day. This corresponds to 550 fewer enquiries to the municipality's switchboard per year. The decrease in the number of phone enquiries to the switchboard represents an annual saving of NOK 35,000. Rewriting invoices in plain language also probably reduces the number of emails sent to the switchboard, saves service providers' time and reduces the number of invoices forwarded to a debt collection agency. This means that our valuation only captures some of the benefits in the health and care sector. Improving invoices for health and care services has also generated benefits in other service areas. Sharing the rewritten invoice with other municipalities may also generate further benefits.

As an illustrative example, it is interesting to consider what the potential benefits would be if a large proportion of the country's recipients of municipal health and care services receive an invoice similar to the one Tønsberg had before the rewrite. If we assume that the potential saving for Tønsberg is NOK 35,000 for around 2,300 service recipients, this equates to approximately NOK 15 per service recipient. In 2021, almost 380,000 people received services from the municipal health and care service. If we assume that 100,000 people a year receive an unclear invoice, the potential saving from rewriting these invoices is NOK 1.5 million each year.

Rewriting the housing support form in Bergen reduces the number of incomplete applications by 4 percentage points

Rewriting the municipal housing support form in Bergen in plain language reduces the number of incomplete housing support applications. More applicants understand how to complete the form, and which documents need to be attached with the application. Fewer misunderstandings of the form probably mean that caseworkers send fewer incomplete application letters to applicants who have submitted incomplete housing support forms. We estimate that the effect of rewriting the form in plain language amounts to a decrease of 4 percentage points in the number of such letters. This corresponds to 194 fewer letters per year. The reduction in the number of incomplete application letters sent out represents an annual saving of NOK 12,000. In addition, municipal housing support applicants will:

- spend less time on housing support applications, through less time spent both completing the form and on phone calls with caseworkers
- receive a quicker decision on whether they are eligible for municipal housing support (resulting in greater predictability and less worry)

Rewriting the form in plain language can, through these effects, enhance the customer experience and increase trust in the City of Bergen. Our valuation therefore only captures some of the benefits that have been and can be realised. Since only a small number of municipalities provide municipal housing support, the direct potential for reuse of this example is limited. However, since municipal housing support is common in large, central cities and towns, which typically have high housing costs, many applicants stand to benefit from the housing support form being rewritten in plain language.

Concluding comments

The benefits we have assigned a monetary value to are considered relatively modest for the municipality carrying out the rewrite. We have estimated the annual saving for Tønsberg Municipality to be NOK 35,000, while the annual saving for the City of Bergen is estimated to be NOK 12,000. These two benefits represent only part of the overall picture. There is reason to believe that the rewrites also benefit applicants and service recipients in the municipalities, by saving time and reducing frustration. In the long term, this can increase trust in the municipality.

Once the texts have been rewritten in plain language, the cost of sharing them is low. This means that the value of plain language is greatest if rewritten texts can be shared and reused. This may include sharing texts across service areas in municipalities as well as between different municipalities. For example, the benefits of rewriting invoices for the health and care sector would increase if more service areas started using the same invoice. The benefit would be even greater if Tønsberg shared the rewritten invoice with other municipalities. For new high-quality standard texts to be effective, municipalities must develop their writing culture, and one way to achieve this is by working directly with texts. Of course, in an ideal writing culture, texts would be written in plain language from the outset. Texts that are initially written in plain language do not require rewriting.

Sharing and reusing rewritten texts across municipal departments and between municipalities can be key to making plain language rewrites worthwhile from a socio-economic perspective. The incentives for rewriting texts in plain language may be limited. As a result, poorly written texts that would benefit from a rewrite may not be rewritten. One solution to this problem could be for municipalities to collaborate on plain language initiatives. Another solution is to continue and further develop the support scheme available to municipalities. The further development of this scheme could, for example, involve prioritising strong plain language projects in a select number of municipalities, rather than spreading efforts across many municipalities. The aim of the initiative could be to realise and document benefits of the work – before going on to share the rewritten texts and knowledge with other municipalities to maximise their reuse value. In any case, it would be beneficial for a single actor to take responsibility for identifying rewritten texts and sharing them with other municipalities. KS has already taken on this role by establishing a text database, consisting of texts from municipalities that carried out plain language projects. The text database is a positive initiative, but there are compelling arguments for further prioritising and systematising this work. One possibility is for KS and national authorities to take greater responsibility for common standardised texts where the potential for sharing and benefit is substantial. The goal could be to make it easier for each municipality to use templates. The advantage of this would be that, unlike today, it would not be up to the individual municipality, and municipal texts would more often be written in plain language.

1 Background and research questions

There is broad agreement that plain language benefits society, but that these benefits are difficult to measure. The ambition of this project is to estimate the effect of rewriting texts in plain language in terms of the time saved by caseworkers in Norwegian municipalities. For the first time, effects of plain language in Norwegian municipalities will be measured and valued.

1.1 Background

The new language act entered into force on 1 January 2022. The revised act contains a clause on plain language (the Language Act, 2022, Section 9): *Public bodies shall communicate in plain and correct language adapted to the target group.*

Since 2015, KS has worked on a programme to promote plain, clear communication in the municipal sector, based on the Language Council of Norway's plain language guidelines. The overarching goals of plain language are to save time by improving understanding, both for the caseworker and user, promote trust and security among citizens, and support the rule of law and democracy. KS's Plain Language Programme for the Municipal Sector *(Program for klarspråk i kommunesektoren)* has been subject to ongoing evaluation. The evaluation (Oslo Economics, 2021) concludes, among other things, that:

- Plain language has been, and continues to be, a relevant topic in Norwegian municipalities.
- The programme has supported plain language training for 800 municipal employees in 300 municipalities.
- Improved language in the municipalities has generated effects that are difficult to quantify.
- *The Plain Language Programme for the Municipal Sector* is a profitable initiative from a socio-economic perspective.

The KS project is inspired by a similar project carried out in government agencies from 2009 to 2012. The evaluation of effects of plain language in government agencies (Dahle and Ryssevik, 2013) showed modest but positive effects on users' experience of communication with government agencies and on employees' attitudes towards communication. The Agency for Public Management and eGovernment's (Difi) compilation of examples[1] of plain language use in the public sector concludes that plain language helps renew, simplify and improve public administration.

Box 1.1 What exactly is meant by the term plain language?

In this context, plain language refers to correct, clear language adapted for users of public sector texts. A text is written in plain language if the recipients

- *find what they need*
- *understand what they find*
- *can use what they find to do what they need to do*

Source: Language Council of Norway

[1] URL [Downloaded 26 May 2022]: https://www.digdir.no/media/1126/download

1.2 Research questions

Qualitatively, it is well established that plain language has positive effects for both citizens and caseworkers. Many municipalities, however, may find it difficult to prioritise plain language projects when the benefits are uncertain. Given that plain language in the municipal sector generates a number of desirable outcomes, it makes sense to encourage municipalities to implement such projects by highlighting and quantifying the benefits for caseworkers. It is also important to map these benefits in their own right, as improvements in municipal casework ultimately benefit society as a whole. For this reason, KS aims to map the benefits for caseworkers in this report.

The ambition of this project has been to estimate the time caseworkers save when texts are rewritten in plain language and to quantify the value of the time saved. For the first time, the effect of plain language has been mapped in a robust, clear manner. The questions to be answered are:

- What are the benefits of plain language work?
- How great are the benefits of plain language work?

2 Methodological approach

Based on dialogue with seven municipalities, Menon identified two municipal texts that were suitable for rewriting and where the effect of the rewrite could be measured. We selected invoices to recipients of health and care services in Tønsberg Municipality and the application form for municipal housing support in the City of Bergen.

Our approach to quantifying the effects and calculating the benefits of plain language has consisted of four activities:

1. Identifying examples of texts that are suitable for a plain language rewrite and where the effect can be measured.
2. Designing a system that ensures access to the necessary data to measure the effect of the plain language rewrite.
3. Rewriting the texts in plain language.
4. Measuring the effect of the plain language rewrite.

Menon Economics was responsible for activities 1, 2 and 4. Activity 3 was carried out by KS, representatives from the municipalities and NTB Arkitekst.

In this chapter, we look at our approach to identifying texts for rewriting. We also provide a description of the texts selected for rewriting and the rationale behind these decisions. We have also chosen to provide a brief introduction to measuring effects and benefits.

2.1 Criteria for selecting texts suitable for rewriting and measuring effects

A key prerequisite for successfully measuring the effects of plain language in the municipal sector is selecting texts that are suitable for this purpose. Below, we discuss key criteria that need to be met in order to measure relevant effects of plain language:

- *Often misunderstood.* Rewriting a text in plain language is most effective when the text is often misunderstood. If the texts are rarely misunderstood, the potential effect of plain language is low and more difficult to measure.
- *Used frequently enough (volume).* It is beneficial for the measurement to have as many observations as possible. The more observations we have, the more confidently we can draw conclusions about the effect. The texts should therefore be widely used by citizens, businesses and/or other actors in the municipality. Using frequently used texts ensures sufficient observations. It is therefore advantageous to measure the effect in municipalities with large populations.
- *Sufficient and reliable data.* Conducting a quantitative study depends on microdata detailing how often a text is misunderstood. The data may already be collected or a system may have to be developed to harvest the data.
- *It should be possible to correct for other factors that affect misunderstandings.* It is beneficial for the measurement to control for other factors that are assumed to influence the extent to which the text is misunderstood, such as the number of times a person has come across the text before (learning effect) and the age of the person reading and interpreting the text.

- *Possible to measure costs*. Misunderstandings of the text must lead to specific actions where it is possible to measure the time spent, as time is a cost. Two specific examples of cost-driving activities that can be reduced through plain language are drafting and sending out incomplete application letters and time spent on phone enquiries.
- *Generalisable*. The texts should be used by multiple municipalities so that the measurement of the effect is relevant to more municipalities than just the one(s) where the measurement is carried out. It is also an advantage if the texts selected are the same across the municipalities involved.

We have focused on addressing these considerations in our dialogue with selected municipalities and KS when selecting texts to be rewritten and measured for effect.

In addition to the requirements made of the texts, we have also had made requirements of the municipalities that own the texts to be rewritten. It was crucial that they are able to allocate sufficient resources for meetings, rewriting, implementation and data collection/submission.

2.2 Selection of texts to be rewritten

The work of identifying texts that could be rewritten started when we received a list of municipalities and contact persons that KS knew were keen and interested in plain language. We entered into dialogue with seven municipalities and identified suitable texts in two municipalities, as Table 2.1 shows. Based on the criteria reviewed in section 2.1, we chose to rewrite the following two texts: invoices to recipients of health and care services in Tønsberg Municipality and the application form for municipal housing support in the City of Bergen. Both texts meet most of the criteria. The exception being that it is not possible to control for learning effects for the invoices in Tønsberg.

