



Needs Description

Introduction

The life event «Children with complex needs» is one of seven life events identified in the government's digitalisation strategy, to be used as a starting point for developing comprehensive and user-friendly services. The Norwegian Directorate of Health collaborates with the Directorate of e-health, the Norwegian Directorate for Education and Research, National service for special needs education, Norwegian Labour and Welfare Administration, The Norwegian Association of Local and Regional Authorities (KS) and Flekkefjord municipality on the life event "Children with complex needs".

After extensive insight analysis, we have identified challenges at various levels that need to be addressed to make the lives of families with children and adolescents with complex needs easier.

A prioritised project is Easier access to information, where the aim is to make it easier for those families to get easier access to information about services and support available to them. With over 5000 public websites, it is challenging for the families to find relevant and up to date information, and a family uses today more than 19 hours a week to search for information and coordinate services for their child.

Can artificial intelligence or other technologies provide the families with easy access to information, even when it comes from multiple sources?

Problem / challenge

Having a child with complex needs turns life upside down. In addition to emotionally process the situation, families must spend time organising practical aspects related to their child. The information they need about treatments, aids, services and other support is difficult to find and sometimes even unavailable. What they do find can also be outdated, incomplete, and not coherent.

The information they need is scattered across various channels, often challenging to comprehend, and varies in quality. There is significant variation in the information provided by different municipalities, often requiring the families to contact the municipality for assistance in finding information about available services.

Due to the complex needs of these families, it is also challenging for service providers to be informed about what services and support are available to the families. They also require access to relevant and up-to-date information to provide the necessary assistance to these families.

Desired result/effect

The aim is that a solution for automated information retrieval would be able to:

- Provide easier access to information for families with children with complex needs
- Reduce the time families spend searching for information and managing services related to their child
- Offer families and service providers better overview of the relevant services and support, ensuring tailored assistance for each family's situation
- Deliver information from the public sector in clear language to make the content more accessible and easier to understand.
- Streamline the management of public information by reducing the time spent on editorial work across multiple content channels
- Decrease the need for the development, operation, and maintenance of new public content channels.

The need

We aim to develop a solution that will provide the families with up-to-date and relevant content from various sources, wherever they may be and whenever they need it. This can help reduce the time spent by families and service providers searching for relevant information.

The solution will play a crucial role in structuring unstructured content. We would like an automated solution that can retrieve information from various predefined sources, filter and extract relevant portions of the content, and classify and structure the information to then present it in a comprehensive, consolidated and understandable manner. We would like a user-friendly interface for those who will administer the solution, to ensure quality control.

To maintain trust to the information, we would like clear references to the source where the information is retrieved. We are not looking for a solution that generates its own information.

The information is publicly available. Personal data is not a part of this project, except for publicly known contact information.

We envision that the solution created in this project can be integrated as a component in our existing architecture, where the structured content generated can be used as input and presented through various channels. Flexibility is important, but for testing purposes we would like the solution to be compatible with our Azure-based platform.

If successful, we envision that a similar solution can be utilised for a broader range of public information tasks.

The needs matrix

The needs matrix provides an overview of the needs, performance, and functionality that the solution will be evaluated and selected on. There is no requirement to perform equally well on all elements in the matrix, but the proposed solution will undergo assessment based on the combined fulfilment of the needs matrix and the other evaluation criteria outlined in the challenge rules.

No.	Category	Description of need	Performance/ function
N01	Functionality	The solution must be able to automatically retrieve content from predefined sources and the structure the content.	To what extent the solution can automatically retrieve, classify and structure the content, and the level of precision by which this is done.
N02	Functionality	The solution should be able to in an interface present the structured information in a cohesive, comprehensive, and understandable manner.	To what extent the solution can present the information in a cohesive, comprehensive, and understandable manner.
N03	User friendliness	The solution should be intuitive and easy to use for those who will administer and quality-check the content.	How easy and user-friendly it is to use the solution.
N04	Quality	The solution should be able to extract consistent text blocks with accurate content (without gaps or overlap) and reference where the information was retrieved from with sources.	To what extent the solution is able to combine and present the information as consistent text blocks and annotate the content with source references.
N05	Continued improvement	The solution should have mechanisms that allow for improvement in the classification and structuring over time.	To what extent the solution has mechanisms to improve quality and results over time.
N06	Integrable	The solution should be flexible, so it can function alongside or be integrated into different system architectures.	To what extent the solution can be adapted to different architectures.
N07	Compliance	The solution must comply with information systems security	How the solution will be able to meet the requirements for

		guidelines and data protection regulations.	information security and data protection.
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