



D 4.5 Final Report

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Summary

SEAL is an eParticipation project in which three different editors have been tested and evaluated by users from four different European parliaments. A primary goal of this project is providing the stakeholders involved in legislation drafting with a supporting environment that enables easy construction of legal drafts using drafting patterns and creation of connections from an to existing legal sources. The SEAL working environments is intended to be a started point for an integrated infrastructure that enables drafting legislation and supporting the deliberation process with all stakeholders involved. Being part of a large eParticipation program, in this project we focused on the legislation drafting environment. The solution created, however, allows for integration with the deliberation support environments explored in other eParticipation projects.

In the first stage of the project the initial success criteria for a working environment were defined. Based on the initial success criteria and in a series of open questions the general drafter's environment, associated processes and technical requirements were inventoried as a basis for the requirements of the drafter's tool and selection for an editor. After these criteria had been established, the editors have gone through several cycles of being tested and being improved based on the test results. At the end of the project, a final test has been held, in which the success criteria were measured again.

From the test results, it becomes clear that the tester expect that using the editors will allow them to write better legal texts more quickly. Positive effects for the legislative organisation are also expected, as the editors make it easier for users to cooperate and use each other's products. Finally, some benefits for society are also expected as the quality of legislation goes up.

These test results, as well as positive reactions, have stimulated the stakeholders to further exploit the possibilities of legislative drafting support. This has already resulted in the start of new projects addressing these issues as well as national and international cooperation.

The work with partners in this project and other projects like DALOS will be continued after this project. The eParticipation program has enabled us to create a platform for international cooperation and legislative text writing; This will undoubtedly lead to changes in working processes, also enhancing possibilities for extending deliberation with stakeholders involved. This way the quality of the legal processes and their products will be upgraded.

SEAL has shown that there is a need for support in legislative text drafting by technology. Besides showing the need, SEAL shows that it is possible to support legislative text drafting by technology. In SEAL we worked in three different countries, all having their specific legislative drafting cultures. Each country consequently has his own specific challenges and has to at least partly create its own solutions because of that. Bringing these solutions together creates synergy. The SEAL project brought together the creators of the most state of the art editing environments for supporting legislative drafting. This and future projects made it possible to try to create a common ground for a new European legislative drafting practice enabling as much as reuse as possible given the local differences. It also brought better legislation alignment a step closer.



The partners in this project are continuing the development of their tools in the respective national settings. The partners will also continue their cooperation in the future and thus allowing the public to benefit of the advantages of a more open, efficient and qualitative improved legislative and deliberation process.



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Special Thanks

During SEAL, a lot of persons are involved during developing, testing en evaluating the editors. We thank all people involved, especially the members of the Senates and the Parliaments involved:

- Dutch House of Representatives
- Austrian House of Representatives
- Italian Chambers of Deputy
- Italian Senate

During SEAL, a step forward in legislative text writing, supported by working environment is taken. Thanks for all you input and enthusiasm.



1 Context of the deliverable

A primary goal of the SEAL project is providing the stakeholders involved in legislation drafting with a supporting environment that enables easy construction of legal drafts using drafting patterns and creation of connections from an to existing legal sources. The SEAL working environments is intended to be a started point for an integrated infrastructure that enables drafting legislation and supporting the deliberation process with all stakeholders involved. Being part of a large eParticipation program, in this project we focused on the legislation drafting environment. The solution created, however, allows for integration with the deliberation support environments explored in other eParticipation projects. As is described in Deliverable 3.3 Test Report, the editing environment that was tested in this project already allows for deliberation between the actors directly involved. Amongst the SEAL project partners are three parliaments: Austria, Italy and the Netherlands, as well as the Italian Senate.

In the first stage of the project the initial success criteria for a working environment were defined. Based on the initial success criteria and in a series of open questions the general drafter's environment, associated processes and technical requirements were inventoried as a basis for the requirements of the drafter's tool and selection for an editor.

The SEAL Project consisted of different phases, the development phases and the test/pilot phases. During these two phases a continuous evaluation process was established. The evaluation cycle consists of different stages, explained in chapter 2. At the start of the project Initial Success Criteria where defined (D1.5 Initial Success Criteria). These Initial Success Criteria formed the basis for requirements, developing and testing. As Rapid Application Development (RAD) is used, the whole creation process consisted of multiple small cycles of building, testing and refining the drafter environment. (See also D2.1 Requirements).

At the end of the project, this final Evaluation Report will look back at the initial success criteria, and from that, the development process of the editors. This development consisted of adapting to the specific user and contextual needs as well as technical updates of the existing editors. Besides looking back, this evaluation report will look forward to the implementation of the different tools and the working environments at the three pilot sites after this project.

Input for final evaluation came from:

- Interviews with the end users ;
- The evaluation forms (see appendix A);
- Findings during and conclusions after testing (D 3.3 Test Report)

The deliverable at hand (D4.5 Report on the fluctuations of the values of the success criteria) reports the final evaluation and recommendations for further activities and implementation.

In chapter 2 the approach will be explained, including the evaluation method. After explaining the method, the results, in general and on national level, will be given in chapter 3. After this, a general conclusion and recommendations for further activities will be given in chapter 5. This final evaluation will end with recommendations for implementing the working environment.



Link with DALOS

There is a clear link between the SEAL project and the DALOS project, another eParticipation project. SEAL and DALOS are both projects that aim at legislative drawers. Where SEAL aims at supporting the legislative drafters at national level and supporting the cooperation between legislative drafters in different countries, DALOS aims on EU legislative drafters (in all institutions involved in the EU legislative process: Commission, Council and Parliament), as well as national bodies involved in the transposition of EU legislation into the different national laws. The goal of DALOS is to provide law-makers and stakeholders in legislative drafting processes with linguistic and knowledge management tools.

These tools will enable construction, update and shared use of a common legal vocabulary, through which legal drafters can consistently express the same concepts in different contexts and languages. Both the SEAL project and the DALOS project use CEN/MetaLex as a starting point.



2 Approach

In the first stage of the SEAL Project, we gathered requirements and success criteria from the intended users. For this purpose we used interviews and investigated the existing situation at the different pilot sites. This research was leading in the development and testing of the different editors. The initial success criteria were translated in requirements (D2.1 Requirements).

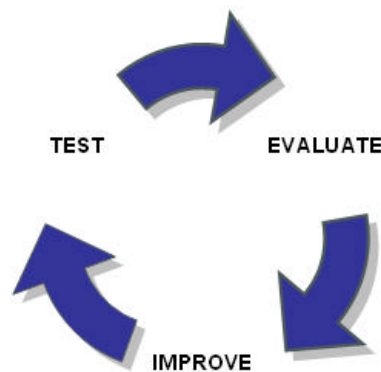
During the whole period, users were interviewed, test results were input for further developing and the development results were tested by the users.

In this chapter a short description of the evaluation method and how evaluation input was collected for further development, according to the Rapid Application Development method.