Table 2.1 Overview of municipalities we entered into dialogue with and the outcome of the dialogue

Municipality	Text to be rewritten	Outcome	Reason why the text was unsuitable:
Tønsberg	Invoices to recipients of health and care services	The text was suitable	-
Bergen	Application form for municipal housing support	The text was suitable	-
Oslo	Parking fines	The text was unsuitable	We consider the risk of recipients disputing parking fines to be high regardless of their level of understanding (something that has interfered with previous measurements). In addition, the user journey is long and complex, and it is unclear how the effect can be measured without the process becoming too extensive.
Sarpsborg	Report of concern to families from the child welfare service	The text was unsuitable	Our hypothesis is that receiving such letters feels dramatic, and that recipients may still have valid reasons to contact the municipality,

			even if the letters are easier to understand and have a friendlier tone.
Ålesund	Information for citizens about water metering	It was not possible to measure the effect	The text had already been rewritten and no historical data were available.
Stavanger	No specific text	Unable to prioritise this work	We entered into dialogue, but the municipality did not wish to prioritise this work at present.
North Follo	No specific text	Did not arrive at a specific text	We entered into dialogue, but did not arrive at a specific example.

Source: Menon Economics

2.3 Description of methods used to measure effects and benefits

The purpose of the project is to measure the effect of the plain language rewrite on the amount of time caseworkers spend on various tasks. We have attempted to identify potential causal relationships between rewriting texts in plain language and caseworkers spending less time on tasks, where such relationships exist. This means that we have attempted to statistically prove a true causal relationship between the cause (plain language rewrite) and the effect (a decrease in the number of enquiries / time spent by caseworkers).

Randomised control trials are considered the gold standard for measuring effect. In such studies, recipients are randomly assigned to either receive rewritten texts or non-rewritten texts (the control group). Then, the time the caseworker spends in relation to rewritten texts is compared with the time spent in relation to non-rewritten texts. The method for measuring the effect of rewriting the two texts in plain language depends on data availability. In this project, it was not possible to design randomised control trials for three reasons. First, it has not been possible to adapt the municipalities' IT systems so that randomly selected recipients receive one text, while the remaining recipients receive another. Secondly, such an approach requires us to measure the caseworker's time by following up the recipients who receive rewritten texts and those who receive non-rewritten texts separately. For this to be possible, we need a unique case identifier for cases with rewritten and cases with non-rewritten texts so that the caseworker can track the time spent on each. This has not been possible. Thirdly, it is perceived as ethically problematic to deliberately expose recipients to poor-quality texts. As a result, we were unable to conduct the measurement of effects as randomised control trials, even though this is the preferred method from a methodological standpoint.

The second-best option is to implement the rewritten text for all users at the same time. The effect is identified by comparing the time caseworkers spend on certain tasks before and after the rewrite. The challenge with this method is that factors other than the rewrite may influence the caseworker's time use. The common practice in such cases is to attempt to control for all factors that are assumed to influence the caseworker's time use, in order to isolate the effect. The biggest methodological challenge with this approach is there may not be available data on all the factors that could influence the caseworker's time use. As a result, there is a risk that the effect we aim to isolate may be either overestimated or underestimated. The rewrite of the application form for municipal housing support in Bergen falls into this category.

The third-best option is similar to the second-best, with one key difference: no data are available to control for factors that may influence the caseworker's time use. As a result, there is an even greater risk that the effect may be either overestimated or underestimated. The rewrite of invoices to recipients of health and care services in Tønsberg falls into this category.

Regardless of the method, the identified effects will represent an *estimate* of the time saved by using plain language. By assigning a value in NOK to the caseworker's time, the benefit can be estimated in monetary terms – per case, per month and per year. As we will return to in Chapter 3, saved case processing time is one of several benefits that can be realised through rewriting texts in plain language.

3 Benefits of plain language in Norwegian municipalities

Rewriting texts in plain language can generate benefits for the municipality, recipients of services, citizens of the municipality and society as a whole. Societal benefits such as increased trust, and strengthened rule of law and local democracy are, naturally, difficult to measure and are closely linked to the information that is shared. Time saved by the municipality and service recipients is more tangible and easier to measure.

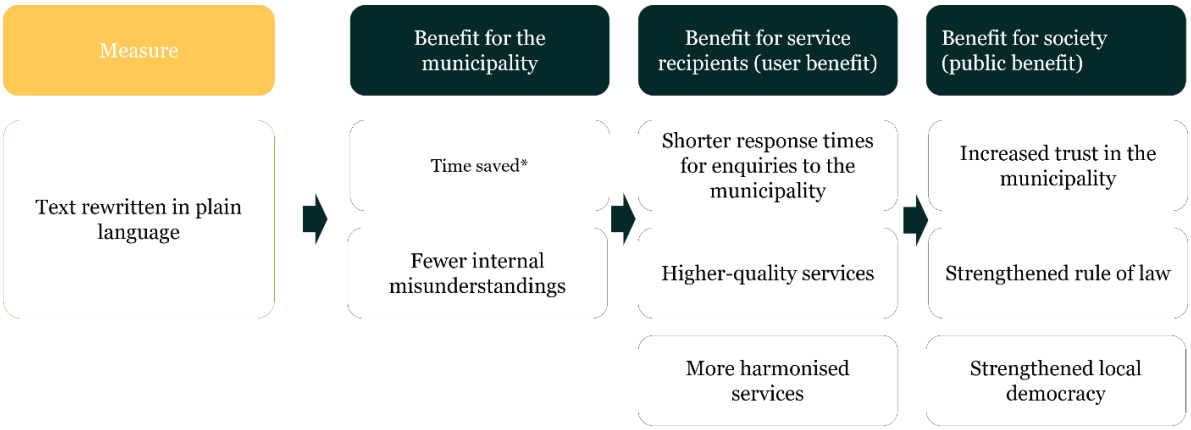
3.1 Potential benefits of plain language

Before we take a closer look at measuring the effect on time use in the municipalities, it is useful to have an overview of the potential benefits that can be realised through plain language. In the generalised example below, we have envisaged a municipal text being rewritten in plain language. By municipal texts we mean, for example, letters, invoices, web pages and application forms.

Unclear language can lead to misunderstandings among citizens who apply for services, receive letters and invoices, and read web pages. The misunderstanding could lead to them deciding not to contact the municipality, and thus not receiving the service they are eligible for. It could also cause them to contact the municipality by phone or letter for clarification. This leads to unnecessary time being spent by both the individuals and the municipality. They may also fail to provide the correct information in applications and letters, increasing the time spent on processing the cases. Since recipients of municipal services may be in a vulnerable situation, unclear language in communication to users can exacerbate inequalities in society.

Rewriting a municipal text in plain language can improve the efficiency of the municipality and generate benefits for users and society as a whole. Municipal benefits can include fewer misunderstandings among employees and time saved. For example, it could help employees grasp the meaning or substance of a text more easily when they need to review previous cases. Plain language in municipal texts can thus help save time and improve the quality of the services offered by the municipality. Time savings may also arise from clearer communication with recipients of municipal services.

Figure 3.1 Example of potential benefits of rewriting a municipal text in plain language



**In this study, we estimate the effect of rewriting texts in plain language on the time saved by the municipality.*

Plain language can also result in societal benefits such as increased trust in the municipality and public sector, and strengthened rule of law and local democracy. One example of how plain language can increase trust in the municipality is the clear communication of the COVID-19 rules. This is particularly important when the rules are intrusive and citizens may feel that the municipality is abusing its power, and that municipalities should understand that unclear rules contribute to different interpretations and unnecessary transmission or restrictions.

Easily accessible and easily understandable information about rights ensures that all citizens, regardless of their resources, can access the services they are eligible for. For example, it could mean that the documentation of a child welfare case is clear and well-documented, making it suitable as evidence in court if required at a later date.

Plain language can also strengthen local democracy. Oslo Economics (2020) writes that plain language means not concealing or exploiting power through language. Plain language thus contributes to citizenship and participation in democracy. Plain language can help clarify why services that citizens consider important are being cut, or make it clear what priorities are being compromised in the process. Plain language can therefore be a tool to achieve greater transparency in local communities. Increased transparency can foster local political engagement, reassure next-of-kin that those they care about are being looked after, and provide a greater opportunity to speak out when something is not right.

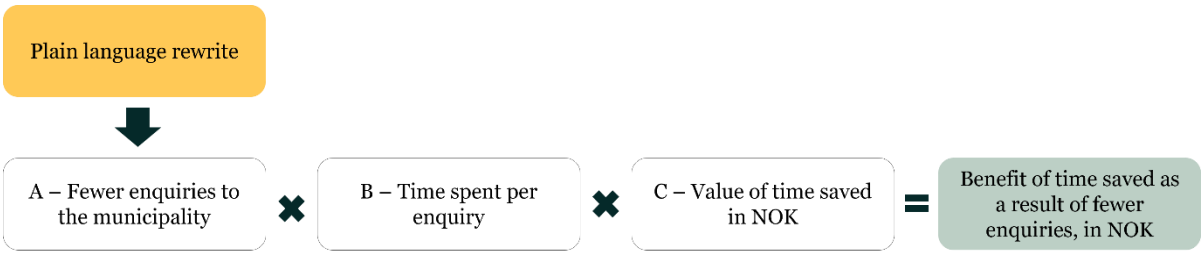
While plain language brings many benefits, it is important to recognise that some plain language initiatives may cost more than the value of the benefits they generate. Plain language initiatives require resources, and a fixed budget means that this may be at the expense of other tasks. It is therefore important to strategically develop competence to ensure that the texts are well-written from the outset, so they do not have to be rewritten, and to prioritise the rewriting of frequently used texts. Several of the internal benefits within the municipality, such as time savings, are unlikely to materialise on their own. Realising the time savings generated by plain language requires managers to commit to reallocating time to other tasks or downsizing.

3.2 The value of plain language

In chapters 4 and 5, we look at two specific examples of municipal text rewrites in plain language. The aim is to demonstrate the time-saving benefits of plain language for the municipality. Figure 3.2 shows how we calculate the benefits of plain language work in monetary terms, presented as a calculation.

Plain language can contribute to fewer enquiries to the municipality and/or reduce the time spent on each enquiry. In our examples, the consensus is that rewriting texts in plain language does not affect the time spent on each enquiry. If this had been the case, the calculation would have been different.

Figure 3.2 Calculation: From plain language rewrites to time saved as a result of fewer enquiries to the municipality



Source: Menon Economics

The first metric we have to quantify is fewer enquiries to the municipality (A). Since several factors can potentially affect the volume of enquiries to municipalities, this is the most difficult metric to determine. Our methods of determining the metric are different for the two examples, and they are described in more detail in sections 4.3 and 5.3.

