



Description of Needs for a New Solution

Version 0.8

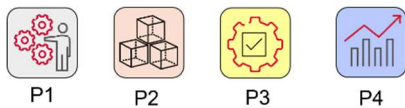
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Introduction

This document provides a list of needs that HK-dir seeks to resolve with the procurement of a new digital solution for administration, production, execution, and analysis of tests and examinations. The present list is intended as a first indication for applicants seeking participation in the competitive dialogue and will be discussed during the dialogue phase. The list is not exhaustive and may be modified and further detailed before the final issue. Furthermore, it will serve as a basis for detailing of the final Needs and Requirements in the final tender documentation.

Overall needs B01 – B05 (Level 1 needs) are also presented in Attachment 1 - Initial Assignment. In the present document, one additional level of detail (Level 2 needs) is provided. Further detailing of associated (Level 3) needs are presently only shown as keywords or abbreviated descriptions to indicate topics for discussion. The listed needs are not currently prioritised or weighted.

Where applicable, the process phase(s) where a particular need commonly occurs is shown by the icons below:















These icons refer to the major process phases outlined in the Initial Assignment document (P1=Overall administration; P2=Production; P3=Execution; P4=Analysis). If no such symbol is provided, the listed need applies to the full solution or most process phases.

1. Description of Needs











B01		The solution enables the Customer to produce and conduct tests that are fit for purpose, with valid and reliable test results.	
B01-1	Fit for purpose tests ----- <i>Associated needs:</i> Fit for purpose tests and tasks		P2
B01-2	Assuring quality of tasks ----- <i>Associated needs:</i> Workflow to assure quality; linking to metadata		P2
B01-3	Accommodation of situational needs ----- <i>Associated needs:</i> Accommodation of test situation or test		P2
B01-4	Preventing cheating ----- <i>Associated needs:</i> Prevent cheating during test execution		P3
B01-5	Analysis ----- <i>Associated needs:</i> Analysis of tasks (IRT); analysis of rater reliability		P4



B02 The solution adheres to public requirements and guidelines, for example regarding information security, privacy and universal design.		
B02-1	Log-in <i>Associated needs:</i> Secure log-in for all; same log-in solution for as many users as possible	 P1
B02-2	Universal design <i>Associated needs:</i> Accessibility and opportunity to demonstrate proficiency for all candidates	 P3
B02-3	Information security <i>Associated needs:</i> Prevent unauthorised access; prevent misuse of data	
B02-4	Privacy <i>Associated needs:</i> Protect personal data; adhere to GDPR standards	




B03 The solution is user-friendly, reliable, supports the work processes of the users of the system and facilitates automated processes.		
B03-1	User administration <i>Associated needs:</i> Create and categorise users, create test centres and give user access rights	 P1
B03-2	Configuration of tests <i>Associated needs:</i> Configure which test types to be made and which assessment scales to be used	 P1
B03-3	Communication solutions <i>Associated needs:</i> Communicate with system users and candidates	 P1
B03-4	Test item development <i>Associated needs:</i> Create and categorise items and store items in an item bank	 P2
B03-5	Development of tests <i>Associated needs:</i> Compile tests; assign characteristics to tests	 P2
B03-6	Planning of test events <i>Associated needs:</i> Plan execution of tests	 P2
B03-7	Preparation for tests <i>Associated needs:</i> Sample tasks and sample tests	 P3
B03-8	Administration of test events <i>Associated needs:</i> Create, edit and delete test events	 P3
B03-9	Registration for tests and examinations <i>Associated needs:</i> Individual registration; registration of groups of candidates	 P3
B03-10	Payment for tests <i>Associated needs:</i> Payment solutions; payment status; registration overview with payment status; manage individual rights to free tests	 P3



B03-11	Rater access to test content <i>Associated needs:</i> Test tasks (text and media files); test assessment criteria	 P3	
B03-12	Invigilation <i>Associated needs:</i> Status on candidates' progression during test execution; status on tests' progression in assessment	 P3	 P4
B03-13	Execution of tests <i>Associated needs:</i> See registered tests; start, complete, and deliver test	 P3	
B03-14	Registration of errors, incidents, and status <i>Associated needs:</i> Absence, exemption	 P3	
B03-15	User data and statistics <i>Associated needs:</i> Result and user data for compilation, development, and statistics	 P4	
B03-16	Analysis <i>Associated needs:</i> Statistics for completed tests and results	 P4	
B03-17	Assessment of test responses <i>Associated needs:</i> Automated scoring and rater assessment (criteria based)	 P4	
B03-18	Allowing appeals <i>Associated needs:</i> Appeals on results and re-assessment	 P4	
B03-19	Distribution of results <i>Associated needs:</i> Inform candidates of test results	 P4	
B03-20	User-friendliness <i>Associated needs:</i> Avoid unnecessary steps, time behaviour, user interface and user experience		
B03-21	Functional reliability <i>Associated needs:</i> Error messages, recoverability, technical availability, data flow		
B03-22	Support of work processes <i>Associated needs:</i> Support devices; access data; location of data; data transfer; test environment and documentation; support and training.		