2.1 Method

In the first phase of SEAL, the initial success criteria were formulated based on user input and knowledge of the existing situation and previous experiences of the partners from previous projects. Based on a questionnaire, filled in by the users, the success criteria were defined. These success criteria were leading in developing and testing. As stated before this development consisted of adapting to the specific user and contextual needs as well as technical updates of the existing editors. With respect to the latter an important technical improvement was to create a CEN/MetaLex compliant solution. CEN/MetaLex is the de facto standard for describing legal sources¹.

Using Rapid Application Development (RAD), the whole creation process consisted of multiple small cycles of building, testing and refining the drafter environment. (See also D 2.1 Requirements). Rapid Application Development can be visualized in the next evaluation cycle. Using this evaluation cycle, as given below, continue improvement of the editors is established and the user are given the possibility to gradually adapt to new ways of working and build trust and commitment because of their involvement in the creation process.



¹See www.metalex.eu



Evaluation stage

With determining the initial success criteria evaluation, the evaluation circle started. Evaluating found place after testing and during the whole pilot period.

Improvement stage

The editors have been improved based on the outcome of the evaluation. The testing and evaluation led to a list of possible improvements (see D3.3 Test Report SEAL Project for the lists). Based on these findings, the editors were improved.

After improving the editor preparing for implementation took place in two steps:

- Technical implementation. The new version of the editor has to be implemented in the working environment.
- User implementation. For using the editor there were different activities that had to be performed, like creating a user manual, or give instructions to the users.

Test stage

After improving the working environment, users were able to test the improvements in a working environment. Recommendations and issues for developing were inventoried in the evaluation stage.

The whole cycle is based on continuous evaluation and improvement. The implementation of this continuous evaluation cycle makes it possible to adapt the existing editing environment and deliver a useful, accepted editor in a relative short period. In this way, for the users it is visible that their recommendations are heard and taken care of in the new version of the editor. The next version of the working environment already contained the suggested improvements

2.2 Initial Success Criteria

For determining the initial success criteria a matrix was used (D1.5 Initial Success Criteria), because of qualitative nature of the Initial Success Criteria.

The matrix contained all the results in a framework for success criteria that can be divided along two axes. First, it is possible to distinguish them by the level they address: does the result affect an individual user, the organisation or the entire society (or a nation, or Europe)? The second axis shows what is affected: the final product, or the process that is used to come to the product?

In the next success criteria matrix the two axes are filled with the result of measuring the initial success criteria.

	Process	Product
Society	<ul style="list-style-type: none">- Enhancement of the participation of citizen's interest groups in the legislative drafting process	<ul style="list-style-type: none">- Increased quality of legislation- Increased accessibility of legislation
Organisation	<ul style="list-style-type: none">- Increased operability between applications- Increased workflow efficiency and co-operation- More transparent workflow- Increased document security and better authentication mechanisms	<ul style="list-style-type: none">- Increased compliance to organisational standards- Increased document security and better authentication mechanisms
User	<ul style="list-style-type: none">- Increased writing speed- Easier to interact with other users- Increased interaction speed	<ul style="list-style-type: none">- Easier to comply to organisational standards- Easier to organise legislative texts- A more simple ordering of law corpora



Making the different initial criteria more quantitative the initial questions out of the questionnaire were used.

The users who were interviewed were asked to rate the criteria on a scale from 1 to 5, where 1 means a *high level of...* and 5, a *low level of...* For details on the outcome of this questionnaire see Appendix B.

Important conclusion of measuring the initial success criteria was that in general the users rated the current drafting process and its results very highly. The measuring suggested very little room for improvement. This also suggested that the users didn't expect the tools to accomplish improvement of the quality of legislation (D1.5 Initial Success Criteria). In the conclusion on chapter 4 of this document this outcome and the initial success criteria are compared with the results of the final evaluation.

2.3 Measurement of Success

After the users had been able to work with the final versions of the working environments, the success of the project had to be measured. In the original plan, this was to be done by using the same questionnaire as was used for the original measurement. However, as in the original measurement the existing situation was scored very high, this questionnaire would probably not have the granularity to pick up any improvements made by the working environment.

Therefore, for the final evaluation, the original questionnaire has been modified to a new one, which measures the (perceived) difference between the original situation and the new situation (with the working environment). The same questions as in the original questionnaire are basis for the evaluation form used in the end evaluation. Because it was necessary to measure a change in attitude, the answers were changed to worse-same-better. By this, it was possible to compare the new situation with the old existing situation. We used the same questions as a basis for that would allow for a valid comparison between the former and new situation. By doing this it is also clear where progress was made and which topics should be focused on, in the recommendations for implementation after the project. Besides modifying the existing questions, we adapted our questionnaire in order to fulfil the needs of the the DALOS project.

In Chapter 3, the results of the final evaluation are given. After the results, a comparison with the initial success criteria is made. Based on this comparison, conclusions can be giving. Because of the three different nation involved, there is a distinction between conclusion on general en national level.

2.4 Requirements

The initial success criteria have been translated into requirements. These requirements are described in D 2.1 *Requirements*. The outcomes of this final evaluation will be related to these requirements. By this, it is possible to evaluate how the editors meet the requirements from user perspective, and which further activities can be developed.

For this see chapter 3: Results en Chapter 4: Conclusions. For an overview of the Requirements, look at appendix C: Requirements.



3 Results

A final evaluation was performed, at the end of June 2008, to measure 'the successes of the SEAL project and the impact of the created working environments. The questionnaire that was used to determine the initial success criteria was used to create the final evaluation form. This questionnaire was changed according to the new situation. The same questions were used, but the testers were asked to fill in the questions with the new working environments in mind and answer the question with a choice between the next answers:

- Good (2 points)
- Better (1 point)
- Same (0 points)
- Worse (-1 points)
- Bad (-2 points)

These answers made it possible to categorise the new situation, in comparison with the old, existing situation.

The results of each of the individual test sites are discussed first. After that, the general findings are compared them with the initial success criteria.

For the final test. the test group contained 12 participants, all experienced legislative text writers. The End evaluation was filled in by a part of the test group. In total nine respondents filled in the final questionnaire. Their answers were inline with our observations of the other participants.

3.1 National findings

The final evaluation was performed at the pilot sites in The Netherlands (Austrian testing took place at the Dutch Site) and Italy. To take a deeper look into the results, the results will be analyzed on national level. This analysis will be compared with the initial success criteria.

3.1.1 Dutch Findings

The final questionnaire was filled out by the same respondents that were involved in the measurement of the initial Success Criteria, the same respondents filled in the End evaluation questionnaire. In the Dutch case, these respondents filled in the questionnaire after the test period. It should be remarked that the respondents were very enthusiastic during the test period and they came up with all kind of ideas about future enhancements.

Before looking back on the Initial Success criteria, we will present deeper analyze of the results of the end evaluation categorised by the societal, organisational and user aspects.

Results on society

On the society level, the results were positive. The next list gives the average score on the different questions. This score is calculated by the values given above.