The time spent on each enquiry (B) is a metric that is relatively easy to measure. Those who handle the enquiries can set the stopwatch and track the time. The average time spent will be a good estimate of this metric. If the plain language rewrite had reduced the time spent on each enquiry, we would have measured the time spent on each enquiry before and after the rewrite and estimated the time difference.

The value of time saved in NOK (C) can be estimated based on the actual labour costs of those who handle enquiries. Our estimate is presented in Box 3.1. We estimate that an hour saved by a customer service centre employee and a caseworker is worth an average of NOK 375 for Norwegian municipalities. Since wage negotiations in the local government sector are largely centralised, local variations in this estimate are likely to be relatively low.

Box 3.1 Estimated value of an hour saved by a customer service centre employee and caseworker in Norwegian municipalities

According to Statistics Norway's earnings statistics for 2021, the average monthly salary of a full-time customer service centre employee in the municipal sector is NOK 43,100 before tax, and NOK 44,000 before tax for a social support caseworker. This corresponds to a gross annual salary of NOK 517,200 and NOK 528,000, respectively, and a gross hourly wage of NOK 296 and NOK 302, respectively. Since the hourly wages are so similar, we will use NOK 300 per hour as our basis. Our aim is to determine the value of the time saved by the municipality, so it is not relevant to deduct tax. The municipality's costs for an employee include more than salary. The municipality must cover pension contributions, employer's national insurance contributions and employee benefits. A common means of determining the total cost of labour for a municipality is to add 25 per cent to gross salary. Adding 25 per cent equates to an hourly wage of approximately NOK 375. Since this captures the average price Norwegian municipalities pay for one hour of work by a customer service centre employee and social support caseworker, it serves as a good estimate of the value in NOK of saving one hour for these employees.

Source: Statistics Norway (table 11418)

4 Invoices to recipients of health and care services in Tønsberg Municipality

Rewriting invoices in plain language appears to help more people understand the content of the invoices. Improved understanding probably means fewer phone enquiries to the municipality's switchboard. We estimate that the decrease in the number of enquiries amounts to 2.5 enquiries per day. This corresponds to 550 fewer enquiries to the municipality's switchboard per year. The decrease in the number of phone enquiries to the switchboard represents an annual saving of NOK 35,000. Rewriting invoices in plain language will also probably reduce the number of emails sent to the switchboard, saving service providers' time and reducing the number of invoices forwarded to a debt collection agency. It is important to note that Tønsberg Municipality was unable to change the part of the invoice the invoice provider was responsible for. Our valuation thus only captures some of the benefits that have been and can be realised. Improving invoices may also generate benefits in other service areas. Sharing the rewritten invoice with other municipalities may generate additional benefits.

4.1 Reasons for the decision to rewrite invoices in Tønsberg

The representatives of Tønsberg Municipality were clear that their priority was measuring the effects of plain language. When they mentioned that invoices sent to health and care recipients are often misunderstood, it became evident that the invoices meet almost all of the criteria we had set for selecting text for a rewrite. Table 4.1 summarises which criteria Tønsberg Municipality's invoices to health and care recipients meet. A more detailed description is provided under the table.

Table 4.1 Tønsberg Municipality's invoices were evaluated against the assessment criteria for texts suitable for rewriting

Criterion	Met
The text is often misunderstood	Yes
The text is used frequently enough	Yes
Sufficient, reliable data to capture the extent of misunderstandings	Yes
Possible to control for factors that may affect the extent of misunderstandings	No
Possible to quantify the municipality's costs resulting from misunderstandings	Yes
Generates value for other municipalities	Yes

Often misunderstood. In dialogue with the head of the municipality's switchboard, it became clear that they handled many calls and emails every day from users who did not understand why they had received

an invoice. It also emerged that the volume of invoices forwarded to a debt collection agency was significantly higher than for other service areas in the municipality.

Used frequently enough (volume). In dialogue with accounting advisors in the municipality, it emerged that between 2,000 and 2,600 invoices are sent each month to recipients of health and care services.[2] Invoices are sent between the 8th and 28th of the month.

Sufficient and reliable data. There was no data on the number of enquiries about invoices to the municipality. In dialogue with the head of the switchboard, we decided that all caseworkers affiliated with the switchboard should count the number of phone enquiries they handled concerning invoices for health and care services.[3] The caseworkers were instructed to distinguish between general enquiries about the invoices and enquiries about invoices that had been forwarded to a debt collection agency. This enabled us to create a dataset for measuring the effect. We also explored the possibility of linking the enquiries to data on issued invoices, but this was not possible. Such a link would, for example, have enabled us to investigate whether the same individuals were contacting the municipality and/or whether the invoices were particularly unclear to first-time recipients.

It should be possible to correct for other factors that affect misunderstandings. As mentioned, the volume of enquiries may be explained by whether the recipient is paying an invoice for the first time, their age, mental state, language challenges and a number of other factors. These data are not available in structured datasets. The lack of data means that we cannot control for other factors that may affect the volume of enquiries to the municipality. It is therefore uncertain whether the effect we identify reflects the true effect of the plain language rewrite. For example, a decrease in the number of invoices issued or a change in the composition of recipients may affect the number of enquiries to the municipality about the invoices.

Possible to measure the benefit in NOK. Based on dialogue with the head of the switchboard service in Tønsberg, we received estimates of the average time spent on each phone call. Since we have already estimated the value of one hour saved by a customer service centre employee in Norwegian municipalities (see Box 3.1), we can calculate the saving in monetary terms per month and year.

Generalisable. Charging for health and care services is common practice in Norwegian municipalities and is regulated by the Regulation on user fees for municipal health and care services (in Norwegian only). The example from Tønsberg is therefore in principle relevant for all Norwegian municipalities, as long as the invoices have not already been rewritten in plain language.

4.2 Description of the invoice process

Between the 4th and 29th of each month, invoices for health and care services are sent to the recipients. The payment deadline is normally 30 days after the invoice date. If the invoice is not paid, a debt collection notice is issued. If the recipient of the invoice does not meet the minimum 14-day payment deadline, the case is forwarded to a debt collection agency. When a case is forwarded to a debt collection agency, the recipient receives a payment reminder. The recipient is given a 14-day deadline to either pay or submit their objections to the claim. If this is not done, the case may proceed to legal recovery of the unpaid invoice and debt collection fees.

---

[2] With the exception of December and January. Invoices for January and December are normally issued in December. As a result, nearly twice as many invoices are sent in December and only a few are sent in January.
[3] The measurement of the effect of rewriting the invoices in plain language does not therefore capture the benefits associated with fewer emails to the municipality.

The municipality's switchboard is the first point of contact for all enquiries to the municipality, by email and phone. The switchboard is open from 9 a.m. to 3 p.m. every weekday. During its opening hours, the switchboard is staffed by one to three employees. In the event of an enquiry concerning an invoice, what the caller finds unclear is quickly identified and obvious issues are promptly resolved. If any uncertainty remains, the enquiry is forwarded to the unit that can provide a detailed explanation of the invoice.

4.3 Rewriting the invoice in plain language

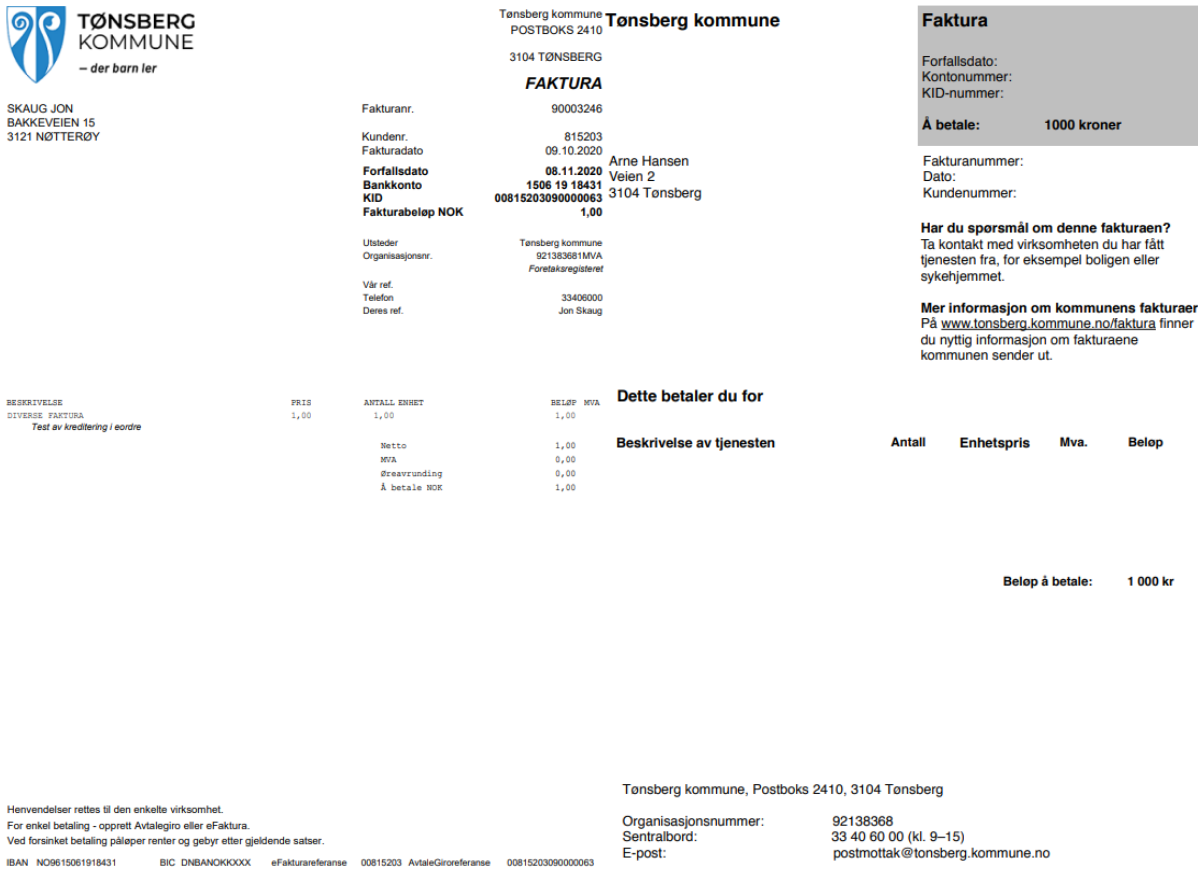
The invoices to recipients of health and care services were rewritten by Tønsberg Municipality, KS and NTB Arkitekst. The result of the rewrite is shown in Image 4.1. The main changes in the rewrite were to:

- make the most important information in the invoice (amount, due date, account number and KID number) more prominent, so that the invoice is easier to understand
- make it clear that enquiries should be directed to the agency that provided the service to the recipient, so that the switchboard does not become a costly intermediary
- clarify that more information can be found on the municipality's website, enabling the recipient to find out more on their own
- clarify what the recipient is being charged for, making it easier for them to trust that the invoice is correct
- ensure that the description of the service imported from the municipality's systems is from the recipient's perspective – for example, by changing:
    - *Sale of crutches* to *Purchase of crutches*.
    - *Garage. Midtløkken* to *Garage hire, Midtløkken*.