B04	The solution is flexible and can be easily and cost-effectively adapted to existing needs and any altered needs in the future.	
B04-1	Solution flexibility <i>Associated needs:</i> Simple and cost-effective modification; low interdependency; modularity	
B04-2	Modern system architecture <i>Associated needs:</i> Integration, technical and functional	



B05 The solution facilitates the reuse of data, for example through integration with other public data systems.		
B05-1	Automated import of user data <i>Associated needs:</i> User data from other systems	 P1
B05-2	Migration of data <i>Associated needs:</i> Users, test centres, tests, test items, and results	
B05-3	Data on results <i>Associated needs:</i> Prepare statistics of user numbers, completed tests, and results; historical data	 P4
B05-4	Sharing of results <i>Associated needs:</i> Share results with public and governmental bodies and candidates (main results and detailed results)	 P4

2. Glossary

English	Norwegian	Description
Act relating to processing of personal data	Lov om behandling av personopplysninger (personopplysningsloven)	Norwegian version: https://lovdata.no/dokument/NL/lov/2018-06-15-38?q=personopplysningsloven
Act relating to integration	Lov om integrering gjennom oppl�ring, utdanning og arbeid (integreringsloven)	Norwegian version: https://lovdata.no/dokument/NL/lov/2020-11-06-127?q=integreringslov
Act relating to language	Lov om spr�k (spr�klova)	Norwegian version: https://lovdata.no/dokument/NL/lov/2021-05-21-42 English version: https://lovdata.no/dokument/NLE/lov/2021-05-21-42
Act relating to archiving	Lov om arkiv (arkivloven)	Norwegian version: https://lovdata.no/dokument/NL/lov/1992-12-04-126?q=arkivloven
Accommodation of tests	Tilrettelegging av pr�ver	Candidates with special needs may take the test under different conditions (such as extended time, using special equipment or special software) or with different content (such as a test without pictures for the visually impaired).
Analysis	Analyse	Data of different aspects of the test, such as items, test sets and raters, is regularly collected and analysed to ensure and document test reliability and validity, and to identify needs for improvements.
Appeal	Klage	Candidates can on certain tests appeal the result. If an appeal is submitted, the candidate's test performance will be re-assessed.
Assessment	Vurdering	"Assessment" refers to the process in which raters assess how well a written or spoken response meets the assessment criteria specified for that test. This also includes re-assessments in cases where candidates submit an appeal.
Assessment criteria	Vurderingskriterier	Raters assess the candidates' answers/responses of tests in written production, and oral or sign language communication by using assessment criteria specified for the specific test.
Candidate	Kandidat	Person that is going to take, is taking or have taken a test.