Society

Efficiency of legislative text? 1

Effectiveness] of legislative text? 1

11



Insight in the negative side effects of legislative text?	1
Consistency in legislative text?	1
Clarity in legislative text?	0.5
Acceptability of legislative text?	0
Legitimacy of legislative text?	0
Feasibility and manageability of legislative text?	1
Simplicity of legislative text?	0
Social and political feasibility of legislative text?	0
How do you consider the level of accessibility of legislative text using the new application?	1
How do you consider the level of transparency in the legislation processes, using the new application?	1

Remarks

Both the questions regarding the process, as the questions regarding the product were positively criticised. (Note: most of the items were product based, except the efficiency and effectiveness of legislative text.)

The new working environment scored “Good”, comparing to the old situations on different areas:

- efficiency;
- effectiveness;
- insight in negative side effects;
- consistency.

There is no visible progress made in the acceptability, legitimacy, social and political feasibility of legislative text, according to the respondents.

This means that, at the moment, the respondents see no direct positive effects for the public, which is what we expected. The terms mentioned in the questionnaire were that terms relate to ‘direct visible value’ for the public. The items mentioned as positive have a more direct relations with the organisational aspects, i.e. those aspects that are internal to the legislative drafting organisation. It must be stated that while the respondents didn’t reported direct positive effects, we still may assume indirect benefits, since it is likely that citizens will benefit from improved legislative quality and this will lead to greater acceptability, legitimacy and social and political support if only indirectly (as expected from the start of this project).

Results on organisational aspects

Also on the organisational aspects the respondents reacted positively as seen in the table below.

Organisational

How do you consider the level of operability between applications using the new application?	1
How do you consider the level of operability between different organisations and body using the new application?	1
How do you consider the level of control of the workflow using the new application?	1
How do you consider the level of compliance to organisational standards using the new application?	1
How do you consider the level of efficiency and effectiveness using the new application?	1
How do you consider the level of costs using the new applications	0

Remarks

Within the organisational aspects it is possible to make a clear difference between criteria that are process based and criteria that are product based

The criteria that are process based are the operability between applications and the operability between different organisations. These two criteria come together in the control of the workflow in a new application. These criteria were judged positively (+1).



During the tests stage we held interviews and found that the testers saw a lot of possibilities within the workflow. The workflow part of our solution could not be tested though, because of the existing workflow software that is used at the test locations. Creating a technical connection between existing workflow system and the editor tested was not in scope of the SEAL Project nor allowed by the parliaments for obvious reasons.

About the criteria that are product based (compliance, efficiency and costs) the respondents saw no improvement in costs, although the efficiency and effectiveness were rated as improved. . However it is likely that the stakeholders have no clear view on the costs involved, or the costs made neither in the old nor in the new situation. Costs are of course considered to be of less importance than responsiveness to political demands.

Results on user aspects

According to the testers, the user aspects, as defined are mostly positive criticised.

User

How do you consider the level of writing speed using the new application?	1
How do you consider the level of interaction with other users using the new application?	0
How do you consider the level of interaction speed with other users using the new application?	1
How do you consider the level of accuracy using the new application?	1
How difficult is it using the new application, in your opinion, to comply with organisational standards?	0
How difficult is it using the new application in your opinion, to organise legislative text?	1
How do you consider the level of quality in legislative texts using the new application?	1
How difficult is it using the new application, in your opinion, to comply with organisational standards?	1

There is no great difference between the score on product and process based criteria. Both were judged positively. In case of the process based criteria there was no visible improvement on the interaction with other users, criteria. It was not possible to test the international workflow, and thus the interaction with other users. During the interviews, the possibilities of workflow and authentication were explained, The product based criteria where, except the compliance to organisational standards, improved. In the initial questionnaire the respondent gives already a high score (1.7 out of 5) to the compliance to organisational standards. Regarding the end evaluation there is no visible improvement.

During and after testing there were some developments on templates to improve the compliance to organisational standard and the uses of these standards by using the templates.

Relation with DALOS

As described in chapter 1 there is a close relation with the DALOS Project, because both projects aim at legislative text writing and legislative text writers. For this a question was added to our initial questionnaire, concerning the DALOS activities.

This question was:

Are there benefits for the quality of legislation text drawing, by using standard thesaurus?

All respondents answered this question with “yes”, which indicates that a standard thesaurus may be beneficial for the quality of legislative drafting.

General conclusion Dutch Findings

When determining the initial success criteria, some side remarks were made:



1. One respondent thinks the level of quality of the legislation is out of scope of the project for two reasons:
 - a. A quality check will always be a manual check and cannot be supported by ICT.
 - b. The sub-department the respondents are working for has no influence on the quality.

The other respondent thinks the quality of legislation is within scope and that there are no problems with this quality apart from the consistency of the text.
2. The respondents are satisfied with the level of accessibility of the legislative text for them (their IT system provides that for them), but wonder whether the text is accessible enough for the civilian.
3. Interoperability problems exist mainly between organisations, not so much between applications.
4. One respondent thinks the level of control of the workflow is very low. The other does not consider this a big problem.
5. There is room for improvement of the level of accuracy of the text.

Looking back at the points of interest, mentioned by the testers, the next conclusions can be made.

- Both quality and accuracy are improved, although during determining the initial success criteria, it was thought, this was not possible;
- The respondents were wondering about the accessibility of legislative text for civilians. In the end evaluation there is no progress measured;
- Although the operability between applications was not a “big problem”, in the new situation there’s improvement made on this criteria.
- Workflow: in the old situation, there was said there was a low control on the workflow. In the new situation improvements are made.

Although the measuring of the initial success criteria suggested little room for improvements, the feedback from the users measured at the Dutch test site was very positive. This was further emphasised by the enthusiasm and ideas for further enhancement voiced by the testers during the tests.

One remark on this result is the accessibility for civilians. Ultimately, a goal of the new working environment was to allow citizens participation. Because of the specific knowledge required for being able to give reasonable comments we expect that this participation will be through citizens’ representatives rather than through direct participation. However no such third parties were involved in the SEAL project, and hence, this feature has not been measured. It is likely that due to the standardisation using CEN/MetaLex and the open platform third party involvement can be supported later at implementation stage.

3.1.2 Austrian Findings

In the final evaluation of the Austrian working environment the evaluation questionnaire was not used the same way as it was used in Italy and in the Netherlands. Although the Austrian site has been a test site as well the users there were involved at a later point and while we received input during the constant evaluation-cycle, we decided not to use the questionnaires since then the results would not be valid for scientific reasons. Evaluation consequently took place based on the findings during testing and developing. Comments made during the evaluation cycle and after testing and developing were translated to conclusions for evaluation.

The Austrian situation was quite similar to the Dutch situation. Enthusiasm about the editor and ideas from the users about future development were similar. Of course there were also Austrian specific findings in the evaluation. In this report these findings will be separately mentioned using the same categories as used in determining the initial success criteria; results on society aspects, organisational aspects and user aspects.



Results on society aspects

In the Austrian case no increase in effectiveness is expected from using the working environment. Since constitutional legislation requires a qualified majority in the National Council, the effectiveness of the legislative process is strongly dependent on the number of seats obtained by the parliamentary groups supporting government, and not by the tool that is used. Therefore, a drafter's tool would have to support the business of legislative drafting at the stages of the federal ministries and the parliamentary groups, as well as legislative editing at the stages of the Federal Government, the parliamentary committees and plenary.