It is also worth mentioning that all unnecessary details that could confuse the recipient have been removed.

Image 4.1 Illustration of what the invoices in Tønsberg looked like before and after the plain language rewrite

A – Before the plain language rewrite *B – After the plain language rewrite*



TØNSBERG KOMMUNE
– der barn ler

SKAUG JON
BAKKEVEIEN 15
3121 NØTTERØY

Tønsberg kommune
POSTBOKS 2410
3104 TØNSBERG

FAKTURA

Fakturanr.	90003246
Kundenr.	815203
Fakturadato	09.10.2020
Forfallsdato	**08.11.2020**
Bankkonto	**1506 19 18431**
KID	**00815203090000063**
Fakturabeløp NOK	**1,00**
Utsteder	Tønsberg kommune
Organisasjonsnr.	921383681MVA
	Foretaksregisteret
Vår ref.	
Telefon	33406000
Deres ref.	Jon Skaug

BESKRIVELSE	PRIS	ANTALL ENHET	BELØP MVA
DIVERSE FAKTURA	1,00	1,00	1,00
Test av kreditering i eordre			
Netto			1,00
MVA			0,00
Øreavrunding			0,00
Å betale NOK			1,00

Henvendelser rettes til den enkelte virksomhet.
For enkel betaling - opprett Avtalegiro eller eFaktura.
Ved forsinket betaling påløper renter og gebyr etter gjeldende satser.

IBAN NO9615061918431 BIC DNBANOKKXXX eFakturareferanse 00815203 AvtaleGiroreferanse 00815203090000063

Tønsberg kommune

Arne Hansen
Veien 2
3104 Tønsberg

Dette betaler du for

Beskrivelse av tjenesten	Antall	Enhetspris	Mva.	Beløp

Beløp å betale: 1 000 kr

Faktura

Forfallsdato:
Kontonummer:
KID-nummer:

Å betale: 1000 kroner

Fakturanummer:
Dato:
Kundenummer:

Har du spørsmål om denne fakturaen?
Ta kontakt med virksomheten du har fått tjenesten fra, for eksempel boligen eller sykehjemmet.

Mer informasjon om kommunens fakturaer
På www.tonsberg.kommune.no/faktura finner du nyttig informasjon om fakturaene kommunen sender ut.

Tønsberg kommune, Postboks 2410, 3104 Tønsberg

Organisasjonsnummer: 92138368
Sentralbord: 33 40 60 00 (kl. 9–15)
E-post: postmottak@tonsberg.kommune.no

Source: Tønsberg Municipality and NTB Arkitekst

The full rewrite was not implemented. Only the linguistic changes under the municipality's control, such as 'description of service', were included in the new version. This means that we were unable to change the part of the invoice that the invoice provider was responsible for. The rewrite was partially implemented for all health and care invoices from 1 August 2021.

4.4 Measuring the effect

Our hypothesis was that rewriting the invoice in plain language would contribute to fewer enquiries to the switchboard about invoices. This is a benefit, since recipients should no longer need to contact the switchboard about the invoice. The information provided by the switchboard should be available on the municipality's website. Any questions beyond this can only be properly addressed by the agency that provided the service to the user. The rewrite therefore has the potential to make the switchboard more efficient by reducing the number of phone enquiries about these invoices. It is also worth mentioning that we also map the number of enquiries related to debt collection for the same invoices. Rewriting the invoice in plain language may reduce the number of invoices forwarded to a debt collection agency, as clearer explanations make it easier for recipients to understand and accept the invoices. It may be that the case would have been forwarded to a debt collection agency anyway, but the rewrite may encourage the recipient to directly contact those who can answer their questions. These are the two effects we seek to measure.

The decrease in phone enquiries to the switchboard is just one of several benefits the municipality can realise. Other benefits that may be realised, but which we have not been able to measure, include fewer:

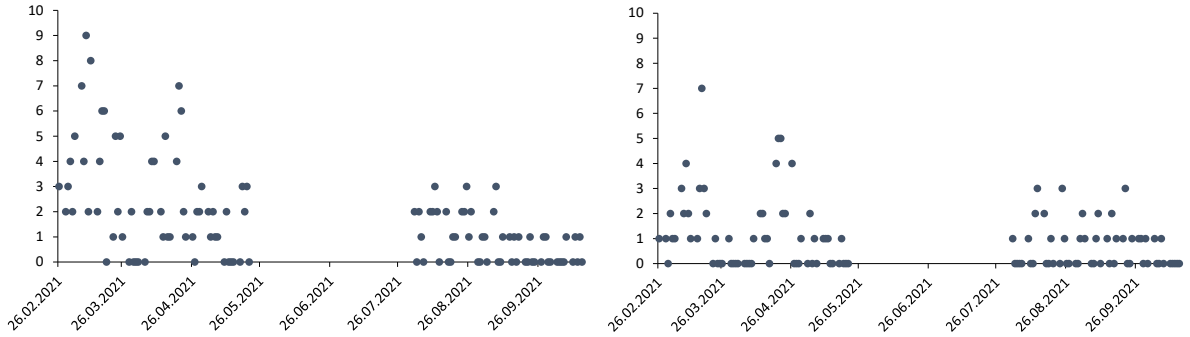
- Emails to the switchboard, as the rewrite reduces ambiguities and makes it clear that recipients should contact the agency that provided the service if they have questions
- Enquiries to the agency the person has received services from, because the most common questions are answered on the municipality's website
- Invoices forwarded to a debt collection agency

Developments in the number of enquiries to the switchboard concerning invoices are shown in Figure 4.1A and the number of enquiries concerning debt collection for the same invoices are shown in Figure 4.1B. The figures show that we have collected data for the months of March, April and May before the invoice was rewritten in plain language and the months of August and September after the rewrite. Due to holidays and a potential decrease in invoice volume, we decided, in consultation with the head of the switchboard, not to count the number of enquiries in June and July 2021. The plain language changes were implemented before 1 August 2021. The figures show a drop in both types of enquiries, indicating that rewriting the text in plain language has reduced the number of phone enquiries to the switchboard.

Figure 4.1 Number of phone enquiries to the switchboard in Tønsberg Municipality per day

A – Number of enquiries per day concerning invoices to recipients of health and care services

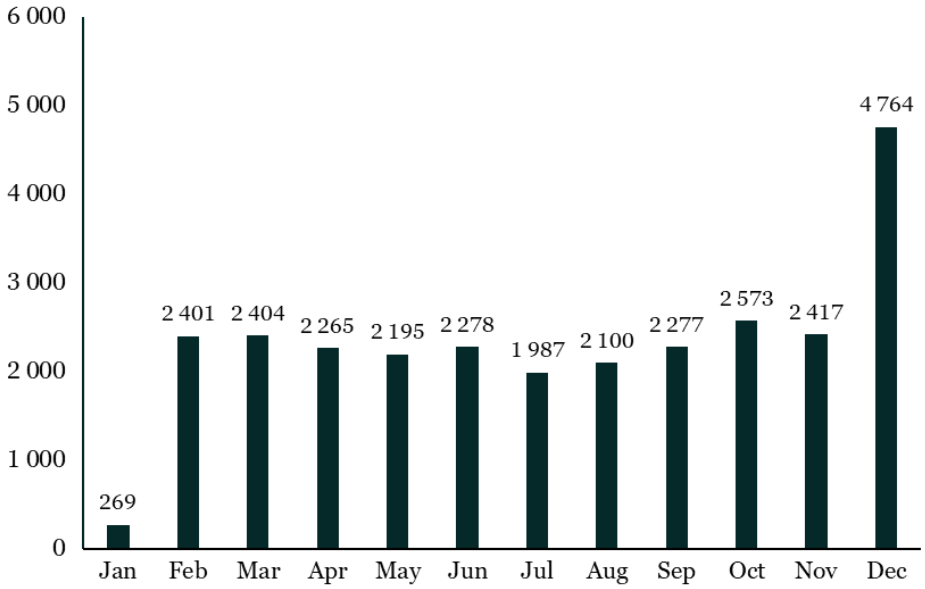
B – Number of enquiries concerning debt collection per day for the same invoices



Source: Tønsberg Municipality switchboard

The decrease in enquiries may be due to the plain language rewrite, a decrease in the number of invoices issued or a change in the composition of invoice recipients. As mentioned, we do not have the data to look at whether changes in the characteristics of invoice recipients could explain the decrease. However, we have obtained data on the volume of invoices for health and care services from Tønsberg Municipality's accounting department. As we can see from Figure 4.2, the volume of invoices issued is roughly the same for the five months for which we have data. Given that the volume of invoices remains relatively stable from month to month, we can conclude that much of the decrease in enquiries is not due to a decrease in the number of invoices.

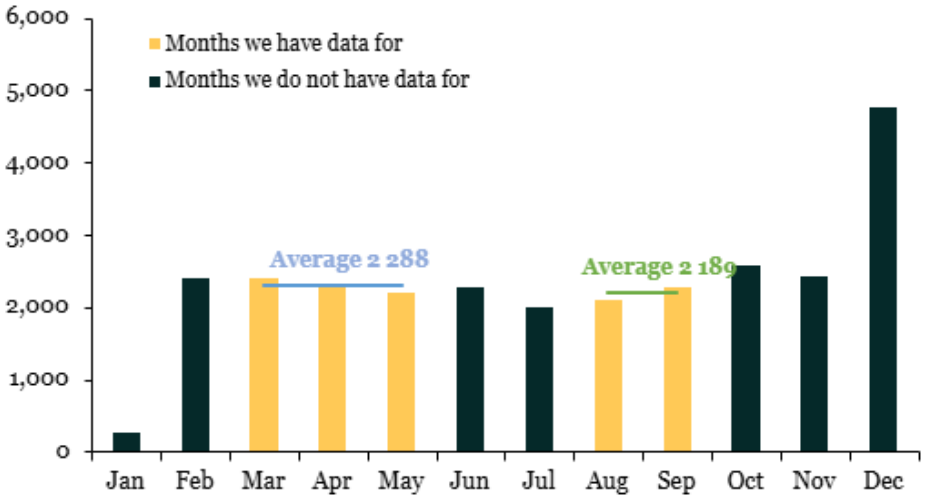
Figure 4.2 Monthly volume of invoices sent to recipients of health and care services



Source: Tønsberg Municipality's accounting department, analysed by Menon Economics

Figure 4.3 shows that there is a marginal decrease in the number of invoices issued in the months after the rewrite. The decrease amounts to 101 invoices. This corresponds to a decrease of 4.4 per cent in invoice volume in the months from March-April to August-September.