CEFR levels	Rammeverksnivåer	The Common European Framework of Reference for Languages levels (Under A1, A1, A2, B1, B2, C1, C2)
Cut score	Cut score	A cut score is a specified number of points a candidate must achieve in a test in order to receive a certain test result.
Execution of tests	Gjennomføring av prøver	Execution of tests is when the candidates sit the test. Execution includes delivery of test to the candidates, delivery of the candidates' responses, and invigilation of the test and candidates.
Interlocutor/Examiner	Eksaminator	The person responsible for conveying the tasks of a test in oral or sign language communication to the candidate. At C1 level, the interlocutor is also responsible for uploading the audio recording of the examination into the digital test system.
Invigilation	Monitorering	Invigilation refers to the possibilities for the test centres, HK-dir and technical supplier to monitor the test planning and execution, and to interfere when necessary.
Item bank	Oppgavebank	An item bank contains items to be used and possibly re-used in a test and may also be a part of an adaptive test. Items are categorized and searchable by specified features.
Item properties/values	Oppgavekarakteristikk	The item or task properties/values are metadata about the item, for example an items' difficulty level, discrimination, and level of guessing.
Item status	Oppgavestatus	Item status provides information about where in the process of development an item is, for example under development, ready for proofreading, ready for testing, approved, used in tests, etc.
Task type	Oppgaveformat	The task type defines the interaction between the candidate and the item. Different types of tasks require different actions from the candidate: choosing one of several written answer alternatives, choosing the correct picture, clicking on the correct object in a picture, producing a short or long written answer, etc.
Listening comprehension	Lytteforståelse	The test in listening comprehension measures the candidates' ability to understand spoken Norwegian.
Norwegian sign language comprehension	Avlesning av norsk tegnspråk	The test in Norwegian sign language comprehension measures the candidates' ability to understand Norwegian sign language. This test is equalled in status to the test in listening comprehension.
Norwegian sign language communication	Tegnspråklig kommunikasjon	The test in Norwegian sign language communication measures the candidates' ability to communicate in Norwegian sign language. This test is equalled in status to the test in oral communication.
Oral communication	Muntlig kommunikasjon	The test in oral communication measures the candidates' ability to communicate in spoken Norwegian.
Partly adaptive tests	Delvis adaptive prøver	In partly adaptive tests the candidates are lead through routing tests, the results of which lead to one of three main tests at an appropriate level of difficulty.
Piloting	Pilotering/utprøving	Piloting is the process of pre-testing and analysing items before the items are included in real tests.
Raters	Sensorer	Assessment of tests in written production and tests in oral or sign language communication is done by human raters. Some tests will be assessed live, with interlocutor and rater present. Other tests will be assessed after the test is finished: in this case, the test answer will be allocated to multiple raters.
Reading comprehension	Leseforståelse	The test in reading comprehension measures the candidates' ability to understand written Norwegian.



Registration	Påmelding	Registration refers to the process of candidates being linked to upcoming tests. This process includes the registration of personal information about the candidate, selection of desired tests, and payment or use of the right to a free test. Registration can be done individually or for groups of candidates.
Regulation relating to universal design of information and communication technology	Forskrift om universell utforming av informasjons- og kommunikasjonsteknologiske (IKT)-løsninger	Norwegian version: https://lovdata.no/dokument/SF/forskrift/2013-06-21-732?q=forskrift%20om%20universell%20utforming
Reliable test results	Reliable prøveresultater	Test reliability refers to the consistency of a test measure. A test can be said to have high reliability if it produces similar results under consistent conditions. Test reliability can be influenced by a number of factors, such as test delivery (consistent conditions for candidates), scoring (based on statistical analysis of item difficulty and discrimination), and assessment (agreement and consistency within a rater corps)
Results	Resultat	The results are the candidates' achievement on a test. Results can be in form of a score, a CEFR level or Pass/Fail.
Routing tests	Forprøver	Shorter sections at the start of a test that are designed to route candidates to a main test of appropriate difficulty level.
Sample tasks/sample tests	Eksempeloppgaver/eksempelprøver	Sample tasks are tasks that are available for all candidates at all times, giving candidates an opportunity to familiarize with the test design and test content prior to taking a real test.
Scoring	Skåring	The process of automated marking where a candidate is given points for correct answers. Tests with automated scoring will have one or more pre-defined cut score(s), which will assign test result based on the candidates' overall performance.
Test answer/response	Oppgavesvar/besvarelse	The answer or response is the candidate's reply to the tasks in the test.
Test centre	Prøvested	An institution that has been approved as test centre and given appropriate user access.
Test certificate	Prøvebevis	The test certificate is the official and verified documentation of the candidates' achieved results.
Test characteristics	Prøve-egenskaper	The test characteristics are metadata about the tests.
Test compiling	Prøvesammensetting	Test compiling refers to the process of putting together a test from a selection of approved tasks.
Test event	Prøvearrangement	A specific test at a specific place and date, with a certain number of places for candidates.
Test period	Prøveperiode	A test period is a specified period of days in which a test can be executed.
Valid test results	Valide prøveresultater	Test validity refers to the degree to which the test result reflects the test construct, i.e., to what degree the test measures what it claims to measure. Test validity can be influenced by a number of factors, such as test delivery (test execution and conditions for candidates enable them to perform as intended), test content (the content is suitable for measuring what is defined in the test construct, and construct irrelevant variance), and test assessment (the raters adhere to the specified assessment criteria).
Written production	Skriftlig framstilling	The test in written production measures how well the candidates can write Norwegian.