Results on organisational aspects

About the organisational aspects and the operability of the editor with other applications it was said that the legislative drafter's tool should be connect with the Fabasoft workflow system on the government level as well as the Oracle database on the parliamentary level. By this it should be possible that the draft documents could be stored, transported and processed in these systems. Such a tool would, of course, have to support editing of draft bills and other legislative documents in accordance with the Legislative Drafting Rules issued by the Federal Chancellery and the document formats jointly established by the Federal Chancellery and the Parliamentary Administration.

Results on user aspects

In Austria the reaction on the editors were fairly optimistic. However, the testers concluded that a lot of work is still to be done before the editor could realistically be used in Austria. The philosophy behind the editor is that by changing the language and jurisdiction specific information, the editor can be made suitable for another jurisdiction. However, it turns out that the underlying XML schema (MetaLex/LS), which was tested in several other jurisdictions, does not allow certain constructs that appear in Austrian law. Thus, it will need to be modified. This is actually done now in cooperation with the CEN/MetaLex working group.

Another important issue addressed was that the user interface was not fully adapted to the Austrian demands yet. It is common knowledge that an adequate user interface is crucial for getting the editor accepted. Taken this into account we can only conclude that after improvement of the current interface the results will even become better.

General Conclusions Austrian Findings

The people working at the Austrian pilot site, which was considered an extra at the start of this project, gave us many good advice and feedback, based on their broad experience with the legislative text editors. The Austrian Parliament's representative in this project dr. Günther Schefbeck wrote a comment about possible future developments and conditions that should be considered for future developments which laid the basis for ideas about future development.

Currently, legislative drafting within Austrian federal legislation is supported by a modified version of Word; by developing a specific macro, i.e. the so-called "E-Law" macro, it is possible to provide legislative drafters with tools enabling them to apply the layout styles defined in accordance with the Legislative Drafting Rules, and thereby produce Word files formatted in a way making them fit to be converted into XML for storage and (authentic) publication. When in 2001 the decision to use Word as the editor was made, no specific legislative XML editors were available. Even if then one of the market available XML editors would have been adapted for legislative purposes, its acceptance by the legislative drafters would have been a matter of



doubt; it seemed easier to adapt Word which they were used to, and do without the functionalities that can only be offered by XML editors like the ones used for the SEALproject.

XML Editors

The next points of importance are mentioned by Austria, regarding XML editors.

- a generic XML editor would offer the possibility to fully restrict the legislative drafters to allowed performances.
- a generic XML editor would offer a lot of functionalities that are not being supported by Word so far (and are not likely to be supported in the future either). In particular, implementation of the Legislative Drafting Rules could be supported, e.g. by providing the drafter with proposals how to structure a document or how to formulate amendments.
- By making use of the structural capabilities of XML, new editing functionalities could be made available: in particular, it would be possible to develop tools supporting the automatic consolidation of legislative and legal texts.
- Consultation processes, could efficiently be supported by a legislative XML editor, enabling the consulted to precisely address their comments to the respective sections of a draft law, and thereby allowing automatic production of a synopsis of the consultation results

Having in mind the time pressure under which all these process steps have to be done, a pressure that in the past years has become heavier than ever, it is even more evident to what extent the automation of these process steps would promote the efficiency of the process. Legislative drafting as well as the understanding of law could be supported by functionalities allowing the automatic linking of sections of legislative and legal texts with the respective explanatory remarks, if existing; so far, retrieval of this material is an intellectual task that often takes a lot of effort, in particular when it comes to several time layers overlapping within one legal text.

Finally, there are some fundamental technical considerations to be taken into account, as well: Word is a proprietary format that is regularly updated by its owner. In the end, it seems unlikely but is beyond the influence of the user that Word some day would no longer be supported or only under very unattractive conditions. On that day, an open standard based editor solution would turn out to be the more sustainable one.

In general it can be said that in Austria, a XML editor has some advantages:

- there is a strict control on the changes/editing steps, a drafter makes during legislative text writing, not only for functions that exist in Word, and can be disabled in XML, but also extra functionalities, that doesn't exist in Word and can be added in the XML editor
- All the processes are at this moment based on the Word editor. But Word is not endless. A sustainable editor should be based on XML.

From Austrian point of view, it is recommended to create next functionalities:

- Insert a comment function, to comment on specific text area's and automatically
- Linking sections and explanatory remarks automatically.
- Automatically process some steps in the process, like consolidation and production of a synopsis.

In chapter 4 all findings will be put together for a general analysis.



3.1.3 Italian Findings

The respondents that participated in the measuring of the Success Criteria also filled out the final evaluation questionnaire (six respondents). Just as with the Dutch case, these respondents filled in the questionnaire after the test period. It should be remarked that the members of the Legal Drafting Office were timorous of the introduction of ICT in the legislative, and sometimes sceptic on the effectiveness. During the test period the people feared they for an increase in time spent, more difficulties of relationship with the other offices and difficulties of capacity to manage the digital workflow. This is due to the fact that, in any phase, the Italian Legislative System is strongly interconnected with several different factors that do not depend on the administrative level but on the political system. The Legal Drafting Office, both in the Senate and in the Chamber of Deputies, has the responsibility of controlling, monitoring, and repairing with a strong division of the roles and with different responsibility levels (any correction in the text should be signed by a responsible).

Before looking back to the Initial Success criteria, there will be a deeper analysis of the results of the end evaluation categorized by the societal, organisational and user aspects.

The respondents have been asked to fill out a single questionnaire based on their experiences with both Norma Editor. Thus, these results represent their general view of the social and organisational aspects of a legislative drafting environment. It is not linked to either the Norma Editor or the xmLegesEditor.

Results on society

In the society area, the results were more positive than when determining the initial success criteria.

Society

Efficiency of legislative text?	0
Effectiveness] of legislative text?	1
Insight in the negative side effects of legislative text?	2
Consistency in legislative text?	1
Clarity in legislative text?	0
Acceptability of legislative text?	0
Legitimacy of legislative text?	0
Feasibility and manageability of legislative text?	0
Simplicity of legislative text?	0
Social and political feasibility of legislative text?	0
How do you consider the level of accessibility of legislative text using the new application?	1
How do you consider the level of transparency in the legislation processes, using the new application?	2

Remarks

The long traditions and the consolidated procedures make the current processes very efficient in terms of time and result. The number of exceptions and complexity of the modification of a modification are managed in a very efficient way, delegating the data-entry process to the Official Parliament typographies (two: one for the Senate and one for the Chamber of Deputies). This means that the current process and organisation are traditional based, manual based and paper based. Users considered this nevertheless very effective, especially in the rush phase where the modifications and the amendments arrives on paper in the very last-minute. The users indicated that it would be very difficult to introduce new ICT tools in this organisation and in this environment, because a great improvement over the current situation would be needed to justify the transition to ICT based work processes.