Figure 4.3 Monthly volume of invoices sent to recipients of health and care services



Source: Tønsberg Municipality's accounting department, analysed by Menon Economics

Much of the decrease in enquiries we observe in Figure 4.1A and Figure 4.1B can probably be explained by the invoice being rewritten in plain language. Based on statistical analysis, further explained in appendix V1.1, we find that the decrease in the number of invoices after the rewrite is 2.6 enquiries per day. This figure includes both the number of enquiries concerning invoices and the number concerning debt collection.

One possible explanation for the drop in enquiries is the 4.4 per cent decrease in the volume of invoices issued. Reducing 2.6 enquiries per day by 4.4 per cent results in approximately 2.5 enquiries per day. Our assessment is that the estimate of 2.5 enquiries per day probably represents the effect of plain language.

4.5 Calculating the benefit

If we assume that the decrease of 2.5 enquiries per day may be attributed solely to the invoice being rewritten in plain language, we can estimate the corresponding time and cost savings for Tønsberg Municipality.

We start by estimating the time saved per year. There are roughly 220 regular working days in a year. If we multiply the decrease of 2.5 enquiries per day by 220 days, we get 550 fewer enquiries to the municipality's switchboard per year. Based on input from the head of the switchboard, we assume that an average enquiry takes about ten minutes. This includes the time spent responding to the enquiry, carrying out any necessary follow-up, and the interruption to the employee's ongoing tasks when the call came in. With 550 enquiries taking ten minutes each, this amounts to a total time saving of 91 hours and 40 minutes per year.

The value of these saved hours and minutes can be found by assuming an hourly rate of NOK 375, as documented in Box 3.1. We then find that the annual value of reducing time spent on an unnecessary task is approximately NOK 35,000 per year. Health and care services accounted for almost 28,000 invoices in 2021. This means that the municipality saves just over NOK 1.25 per invoice. The municipality issued a total of 168,000 invoices in 2021. If the number of misunderstandings were the same for these invoices and the rewritten invoice was used, the amount saved would be NOK 210,000

per year. It is natural to assume that the effects would have been greater if the entire invoice had been rewritten in plain language.

As an illustrative example, it is interesting to consider what the potential benefits would be if a large proportion of the country's recipients of municipal health and care services receive an invoice similar to the one Tønsberg had before the rewrite. If we assume that the potential saving for Tønsberg is NOK 35,000 for around 2,300 service recipients, this equates to approximately NOK 15 per service recipient. In 2021, almost 380,000 people received services from the municipal health and care service. If we assume that 100,000 people a year receive an unclear invoice today, the potential saving from rewriting these health and care invoices is NOK 1.5 million each year.

5 Application for municipal housing support in the City of Bergen

Rewriting the electronic housing support form in Bergen in plain language reduces the number of incomplete housing support applications. More applicants understand how to complete the electronic form and which documents need to be attached with the application. We estimate that the effect of rewriting the electronic housing support form in plain language amounts to 194 fewer incomplete application letters per year, corresponding to an annual saving of NOK 12,000. In addition, municipal housing support applicants will:

- **spend less time on housing support applications, through less time spent both completing the form and on phone calls with caseworkers**
- **receive a quicker decision on whether they are eligible for municipal housing support (resulting in greater predictability and less worry)**

Rewriting the form in plain language can, through these effects, enhance the customer experience and increase trust in the City of Bergen.

5.1 Reasons for the decision to rewrite the housing support form in Bergen

The representatives of the City of Bergen were clear that they wanted to set aside time to facilitate the measurement of plain language effects. We were informed early on that completing the housing support form is misunderstood relatively often. As a result, the municipality has to spend time issuing incomplete application letters to those who have submitted an incomplete application for housing support. Some people also meant that a lack of clarity about who was eligible for what resulted in more applications than necessary being rejected. When it also became clear that the City of Bergen has established an application database with detailed information about the applicants, it was evident that the housing support form in Bergen was a suitable text for rewriting. Table 5.1 summarises which criteria the rewrite of the housing support form meets. A more detailed description is provided under the table.

Table 5.1 The City of Bergen's housing support form evaluated against the assessment criteria for texts suitable for rewriting

Criterion	Met
The text is often misunderstood	Yes
The text is used frequently enough	Yes
Sufficient, reliable data to capture the extent of misunderstandings	Yes
Possible to control for factors that may affect the extent of misunderstandings	Yes
Possible to quantify the municipality's costs resulting from misunderstandings	Yes

Generates value for other municipalities	Yes

Often misunderstood. The City of Bergen's housing agency conducted a customer survey in 2021 (City of Bergen, 2021). Among the respondents who had applied digitally, 28 per cent felt that it was not easy. Every year, around 1,100 incomplete housing support applications are submitted to the municipality due to incomplete documentation or errors in the application. Around 50 applications a year are rejected. These are examples of how municipal housing support applications are often misunderstood and have room for improvement. Users have often misunderstood what needs to be submitted, and some also misunderstand whether they are eligible for housing support or not.

Used frequently enough (volume). The City of Bergen receives around 6,000 applications for housing support every year. As of 2020, more than 4,000 of the around 6,000 applications have been electronic applications.[4] A large proportion of these applications are submitted in April-May and October-November. The dataset we have access to contains data from 1 January 2017 to 15 June 2022.

Sufficient and reliable data. We have access to detailed and anonymised data on applications for municipal housing support, which provide comprehensive information about the applications submitted and each individual applicant. For example, we know which applications were incomplete and therefore resulted in incomplete application letters. This provides a good basis for analysing the development of incomplete applications before and after the plain language rewrite. No statistics are available however, on what the misunderstandings cost the municipality. To estimate the time employees spent on processing applications, caseworkers in the City of Bergen helped us to map the actual time they spent on this task. The caseworkers noted how long they spent processing applications, drafting incomplete application letters and drafting rejection letters for randomly selected housing support applications. The survey ran from 8 April to 16 June 2021 and covered 323 randomly selected housing support applications. The caseworkers also recorded the outcomes of the cases they timed. This approach enabled the caseworkers to compile a dataset detailing the time spent on incomplete, rejected and approved applications.

It should be possible to correct for other factors that affect misunderstandings. The dataset includes information about the applicant's age, whether they have a refugee background and whether the application was submitted electronically or not. Since we can link applications submitted at different times to the same applicant, we created a variable capturing the number of applications they had previously submitted. This makes it possible to control for the fact that it may be easier for an applicant to complete the form correctly if they have applied previously.

Possible to measure the benefit in NOK. Using information on the time spent per application and the estimated value of an hour saved by a customer service centre employee in Norwegian municipalities, we can estimate the savings in NOK.

Generalisable. The experiences we have gained with the housing support form are directly relevant to other municipalities that provide municipal housing support. Pedersen et al. (2020) conclude that some municipalities offer municipal housing support as a supplement to state housing support. There is no comprehensive overview of how many municipalities provide a municipal housing support scheme. A Google search tells us that Oslo, Bergen, Bærum, Stavanger, Lillestrøm and Bodø have established a municipal housing support scheme. Municipal housing support thus appears to be common in large, central cities and towns, which typically have high housing costs. The experience and

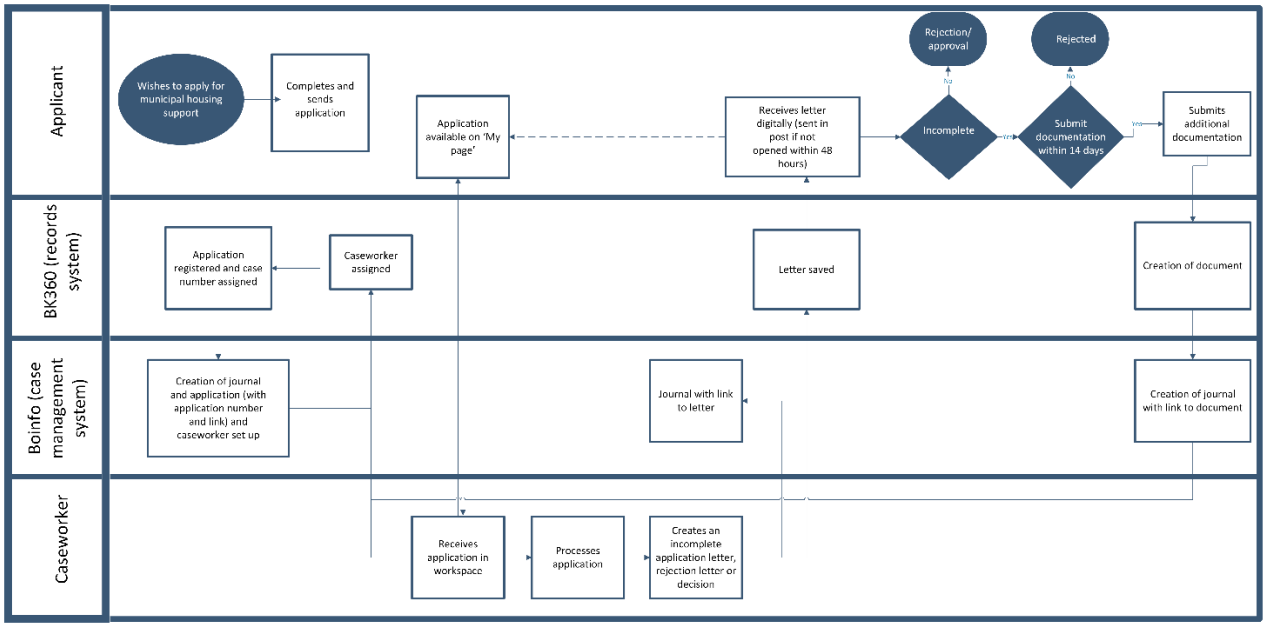
[4] As a result of COVID-19 and the related restrictions, an increasing number of applicants have applied electronically.

lessons learnt from rewriting the housing support form in Bergen can also inform and improve the design and rewriting of municipal application forms in other areas.

5.2 Description of the process of applying for municipal housing support

Municipal housing support in the City of Bergen is a financial support scheme available to the residents of municipal housing in the municipality. Residents of municipal housing must apply for housing support. Applications can be submitted electronically or on paper. To be granted municipal housing support, applicants must meet requirements regarding income, rent, assets and they must live in the housing themselves. Decisions are made for up to one year at a time, so applicants must apply at least once a year. This period is shorter for applicants with an uncertain income situation. The application process is illustrated in Figure 5.1.

Figure 5.1 Municipal housing support process in the City of Bergen



Source: Menon Economics, based on input from employees in the City of Bergen

The application can be submitted digitally or on paper, and the applicant uploads or attaches the requested documentation. Alternatively, the applicant can submit documentation later via 'My Page' (Min Side).