On the other hand, the data entry of Official Parliament documents is done by specific civil servants. Without an adequate working environment, they are not able to detect inconsistencies, errors of content and misleading and bad quality legislative text. Therefore, a light editor, really usable, with a low learning-curve and with a user-friendly interface is considered a very good tool, especially in the early phase of legislative drafting. With the help of the editing environment provided for by this project, the user is able to control the structure, the normative references, the inconsistencies, the redundancy inside of the structure and the main rules of the common legal drafting guidelines. The editor is able to detect inconsistencies of the structure and "bad text", considering some legal drafting guidelines, in an automatic way. For these purposes, the editor was considered very useful (see the last two questions of the Society part as well).

Clarity, acceptability, legitimacy, feasibility and simplicity of the legislative text are requirements of the legislative law-making process as a whole. ICT and the work of the Legal Drafting Office alone are not sufficient to reach improvement in this area. Without serious awareness at a political level, and strong commitment from the Assembly, ICT cannot make an improvement.

ICT is not the only element in the creation of clear, feasible, simple and acceptable legal texts. Other elements influence this process as well. Therefore, in the eyes of the Senate and the Chamber, ICT is only a tool for implementing political, linguistic and legal input. Their preference is to focus their attention on those elements that will give the greatest improvement; this is not necessarily the ICT element.

Results on organizational aspects

On the organizational aspects, the respondents reacted positively, as seen in the table below. Some comments have been raised with some realistic concerns relative to the effectiveness and the costs.

Organisational

How do you consider the level of operability between applications using the new application?	1
How do you consider the level of operability between different organisations and body using the new application?	2
How do you consider the level of control of the workflow using the new application?	0
How do you consider the level of compliance to organisational standards using the new application?	1
How do you consider the level of efficiency and effectiveness using the new application?	1
How do you consider the level of costs using the new applications	1

Remarks

Internal Organisation

A new editor requires training, concentration and dedicated time. Often, the pressing and pushing of the political layer is so strong that it is not possible to take enough time for following the procedure of an editor and manual work is faster. In addition, the current division of responsibilities does not make it easy to take advantage of the ICT and from the editor. In order to get a serious advantage, a serious reorganisation of the work is necessary in order to take advantages from. If the work is totally reengineered in terms of process, organisation and responsibility, the editor could be fully used and it will be possible to exploit the full potential.

Costs

The costs of using the editors proposed in this project are reduced in terms of paperwork, but the time for marking-up the documents and any amendment in any phase of the long legislative process should be considered. It is important to understand in each organisation when and where to introduce the editor and the mark-up. A risk is to mark-up a text in a very early phase with a waste of time.



Some initial cost of training should be considered besides a cultural change in the method of work. In general the cost is reduced more and more if the mark-up is adopted in any phase of the process, with a strong advantage in the very complex step such as consolidation and creation of reports.

It is important to consider the internal training costs and the cultural changes needed for applying this new approach.

In term of social costs the benefit is more evident: more transparency, accountability, awareness, assessment for each phase of the legislative process.

Efficiency and Effectiveness.

The four scenarios tested showed that a more effective way to use the editors, is in repairing, merging, consolidating, assembling, elaborating pre-existing fragments of documents in order to produce, day by day, the needed documentation for the internal and external process (internally for the committees and for the Assembly, externally between the different organisations such as Senate, Chamber, Government, Ministry of Justice). The idea to cover all the legislative process with the editor or tools is in this moment not realistic.

Results on user aspects

The testers are mostly positive about the user aspects.

User

How do you consider the level of writing speed using the new application?	2
How do you consider the level of interaction with other users using the new application?	1
How do you consider the level of interaction speed with other users using the new application?	0
How do you consider the level of accuracy using the new application?	1
How difficult is it using the new application, in your opinion, to comply with organizational standards?	1
How difficult is it using the new application in your opinion, to organize legislative text?	0
How do you consider the level of quality in legislative texts using the new application?	1
How difficult is it using the new application, in your opinion, to comply with organizational standards?	1

Remarks

The Norma Editor is based on Word. Its interface is closest to what legislative drafters are used to work with (i.e. Word). The documents produced in the Norma Editor are parsed into CEN/MetaLex format in a separate step. The user does not need any XML knowledge to make the translation. An XML validation is made at the end.

The editor support consistency checking on the the text, thus guaranteeing compliance with the internal legal drafting rules.

But due to the official internal regulation of each institution merely using the editor did not improve the speediness in the interaction. It helped, however, to improve the quality of the work, the accuracy and to avoid trivial errors.

For this reasons the officials believe that no time will be saved in communication with the other institutions with or without the Norma Editor. Nevertheless the XML format improves the communication and the publication of the document on the Web and on paper.

Also the organisation of the text is not a relevant point using the editor because this issue is influenced by the workflow of the Assembly and from the policy actors. So what the editor can improve is missed completely in the political round.

The xmLegesEditor is, a native xml editor, able to comply with a predefined xml standard.



It has been considered a plus the effort made with the development of xmLegesEditor, to establish a trade-off between a user-friendly approach to text authoring, hiding the underlying XML structure, and the maximum of flexibility and extensibility in the exploitation of the high potentiality of content expression offered by XML documents and captured by legislative XML standards, while content and presentation are kept well distinct.

Another crucial point of xmLegesEditor, which has been positively evaluated during the SEAL tests, is the issue of document validity in an XML-sense. Usually the enforcement and the respect of the rules included in DTDs/XMLSchemas during documents production is a non-trivial task for typical editors. On the other hand, failure in validation or manual management of XML tags can, particularly for complex standards as the legislative ones, cause a complete failure of the original objectives of standard compliant document production.

xmLegesEditor proposes an original approach to this problem, positively evaluated during the test, in which XML validation is completely “transparent” to the user and does not require any additional effort or XML awareness than typical word processing operation. Such an approach can be indicated as an “*a priori*” validation approach: the basic idea is that the user is transparently constrained by the editor to perform only valid operations on the document in such a way that, starting from a valid document template, only valid documents can be produced.

Relation with Dalos

The thematic of thesaurus is strongly relevant for the Senate and for the Chamber of Deputies so to use a controlled vocabulary of semantic terms for monitoring the linguistic quality of the legislative text are very appreciated.

General conclusion Italian Findings

During determining the initial success criteria in Italy, the next comments are made:

Italian Senate and Chamber of Deputies

The results for the Italian case can be seen in Appendix 1. On some of these results we will elaborate, because respondents made side remarks:

1. Questions about the level of quality of the legislative text are considered to be out of scope for this project according to the Italian respondents because they are not connected to ICT tools but to the internal political process as it is in Italy. However earlier in the questionnaire (in the part about functional requirements) it is noted that it would be very beneficial if the project supports users in making accurate normative references. This leads us to the conclusion that there is room for improvement with regard to the quality of the legislation on this point and that it will be worthwhile to monitor improvements reached by SEAL. While monitoring however, we must take into account that the quality of drafts and legislation depends not only on the ICT support, but also to a large extent on the dynamics of the Italian political system.
2. Interoperability problems exist mainly between organisations, not so much between applications. This is due to the way activities are organised in the legislative process.
3. Although the ICT support is highly scattered there are no problems with the efficiency and effectiveness of the process.
4. The writing speed of drafts is negatively influenced because it is difficult to consolidate amendments, compare to different texts, present comprehensively the text and the different amendments on the text.
5. There is no integration between drafters now. On this point there is much room for improvement.
6. Opinions about the organization of the legislative text vary from not difficult to the task is too complex and should be supported.

Based on these consideration four scenarios were tested:

- a) markup a pre-existing document in XML for sending it from Senate to the Chamber of Deputies (external workflow);



- b) markup a mixed document (partially cut/pasted) coming from the parties to the legal drafting office for a strong revision (internal workflow);
- c) creation of new document of amendments and application of the amendments approved by the committee to the original document (committee workflow);
- d) comparison of two texts coming from different steps for printing the synopsis table(internal and external workflow).

The final evaluation of the test confirmed some initial considerations and demonstrated on the other hand that some micro-steps are possible using ICT and editor for improving effectiveness, quality, accuracy and interoperability.

Some concerns raised and we believe the decision-makers need to take them in serious consideration before introducing ICT and editor in the organisation:

- 1) ICT in itself is not sufficient to improve the legislative processes. Some parameters like clarity, acceptability, legitimacy, feasibility, simplicity depends from the political level and from the commitment of the Assembly;
- 2) a strong reengineering of the organisation is necessary before introducing ICT support. Some steps could be deleted and others should be added in the organisation of each institution in order to make effective usage of the editor;
- 3) training on tools but also on methodology of work are necessary for a successful ICT introduction;
- 4) automation of all process steps in the legislative workflow has never been a goal in itself, nor the goal of the project. Our goal is to simplify the workflow and improving the quality as much as possible and this could mean also to have paper-work in middle or hand-work;
- 5) the aims of this project to provide the users with a tool for repairing, monitoring, checking, merging, consolidating, assembling and elaborating pre-existing fragments of documents coming from different steps and from different resources. The XML format used in this project enables this;
- 6) the costs of the new application usage include the learning-curve and, the organisation time, the time of mark-up. So it is important to plan training courses and to define where and when to mark-up the document in the workflow of each institution, based on the internal organisation;
- 7) without adequate support tools, the mark-up of legal documents is a boring and time-consuming activity. XML structured documents, however, have serious advantages for publication on the web or on paper, comparison between versions and updating of a document. These operations can be easily supported by our editor's with more accuracy, quality and effectiveness.

The test, especially in Senate, produced some interesting scenarios where it is possible to apply the editor in a very effective way. After SEAL two important results came up:

- 1) improvement of the Norma-Editor and xmLegesEditor on the base of the user requirements (Parliaments);
- 2) conviction of the officers the feasibility to a new methodology of work based on editors and XML functionalities. With SEAL some initial scepticism of the officers were taken away.



4 Conclusion and further activities

As D1.5 Initial Success criteria mentioned the SEAL project should streamline the process within the organisations by facilitating interoperability among different applications that are used within the legislative drafting and debating process.

Besides the interoperability among different application used within the organisations, there should be a 'system' that support the tracking of changes and which allows an authentication mechanism. This is important for protecting the democratic debate.

There were different goals to be achieved in SEAL. In this paragraph the outcomes of the end Evaluation and remarks made during the interviews with the tester are related with the goals as determined by determining the Initial Success Criteria

4.1 Society Level

On the level of society, three goals were distinguished:

- S1 Enhancement of the participation of citizen's interest groups in the legislative drafting process
- S2 Increased quality of legislation
- S3 Increased accessibility of legislation

The first two of these goals are goals with regard to the product; the last one is about the process.

Participation (S1)

Increasing the participation level on the legislation process was never a primary goal of the SEAL project. For this purpose, different systems already existed, like the PARLIS system in the Netherlands, E-Law in Austria and DEMOS in Italy. Although these systems already are integrated into the existing environment, the working environment developed in SEAL can be integrated with those systems, and consequently become part of the working environment of legislative drafters and other stakeholders. The evaluation of SEAL shows a possible increase in accessibility using the new working environment. The working environments created in the SEAL project allow for future linking to third parties in the workflow. In the long term this will lead to a chain of processes, connecting several parties involved in legislative text drafting.

*Quality & Accessibility (S2 * S3)*

The Quality & Accessibility are related with O1. Using standards and templates, creates a consistent way of legislative text writing. This increases the quality, but also the accessibility of legislative text. Using a standard outline, a standard structure, but also a standard way of publishing makes it for different kinds of stakeholders (public, parliament and other interested third parties), more easy to read and understand legislative text.

4.2 Organisational level

On the level of organisations, 5 goals were distinguished:

- O1 Increased operability between applications
- O2 Increased workflow efficiency and co-operation
- O3 More transparent workflow
- O4 Increased document security and better authentication mechanisms
- O5 Increased compliance to organisational standards



Quality (O1)

The quality of legislative texts can be improved, using a new working environment. Using templates and using the support for referencing to other legislative documents can improve the legislative texts as a product, but also the process of drafting legislative texts. User can also select templates and use forms filling support which helps the user to insert their desired legislative texts into the template.

The quality of texts can also be improved by using the referential support offered by the editors. References can be used to track changes in legislative texts that are connected with the texts that are edited.

Quality of legislative texts is also the acceptability and the legitimacy of legislative texts. This is not improved by using templates, but is related to the public. This is where some improvement can be made, according to evaluation.

Workflow (O2, O3 & O4)

Using a repository, with a check in/check out function. Giving status information on documents and the possibility to assign a document to a colleague (national or international), is seen as a great advance using the new working environment. Because of this an increased efficiency and transparency is visible.

Generating a proved workflow also gives the possibility for document security and authentication.

Organisational Standards (O5)

By using an XML schema to validate the documents, some compliancy with organisational standards can be achieved. Templates can further encourage people to follow organisational standards. Furthermore, a dedicated editor for legal drafting will not have any options that should not be used, whereas such options (most often formatting options) are present in existing editors like MS Word.

Within the eLaw project in Austria, an attempt has been made to turn MS Word into an editor for legal drafting. By means of macros, templates were introduced and unwanted functionalities disabled. An XML export function was added that could validate the structure (based on Word Formatting Styles). Though this works to create a basic editor, it is the perception of the users that the options of editors like Word are not sufficient for this purpose. A dedicated editor, like the ones tested in this project, can create a more sustainable environment.

4.3 User level

On the level of the user six more goals were distinguished:

- U1 Increased writing speed
- U2 Easier to interact with other users
- U3 Increased interaction speed
- U4 Easier to comply with organisational standards
- U5 Easier to organize legislative texts
- U6 A more simple ordering of law corpora

The first three goals are related to the process, the last three goals to the product.

Speed and Interaction (U1, U2 & U3)

Using templates and pre-formatted sections helps to increase the writing speed of legislative texts. In addition, it improves the quality of the legislative texts since the drafter is prevented from making mistakes (see goal O1). As a result, the increase of speed does not affect the quality of the legislative text in a negative way.