Once the application is submitted, it is registered under the applicant's name. The application is registered and assigned a case number in the BK360 records system. The case is then assigned a journal number and application number in the Boinfo case management system. The case is subsequently assigned a caseworker in the BK360 records system. Then, the application is made available to the applicant on 'My Page', and to the caseworker in their workspace.

The caseworker's task is to process the application. The caseworker assesses whether the application should be rejected, whether the information/documentation is incomplete or whether there is enough information to make a decision. If there is insufficient information to make a decision, the caseworker requests additional information. In most cases, this assessment takes 1–5 minutes. In some cases, a more thorough review is required, and multiple staff members may need to look at the case before a

decision can be made or further information/documentation is requested. If additional information is required, an assessment is made of whether it can be obtained from the Norwegian State Housing Bank, the Norwegian Labour and Welfare Administration (Nav), or other partners such as the Introduction Centre for Refugees, or over the phone. If it is not possible to obtain the information from other sources, an incomplete application letter will be sent to the applicant.

Once a decision, incomplete application letter or rejection letter has been created, it is sent digitally via the SvarUT electronic delivery service. The applicant receives the letter as soon as it is sent to their digital mailbox or Altinn. If the applicant has not activated their digital mailbox or Altinn, or if they do not open the letter within 48 hours, it will be sent automatically by post.

The applicant has 14 days from receiving the letter to contact the housing agency before the application is rejected. The process can then proceed in four ways:

- The applicant does not make contact. The application is rejected.
- The applicant contacts the housing agency by phone and clarifies the need for further documentation or information. The applicant may be given a new deadline to submit documentation or a new incomplete application letter if necessary.
- The applicant physically delivers or submits the requested documentation on paper.
- The applicant submits documentation via 'My Page'.

Once documentation is submitted, the caseworker repeats the process, assessing again whether there is sufficient documentation to make a decision, or, if applicable, identifies any incomplete information. A decision is then made either to grant housing support or reject the application.

5.3 Rewriting the electronic application form for municipal housing support

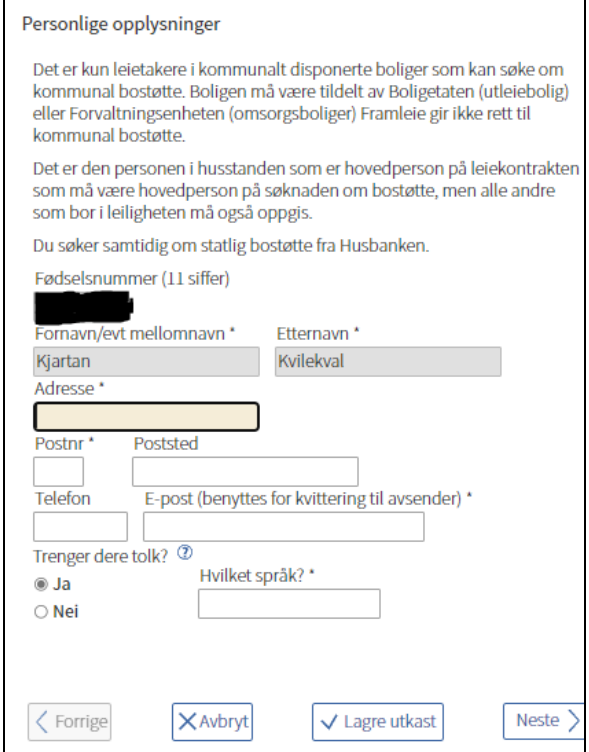
The electronic application form for municipal housing support was rewritten by the City of Bergen, KS and NTB Arkitekst. Since the application form, before and after the rewrite, consists of many screenshots, we have chosen not to document the entire process. However, we provide examples that give an impression of what the rewrite entails. The main changes in the rewrite were to:

- rephrase unclear text in plain text
- remove unnecessary text
- include explanations where words may have multiple meanings
- clarify who is eligible to apply in the introduction to the application, so that it is easier for the reader to understand whether they are eligible for municipal housing support
- reduce the amount of information presented per page in the application form
- remove the option to submit documentation later
- use a friendlier tone

The first page of the application illustrates how presenting less information at a time makes the text clearer, as shown in Image 5.1. The example shows that the amount of information and input fields per screen were reduced. The information to be entered in each field was specified to avoid any misunderstandings. The wording in the form was also revised to adopt a friendlier tone and address the applicant directly. The eligibility criteria for municipal housing support, as well as the documentation required to process the application, were also clarified.

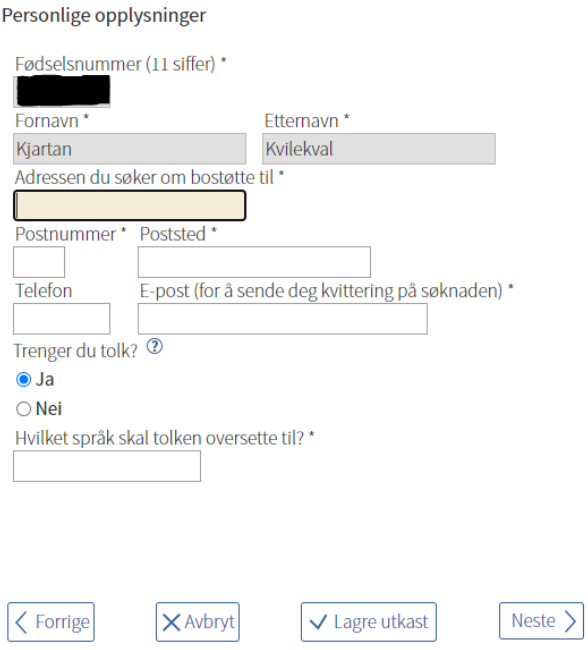
Image 5.1 Example of rewrite of the municipal housing support form – concerning personal information

A – Before the plain language rewrite (one page)



B – After the plain language rewrite (page 1 of 2)

C – After the plain language rewrite (page 2 of 2)

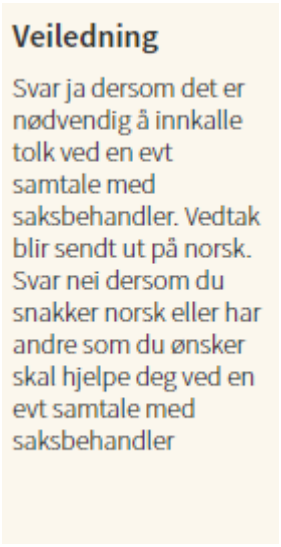


Source: City of Bergen

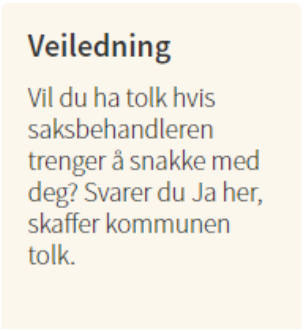
Another example includes the guidance texts that appear when the mouse hovers over the question mark (circled), see example in Image 5.1C after the question: *Do you need an interpreter? (Trenger du tolk?)* The guidance texts have generally been shortened and clarified. An example of this is shown in Image 5.2. The image shows the guidance text for the question: Do you need an interpreter – before and after the plain language rewrite. As we can see from the figure, the guidance text has been halved without altering its meaning. The phrase 'If you answer yes here, the municipality will provide an interpreter' creates the impression that the municipality is offering support to enhance the user experience.

Image 5.2 **Example of guidance texts in the municipal housing support form in Bergen – before and after the plain language rewrite**

A – Before rewrite



B – After rewrite



Source: City of Bergen

The rewritten form was implemented in the electronic application system on 3 November 2021 at 14:30.[5]

5.4 Measuring the effect

Our hypothesis was that rewriting the electronic housing support application in plain language leads to fewer incomplete and rejected applications. This is because applicants now have a clearer understanding of their eligibility for housing support and the documentation required before their application can be processed. The expectation is that clear information at the outset will ensure applicants who are not eligible for housing support apply less often, resulting in fewer rejected applications. We also expect that making it clear what information needs to be attached with the application will reduce the number of incomplete applications. Fewer incomplete and rejected applications for municipal housing support are expected to save time for both caseworkers and applicants.

Before the rewrite, the application form contained a checkbox option to submit documentation later, see Image 5.3. This checkbox has been removed in the rewritten application form. Our hypothesis was that this checkbox option legitimised the submission of incomplete applications. Removing this

[5] It is not possible to determine the time of day an application was submitted. Applications submitted on 3 November 2021 are therefore not included in the analysis.

checkbox option in the rewritten application is therefore expected to lead to fewer incomplete applications. This is a benefit for the municipality, both because the caseworker does not have to send incomplete application letters and because they do not have to familiarise themselves with the case multiple times. We also envisage that rewriting the form in plain language can, through these effects, enhance the customer experience and increase trust in the City of Bergen.

Image 5.3 Checkbox option in the housing support form for submitting documentation later, before the rewrite

Source: City of Bergen

Housing support renewal letters are sent twice a year, in April and October. They are a reminder to existing housing support recipients that they have to reapply. In 2021, 1,037 applications were submitted during April-May, and 2,202 applications were submitted during October-November. The other housing support applications are evenly distributed throughout the rest of the year. In total, the municipality receives around 6,000 housing support applications annually.

The dataset we have access to contains data on both incomplete and rejected applications. It includes applications submitted up to and including 15 June 2022. This means that we have applications for a period of 7.5 months after the text was rewritten, from 3 November 2021. Before the rewrite, we have data for all applications submitted in the period from 1 January 2017 to 3 November 2021.

Every year, 50-60 applications are rejected (of a total of more than 6,000 submitted applications). During the period after the rewrite, the City of Bergen has only received 39 applications that have been rejected. Applications submitted in April-May 2022 that will be rejected have yet to be rejected. The reason for this is that applicants have time to respond to incomplete application letters. As a result, we only have data from 3 November 2021 to 17 April 2022 for rejected applications. Because the proportion of rejected applications is very low, there is insufficient data to draw meaningful conclusions about the effect of the rewrite on rejections. It may be possible to measure this effect later on when more applications have been fully processed. This means that the effect we have measured is limited to the effect of the plain language rewrite on the number of incomplete application letters issued.

Table 5.2 shows the development in the number of housing support applications per year and the annual number of incomplete application letters, both in total and for electronic applications. We also show the subset for electronic applications because it is the electronic application form that has been rewritten. The proportion of incomplete application letters is the same for the total number of applications and electronic applications, both before and after the rewrite. It is worth noting that the volume of electronic applications has increased significantly from 2019. This is probably due to COVID-19, which has led to fewer applicants showing up to complete the application form in person. We also see that the proportion of incomplete application letters for electronic applications fell significantly from 2021 to 2022. In isolation, this indicates that the effect of the rewrite was a decrease in the number of such letters. At the same time, we observe that the proportion of these letters is virtually identical for the total number of applications and electronic applications, which suggests that the decrease is not necessarily an effect of the rewrite. If the decrease was an effect of the rewrite of electronic applications, we would expect the proportion of incomplete application letters for the total number of applications (including paper-based applications) to be higher than for electronic applications.