By creating a validated workflow the speed and quality of interaction between users can be increased as well. It's easier to assign a document to a colleague, national or



international, and to inform this college by automatically generated messages. In this manner the interaction level can be upgraded to a European interaction level.

Comply with organisational standards (U4)

This goal has a close relation with goal O5, though that goal is technical, while this goal is on user level. By using templates and by automatic generating legislative text (like amendments), the users can easier comply with organisational standards. These standards are inserted in the editor that is used.

It has to be mentioned that not all processes can be generated automatically. Many tasks require legal expertise, human thinking an interpretation. Most of these have not yet been computerized, and maybe never will be computerized.

Ordering and Organisation (U5 & U6)

Using a validated workflow should help to increase the possibilities for ordering and organising legislative text. In this workflow an archive function should be integrated in which all historic documentation can be stored. The accessibility of this material should be guaranteed, to make sure a reference structure can be full functional.

4.4 General findings

At the pilot sites there was a lot of positive criticism. The testers and the development team were enthusiast about the editors and working environment. With SEAL, progress in the process and product of legislative text writing has been made.

The difference between process and product is made because improvement in a process not automatically leads to a better product. The quality of a product should be measured externally. Because of this, the criteria on accessibility and quality on societal level are determined separately. It can be said that improvements in the process contribute to an increase of quality of the product, but theirs is not a direct guarantee.

The distinction between process and product was made, during determining the initial success criteria. The SEAL project resulted in both product and process improvements.

However, we consider it equally important to look for areas for further improvements. The next two sections describe these further improvements.

Process related

When interacting on national or even international level, it is very important to create a validated process that is suitable for the countries involved. Experience from the SEAL confirmed that the process of legislative text drawing varies from country to country. This makes it necessary that each country sets up its own workflow management system. The only shared function is the repository, which can be reached through the national workflow system. There is a technical connection between the different sites, but there are different processes.

The process consists of steps or activities that are to be executed in a determined order. These activities are supported by process related functions. The process steps, and the supporting functions are very much language and jurisdiction dependent.

In the future international cooperation could be better facilitated and strengthened but this would require an international standard for workflow and shared requirements for a working environment. The SEAL project can be considered as a first step into that direction.



Product related

When looking at the product, the initial success criteria are about quality, accessibility and consistency of the product. These criteria are also supported by the tools, mentioned above. To ensure a certain quality, standardisation and supporting technology can be a good help. Besides technology the human factor is always important. This stresses the importance of a good user interface.

During SEAL, there was a great amount of interaction with the user. This interaction ensures that the tools and system as a whole conform to the users' needs as much as possible.

In SEAL we took a little bit an inside-out approach, i.e. we tried to support the legislative drafters and took their needs as a starting point. Additionally an outside-in approach would add value for the drafters' product, i.e. legislative texts, is written for an audience that is members of parliament or in senate and last but not least citizens. Unfortunately testing the effects of the SEAL approach on these target groups was outside the scope of the SEAL project.



5 Recommendations for implementation

After evaluating the SEAL pilot recommendations for implementing the working environments can be given. We came much closer to implementing a more effective and efficient legislation drafting environment, but in the same time we found that further improvements can still be made. But even though the SEAL project didn't lead to a full implementation yet, which is according to our expectations, the organisational readiness of the parliaments for changing towards this more effective and efficient support legislative drafting approach has grown.

5.1 Best Practices

One of the goals of SEAL was to compare elements from the different editors and from the results select best practices for future development and implementation.

A difficulty in comparing editors is that the editors are developed for a certain group of users in a specific country. Although, based on the testing and evaluation, a general overview of best practise can be given.

The use of templates

At all pilot site there was positive feedback about the templates and the use templates in legislative text writing. Using the existing tool, the legislative text drawer has a certain freedom in creating the lay out for the legislative text. This freedom has two disadvantages.

1. Consistency. If there is some freedom of creating the lay-out of a legislative text, it is possible that different users, use a different lay out. This may have negative consequences for the consistency of the legislative text.
2. XML. The use of XML as basis formalism for describing legal sources requires the availability of a template based support system. If no such templates are used it is easy to violate the requirements of the XML schema definition. Then the format of legislative text may not be compatible to the required XML structure.

The use of templates within SEAL is country specific. While we succeeded in offering users template based support this support still needs to be improved. In a future version of the SEAL environment parsers that can detect specific constructions in legislative text could be added to further improve support to the user.

Functionalities

The interface of an editor should be a WYSIWYG interface. Besides the interface itself, an editor should work like a user expects. The functionalities and especially the editing functionality of an editor should meet the needs of the users. The expectations of the users are mainly based on text editors like MS Word. The potentialities of using native xml editors with user-friendly MS Word-like interfaces have been positively evaluated as well, with the aim of promoting interoperability between different text editor applications sharing the same standard. The basis edit functionalities, like copy, past, delete, undo, redo, select etc. should work fully correct.



Automatic detection

When creating text, references or amendments it could be possible to automatically support the user by give suggestions or alert about some critical point in the text that needs the user's attention.

Like in consolidating an amendment, possible errors in numbering should be alerted by the system.

Automatic detection and alerting the user decreases the quality of legislative text. Besides quality, acceptability of legislative text decreases. A public reader doesn't get the idea that there are mistakes that were visible for the editor include.

References

Using references is a way to ensure the connection between different texts. Using reference should be two-way. Create a reference to another text means that the edited text points to the referenced text, and that the referenced text now is connected to the edited document.

If a part of a document changes, the system should alert about the link between the different documents. Thus, the impact of changes in legislative text is visible, and the user can criticize the impact and take care of this.

A reference system is positive for the quality of legislative text in general, not only for the edited text. Connections between laws are visible and because of that, it is easier to accomplish consistency between laws.

Workflow

Facilitating a workflow means that there is taken care of the next elements of the workflow

- Version management. It should be possible to view all version of a text. This means that there is version management, that manages the different version and asked, by saving if a document is a new version, or replaces an existing one
- Status. It has to be possible to give a document a status and change this status. Together with the status, there can be an authorisation structure. When in a certain status, a document can be changed or a read-only version is available and which specific author is allowed to edit the text.
- Process related. The workflow should follow the process of legislative text writing and consolidation.

Before implementation of a working environment there should be a complete working environment. If comparing the different editors, you see that some differences are visible, but together the working environment is quite complete. One example: where in the Dutch site there is a focus on development of the templates, the Italian development focused on references and cross referencing.

5.2 Future activities

Future activities can focus on integration of the different editors in the existing environments and with each other. Using XML gives good opportunities to create this integration. During the interviews with the different users a few good examples came up for integration and future development.

The reference structure will be a good step forward to ensure the quality of legislative text with existing and new legislative text. A requirement for a reference structure is the parsing of existing text into the XML format.



XML should be a format, that's not visible for the user. Using an editor, the user is excepting edit functionalities like he or she is used to. A WYSIWYG interface, together with the edit functionalities is a good step forward. This interface is the skill of the XML structure. Like mentioned, a XML environment should be more sustainable than text editors like Word.