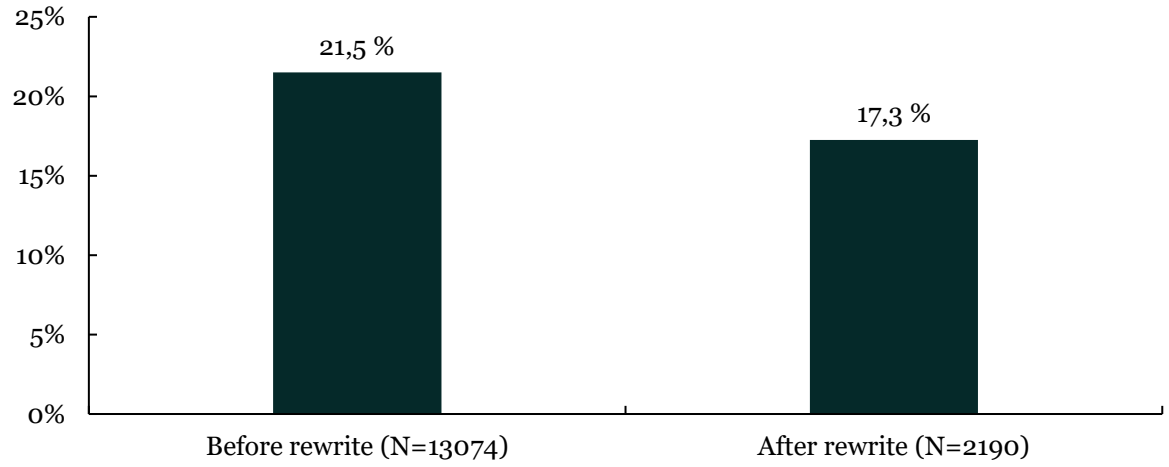
Table 5.2 **The development in housing support applications and incomplete application letters for the total number of applications and electronic applications**

Year	Number of applications, in total	Number of incomplete application letters, in total	Total proportion of incomplete application letters, in per cent	Number of electronic applications	Number of incomplete application letters for electronic applications	Proportion of incomplete application letters for electronic applications, in per cent
2017	6,120	1,211	23	422	97	23
2018	5,761	1,108	25	1,805	462	26
2019	5,838	1,119	22	2,512	565	22
2020	6,165	1,099	20	4,297	873	20
2021	6,259	1,110	20	4,590	921	20
2022*	2,090	332	16	1,638	270	16

**The data for 2022 include data for the period 1 January to 15 June. Source: City of Bergen, analysed by Menon Economics*

The proportion of electronic applications that received an incomplete application letter before and after the rewrite is shown in figure 5.2. The figure shows that a higher proportion of electronic applications for municipal housing support led to incomplete application letters before the rewrite than after the rewrite.

Figure 5.2 **Proportion of the total number of electronic applications that received an incomplete application letter, before and after the plain language rewrite on 3 November 2021**



Source: City of Bergen, analysed by Menon Economics

We have also carried out a statistical analysis to measure the effect of the rewrite on the decrease in incomplete application letters. The method used to conduct the statistical tests is documented in Appendix V1.2. In short, we have set up a simple linear regression model. In the model, we attempt to explain the variation in whether an electronic application led to an incomplete application letter or not, using four explanatory variables. The outcome to be explained is whether the application has led to an incomplete application letter or not. This variable takes the value 1 if an incomplete application letter has been issued and the value 0 if such a letter was not issued. This type of variable is often referred to as a dummy variable.

We attempt to explain the variation in the outcome variable using the following explanatory variables:

- Number of applications – The number of applications the specific applicant has submitted previously, in the period from 1 January 2017 to the submission date of the current application.
- Refugee dummy – A variable that indicates whether the applicant has a refugee background or not. The variable takes the value 1 if the applicant has a refugee background and 0 if the applicant does not have a refugee background.
- Age of applicant – The applicant's age at the time of application.
- Plain language dummy – The variable takes the value 1 if the housing support form has been rewritten and the value 0 if the housing support form has not been rewritten.

Below, we explain why the four variables are included in the statistical analysis:

Number of applications. Our hypothesis was that the likelihood of submitting an incomplete application decreases in step with the number of applications the applicant has previously submitted. This means that there may be some kind of learning effect that we should control for in the statistical analysis.

Refugee dummy. People with a refugee background may face greater linguistic and cultural challenges in completing the housing support form correctly than people without a refugee background. We have therefore chosen to control for whether the applicant has a refugee background or not.

Age. Our hypothesis was that older applicants are more likely to submit an incomplete application. This could be because older people may not be as adept at completing electronic applications as younger applicants.

Plain language dummy. This variable, as mentioned, takes the value 1 if the housing support form has been rewritten and the value 0 if the housing support form has not been rewritten. This variable captures the effect of the rewrite on the probability of the application being incomplete.

The result of the statistical analysis is that the plain language rewrite has a negative impact on the probability of the application being incomplete. This reduction in probability is estimated to be 4 percentage points. This indicates that we expect a 4 percentage point decrease in incomplete applications. The estimated effect of the other three explanatory variables are discussed in Appendix V1.2.

Our method is based on the assumption that we can control for all factors affecting the number of incomplete application letters. However, we have been limited to controlling only for factors for which we have data. There is therefore a risk that we have omitted important explanatory variables in the analysis. This suggests that our estimate of the effect carries some uncertainty, and the true effect could be either lower or higher.

5.5 Calculating the benefit

The benefits of the rewrite that we can quantify are the decrease in incomplete applications and the time saved by the municipality as fewer incomplete applications have to be processed.

We have estimated that rewriting the electronic housing support form in plain language reduces the probability of the application being incomplete by 4 percentage points. This means that, all else being equal, we assume that 4 percentage points fewer of the electronic municipal housing support applications in Bergen will be issued incomplete application letters as a result of the rewrite. Based on this, we can estimate the time and cost savings for the City of Bergen.

We start by estimating the time saved per year. Before the rewrite, around 21.5 per cent of electronic applications were incomplete. A decrease of 4 percentage points means that, after the rewrite, around 17.5 per cent of all electronic applications for municipal housing support are expected to be issued an incomplete application letter. During the period from 3 November 2021 to 15 June 2022, such letters were issued for 17.3 per cent of the submitted applications.

In 2021, the municipality received a total of 4,590 electronic applications for municipal housing support. Before the rewrite, 986 of these would be expected to be issued an incomplete application letter. After the rewrite, our model now predicts 792 incomplete applications. This corresponds to a decrease of 194 incomplete applications and letters of such.

When mapping caseworkers' time use, discussed in more detail in section 5.1, we found that, on average, it takes seven minutes to process and issue an incomplete application letter. When the applicant submits the correct documentation or sends incorrect documents, the caseworker must repeat the process. Naturally, the caseworker will also spend some time familiarising themselves with the case, follow-up etc. We therefore assume that the caseworker will save ten minutes by processing one less incomplete application. With 194 inquiries taking 10 minutes each, this amounts to a total saving of 32 hours and 20 minutes per year for 4,690 applications.

The total number of applications remains relatively stable. Electronic applications have increased significantly since 2019, and there is no indication that this will decrease. The number will probably increase slightly, but some people will probably still submit applications on paper in the future. Without a basis for predicting how much the proportion of electronic applications will increase by, we assume an annual average of around 4,590 electronic applications in the coming years. The time saved each year is therefore estimated to be 32 hours and 20 minutes.

The value of these saved hours and minutes can be found by assuming an hourly rate of NOK 375, as documented in Box 3.1. We then find that the annual value of reducing time spent on an unnecessary task is approximately NOK 12,000 per year for the municipality. Processing housing support applications, including issuing incomplete application letters, is a relatively simple task. There is reason to believe that processing applications in other municipal areas may be more complex and that more time can therefore be saved from plain language rewrites.

6 Concluding comments

The benefits we have assigned a monetary value to are considered relatively modest for the municipality carrying out the rewrite. We have estimated the annual saving for Tønsberg Municipality to be NOK 35,000, while the annual saving for the City of Bergen is estimated to be NOK 12,000. These two benefits represent only part of the overall picture. There is reason to believe that the rewrites also benefit applicants and service recipients in the municipalities, by saving time and reducing frustration. In the long term, this can increase trust in the municipality.

Once the texts have been rewritten in plain language, the cost of sharing them is low. This means that the value of plain language is greatest if rewritten texts can be shared and reused. This may include sharing texts across service areas in municipalities as well as between different municipalities. For example, the benefits of rewriting invoices for the health and care sector would increase if more service areas started using the same invoice. The benefit would be even greater if Tønsberg shared the rewritten invoice with other municipalities. For new high-quality standard texts to be effective, municipalities must develop their writing culture, and one way to achieve this is by working directly with texts. Of course, in an ideal writing culture, texts would be written in plain language from the outset. Texts that are initially written in plain language do not require rewriting.

Sharing and reusing rewritten texts across municipal departments and between municipalities can be key to making plain language rewrites worthwhile from a socio-economic perspective. The incentives for rewriting texts in plain language may be limited. As a result, poorly written texts that would benefit from a rewrite may not be rewritten. One solution to this problem could be for municipalities to collaborate on plain language initiatives. Another solution is to continue and further develop the support scheme that municipalities can apply for (see Box 6.1). The further development of this scheme could, for example, involve prioritising strong plain language projects in a select number of municipalities, rather than spreading efforts across many municipalities. The aim of the initiative could be to realise and document benefits of the work – before going on to share the rewritten texts and knowledge with other municipalities to maximise their reuse value.

Box 6.1 Support scheme for municipalities during the programme period

During the period from 2015 to 2021, KS has worked on a programme to promote plain, clear communication in the municipal sector, based on the Language Council of Norway's plain language guidelines. During the programme period, KS has distributed NOK 5.74 million in support to around 100 municipalities. KS provided grants for projects with high reuse value and projects to help municipalities begin using plain language.

In any case, it would be beneficial for a single actor to take responsibility for identifying rewritten texts and sharing them with other municipalities. KS has already taken on this role by establishing a text database, consisting of texts from municipalities that carried out plain language projects. The text database is a positive initiative, but there are compelling arguments for further prioritising and systematising this work. One possibility is for KS and national authorities to take greater responsibility for common standardised texts where the potential for sharing and benefit is substantial. The goal could be to make it easier for each municipality to use templates. The advantage of this would be that, unlike today, it would not be up to the individual municipality, and municipal texts would more often be written in plain language.

KS has also highlighted the need for further research in this area. We have concluded that it may be useful to take a closer look at:

- ***Continuing the measurement of effect in Tønsberg and Bergen.*** As a suggestion for further work, it would be interesting to follow the Bergen example over time and also see if Tønsberg's invoice can be fully rewritten in plain language, assuming the invoice provider follows through on their promise to update the template.
- ***Similar research on more complex case areas.*** Our hypothesis is that there are more complex case areas in Norwegian municipalities that involve a high volume of incomplete application letters, which take caseworkers significantly longer to process. One specific case area that stands out is planning and construction cases in large municipalities.
- ***Further research on the user effects of plain language.*** In our study, we have focused on benefits of plain language for municipalities, not for users/recipients of services. In further research, it would be interesting to gain more knowledge about the significance of plain language from the users'/service recipients' perspective.

Reference list

City of Bergen (2021): *Kundeundersøkelse Boligetaten. Report*, 2 March 2021.

Dahle M. & Ryssevik J. (2013): *Klart vi kan! En evaluering av effektene av prosjektet «Klart språk i staten»*, ideas2evidence Report 11/2013.

Oslo Economics (2021): *Evaluering av Program for klart språk i kommunesektoren: Sluttevaluering*. OE Report 2021-28.

Pedersen S., Westberg N. B., Johnsen P. F., Albertsen M. O. & Kjelsaas I. (2020): *Utredning av bostøtten med fokus på brukereffekter*, Menon Publication 106/2020.

The Language Act (2022): *Lov om språk (The Act relating to Language)*, LOV-2021-05-21-42. URL [downloaded 26 May]: https://lovdata.no/dokument/NL/lov/2021-05-21-42

Appendix 1 – On the measurement of effect

In this appendix, we review the results of the statistical analyses conducted on the available data to measure the effect of plain language. This also ensures that our work is verifiable.

Box V1.1 Key concepts for understanding the results of the econometric model

Coefficients and linear regressions. A coefficient is a numerical value, constant or function that is a factor in a mathematical expression[6]. In the results, the coefficient is first shown as a numerical value, with the corresponding p-value in parentheses. We have chosen to use linear regressions in our analyses. This model assumes that a one-unit increase in the explanatory variable results in a change in the outcome variable corresponding to the *coefficient* of the explanatory variable. For example, if the coefficient related to the (natural logarithm of) population size is 0.02, a 1 per cent increase in population would lead to a 0.02 percentage point increase in total compliance, assuming all other variables remain constant. This effect is assumed to be linear, meaning it is the same regardless of whether the change occurs from a low to a slightly higher level, or from a high to a slightly higher level. From a modelling perspective, using linear regression for an outcome variable that theoretically cannot be below 0 or above 1 can be problematic, as the model could theoretically predict values below zero or above 100 per cent compliance. However, we have conducted tests that indicate this is not a problem in practice in this case. Based on this, and because the results from linear regressions are much easier to interpret than, for example, those from logistic regressions, we have chosen to use linear regressions.

P-value. Each coefficient has an associated p-value, given in parentheses after the coefficient. The p-value is a measure of how uncertain the coefficient is. More specifically, it measures the probability that the coefficients were estimated at the reported value if there was no relationship between the variables. A p-value of 0.05 can thus be loosely defined as a 5 per cent probability that we have measured a coefficient different from zero, assuming that, in reality, there is no relationship between the explanatory variable and our total indicator. The lower the p-value, the more reliable the results. In our tables, we have marked possible but uncertain results ($p<0.1$) with one plus sign, somewhat more certain results ($p<0.05$) with two plus signs, and relatively certain results ($p<0.01$) with three plus signs. Coefficients that are not marked with plus signs are highly uncertain, and we do not place emphasis on these results.

Adjusted R^2 is a measure of the proportion of variation in the outcome variable that is explained by the explanatory variables (and a constant). Unadjusted R^2 will mechanically increase if more explanatory variables are added, even if they do not actually improve the model's explanatory power. We use adjusted R^2 rather than unadjusted R^2, as the former accounts for the mechanical increase in explanatory power that comes from adding more explanatory variables.

V1.1 Invoices in Tønsberg

The statistical model used to measure the effect of rewriting invoices in plain language in Tønsberg is a linear regression model with a single explanatory variable. We explain the number of enquiries per day to the switchboard using a constant term and a dummy variable. The dummy variable takes the value 1 if the invoice has been rewritten and 0 if it has not. We call the dummy variable the plain language dummy.

[6] URL: https://snl.no/koeffisient_-_matematikk [Downloaded 25 February 2022]

Table V1.1 shows the estimated coefficients when explaining enquiries per day using a constant term and a plain language dummy. As we can see, both estimated coefficients are statistically significant at less than one per cent. The results indicate that, for an invoice not written in plain language, the switchboard handles 4.1 enquiries per day. The number of enquiries per day decreases by 2.6 per day when the invoice is rewritten in plain language. In other words, this can be considered the effect of plain language on enquiries per day to the switchboard.

Table V1.1 Estimated relationships (with p-values in parentheses) between the number of enquiries per day to the switchboard about health and care invoices and the plain language dummy*

	The model
Constant term	4.1^{+++} (0.000)
Plain language dummy	-2.6^{+++} (0.000)
Adjusted R^2	**0.212**
Number of observations	**105**

** If the estimated coefficients have a p-value of one per cent (0.01) or less, they are assigned three plus signs (+++); if the p-value is five per cent (0.05) or less, they are assigned two plus signs (++); and if the p-value meets the ten per cent level (0.1), they are assigned one plus sign (+). Source: Menon Economics*

As mentioned in chapter 4, the number of enquiries can be affected by many factors. Since we do not have data on these factors, the estimates are associated with uncertainty.

V1.2 Housing support form in Bergen

As explained in chapter 5.4, we have selected four explanatory variables that we believe are relevant for explaining the variation in whether an application is incomplete or not. An important first check of the explanatory variables is to examine whether there is a correlation between them.

Correlation is a statistical measure of the extent to which two measurable variables are related to each other. The relationship can be real or random, and it can be positive or negative. A perfect positive correlation means the correlation is equal to 1, while a perfect negative correlation means the correlation is equal to -1. For example, a positive correlation between height and weight means that taller people are often heavier than shorter people. Before we look more closely at the results, it is useful to have an overview of the correlations among the five explanatory variables. The reason this is important is that linear relationships may exist between the explanatory variables, which can make the relationships we aim to estimate unreliable. This means that the estimated relationships, due to correlation between the explanatory variables, may deviate from the true values. If the problem is that two explanatory variables are correlated, one solution may be to disregard one of them or to include an interaction term[7]. As we can see from Table V2.1, there are neither very high (close to 1) nor very low

[7]In this context, an interaction term represents the product of two identified explanatory variables.

(close to -1) correlations between the explanatory variables. We can thus confirm that there is no problem with correlation among the explanatory variables.

TableV2.1 Correlation matrix between the explanatory variables

	Number of previous applications	Refugee dummy	Age of applicant	Plain language dummy
Number of previous applications (numerator)	1.000			
Refugee dummy	0.301	1.000		
Age of applicant (age)	-0.138	-0.299	1.000	
Plain language dummy	0.274	0.027	-0.073	1.000

Source: Menon Economics

From the correlation matrix, we can see that the strongest positive correlation is between the number of previously submitted applications and the refugee dummy. The correlation between these two variables is 0.3. The rule of thumb is that correlations become problematic if they are higher than 0.7 or lower than -0.7. We can therefore conclude that the correlation between the count variable and the dummy variable for individuals with a refugee background is too low to pose a problem. The correlations are low among all the explanatory variables.

To calculate the effect of the rewrite the municipal housing support application forms on the number of incomplete applications, we conducted a linear regression analysis. This method attempts to identify a linear relationship between the dependent variable (in this case, whether the application is incomplete or not) and the four explanatory variables.

Model for the effect of the rewrite on incomplete applications

To measure the treatment effect of the plain language rewrite, we established the following relationship to test the effect of the treatment on whether an application would be incomplete:

$$y_i = \beta_0 + \beta_1 \times numerator_i + \beta_2 \times refugee\ dummy_i + \beta_3 \times age_i + \beta_4 \times plain\ language\ dummy + \varepsilon_i$$

Where y_i is a dummy variable[8] for whether the application was incomplete or not. β_0 is a constant term, while $\beta_1 - \beta_4$ represents the relationships between the four explanatory variables and their estimated impact on the probability that the application is incomplete. ε_i is the error term.

Table V2.2 shows the estimated relationships between the various explanatory variables and the probability that housing support applications are incomplete. All explanatory variables are considered statistically significant at the 1 per cent level. This means that we can say with high confidence that there is a relationship between the explanatory variables and the number of incomplete applications.

[8] A variable that takes the value 1 or 0. Here, a value of 1 indicates that the application is incomplete, and 0 indicates that it is not.

The plain language dummy is significantly negative, meaning that a rewritten application helps reduce the probability of an incomplete application by 4.1 per cent.

Table V2.2 Estimated relationships between the number of enquiries per day to the switchboard about health and care invoices and the plain language dummy and p-values *

	The model
Constant term	0.261+++
	(0.000)
Number of previous applications (numerator)	-0.005+++
	(0.000)
Refugee dummy	0.103+++
	(0.000)
Age	-0.002+++
	(0.000)
Plain language dummy	-0.041+++
	(0.000)
Adjusted R^2	**0.021**
Number of observations	**15,259**

** If the estimated coefficients have a p-value of one per cent (0.01) or less, they are assigned three plus signs (+++); if the p-value is five per cent (0.05) or less, they are assigned two plus signs (++); and if the p-value meets the ten per cent level (0.1), they are assigned one plus sign (+). Source: Menon Economics*

The other three explanatory variables are also statistically significant. The count variable, which measures the number of times the individual has previously completed the form, shows that the probability of making errors is lower for those with experience of completing the housing support form. Having a refugee background increases the probability of making errors. Since the application form is written in Norwegian, it is reasonable to assume that individuals with a refugee background face greater linguistic and cultural challenges in completing the form. We find that the applicant's age increases the probability of the application being correctly completed, although we had expected the opposite. One possible explanation for this finding is that younger applicants may have more difficulty completing the form correctly compared to older applicants. For example, younger applicants may be more likely to struggle with substance abuse and mental health issues, while older applicants are more likely to receive help completing the application forms. Older housing support applicants may also have more experience of completing the form. Although this is already controlled for in the number of previous applications, this variable reflects the number of applications submitted since 1 January 2017. The age variable may therefore capture those who had applied for municipal housing support for many years before that.

Menon Economics

Menon Economics

Sørkedalsveien 10 B, 0369 Oslo

+47 909 90 102

post@menon.no

menon.no