International Workflow

Workflow is not an item, which can be installed and will work. Workflow follows the process that is used during legislative text writing. During SEAL it is found out that law making can be categorised like quiet complex. A lot of parties are involved and activities, which are part of the process, not always are in a sequent order.

With regard to the workflow, there can be two different a pproaches:

1. Maintain the existing process. Each country has his own way of creating laws and different parties are involved. If the existing process is used each workflow system will be country specific.
2. Create a new process. Because each country has his own historically/juridical grown process it looks impossible to create a new process that is used in each country. On European level, it should be possible to create some synergy, by creating a process for European legislative text writing. This general process should be connected to the national processes somewhere. This connection point is very import to ensure quality and coordination between the different countries.

Looking back at the pilot phase, it is clear that a well defined process of legislative text writing is necessary on national level. Like in the Italian case, the complexity of the existing process, makes it difficult to develop an ICT editor, fully process compliant. A step forward is made in inventorying the existing processes on national level.

Implementing working environments

Implementation of software is not only a technical activity. The user of the environment is the one that determines if the product is successful. He is the one that uses or abuses a technical environment. Technical, the quality can be assured, but if the user, for any reason, doesn't use it as intended to do, quality will be poor.

During SEAL the users were part of the team. Using Rapid Application Development has the advantage that the user involved in the development process of the editors, which increases the acceptance of the editor.

The enthusiasm of the testers in SEAL is an example of a positive attitude towards the development and the editor that is tested.

Of course, Rapid Application Development can cause tension between development and user, because it may appear as if the user/tester is pulling the project. By gathering requirements at the start of development, the scope of the project is set. Keeping these requirements as guidelines a possible gap between development and user can be closed.

During implementation it is necessary to reserve time and capacity for a well training scheme. This investment will pay off when the user accepts to use the new editor as designed. This environment is not only ICT related, but also considers the process of legislative text writing.

Looking back at the Requirements (Appendix C), in SEAL there is a lot of work done. But there are some point that needs some attention before a working environment



(on national level) is finished. Besides this point, integration in existing systems is necessary. During SEAL this was out of scope of the project.

Some points of attention are:

Basic GUI

There is some need for extra modules, which support the legislative text writing process, like a fully functional publication module and the integration with existing systems. In the requirements, using multimedia was a requirement. During SEAL there was no real need visible for this function. Also testers didn't mention this. In a future stage this can be added when necessary.

Editing functionality

Like is mentioned before, the need and importance of templates is visible. There is some further development needed before this is implemented. Creating more templates can be an incremental process. When looking to an international environment the use of multiple languages is a point of attention.

Technical requirements

Before implementing a working environment, the technical requirements should be reconsidered, especially the storage component and the integration with existing systems and security. The requirements in this section are leading in technical implementation.

Looking back at the requirements concludes the recommendations for implementation. As said the user is the one determining the success of implementation. It is important to keep the user involved during further development and implementation.



6 Final Thoughts

Drafting legislative text and the process to create a law is an area where a lot of research is done. Looking at developments in the European Union, the need for research on this area will stay for some more time.

These test results, as well as positive reactions, have stimulated the stakeholders to further exploit the possibilities of legislative drafting support. This has already resulted in the start of new projects addressing these issues as well as national and international cooperation.

Verwijderd: h

The work with partners in this project and other projects like DALOS will be continued after this project. The eParticipation program has enabled us to create a platform for international cooperation and legislative text writing; This will undoubtedly lead to changes in working processes, also enhancing possibilities for extending deliberation with stakeholders involved. This way the quality of the legal processes and their products will be upgraded.

The SEAL project has shown that there is a need for support in legislative text drafting by technology. Besides showing the need, SEAL shows that it is possible to support legislative text drafting by technology.

In SEAL the work of three different countries is used. Each country has his own specific challenges and because of that has to create its own solutions. Bringing these solutions together creates synergy.

Currently, the partners in this project are further developing their tools in the respective national settings. The partners have decided to continue to cooperate in the future and thus allowing the public to benefit of the advantages of a more open, efficient and qualitative improved legislative and deliberation process.



Appendix A: Evaluation Form

Society

Efficiency²of legislative text?

Effectiveness³of legislative text?

Insight in the negative side effects of legislative text?

Consistency in legislative text?

Clarity in legislative text?

Acceptability of legislative text?

Legitimacy of legislative text?

Feasibility and manageability of legislative text?

Simplicity of legislative text?

Social and political feasibility of legislative text?

How do you consider the level of accessibility of legislative text using the new application?

How do you consider the level of transparency in the legislation processes, using the new application?

Organisational

How do you consider the level of operability between applications using the new application?

How do you consider the level of operability between different organisations and body using the new application?

How do you consider the level of control of the workflow using the new application?

How do you consider the level of compliance to organisational standards using the new application?

How do you consider the level of efficiency and effectiveness using the new application?

How do you consider the level of costs using the new applications

User

How do you consider the level of writing speed using the new application?

How do you consider the level of interaction with other users using the new application?

How do you consider the level of interaction speed with other users using the new application?

How do you consider the level of accuracy using the new application?

How difficult is it using the new application, in your opinion, to comply with organisational standards?

How difficult is it using the new application in your opinion, to organize legislative text?

How do you consider the level of quality in legislative texts using the new application?

How difficult is it using the new application, in your opinion, to comply with organisational standards?

² Definition of efficiency: Measure of actual output over effective capacity or the ratio of output to input

³ Definition of effectiveness: Ability to achieve stated goals or objectives, judged in terms of both output and impact



Appendix B Quantitative result Initial Success criteria

Society	Before SEAL			Average Score
	D1	D2	I	
Efficiency ⁴ of legislative text?	1	2		1,5
Effectiveness ⁵ of legislative text?	1	2		1,5
The negative side effects of legislative text?	1			1,0
Consistency in legislative text?	3	1		2,0
Clarity in legislative text?	1	1		1,0
Acceptability of legislative text?	1			1,0
Legitimacy of legislative text?	1			1,0
Feasibility and manageability of legislative text?	1			1,0
Simplicity of legislative text?	1			1,0
Social and political feasibility of legislative text?	1			1,0
How do you consider the level of accessibility of legislative text now, before the SEAL project?		1	2	1,5
How do you consider the level of transparency in the legislation processes, before the SEAL project?		3	1	2,0
Organisation				
How do you consider the level of operability between applications now?	1	2	2	1,7
How do you consider the level of operability between different organisations and body now?	4	2	3	3,0
How do you consider the level of control of the workflow now?	2	5	1	2,7
How do you consider the level of compliance to organisational standards now?	1	1	1	1,0
How do you consider the level of efficiency and effectiveness now?	1	1	1	1,0
How do you consider the level of costs now?	2	3	3	2,7
User				
How do you consider the level of writing speed now?	2	1		1,5
How do you consider the level of interaction with other users now?	2	3		2,5
How do you consider the level of interaction speed with other users now?	1	2	2	1,7
How do you consider the level of accuracy now?	5	2	1	2,7
How difficult is it now, in your opinion, to comply with organisational standards?	2	1	2	1,7
How difficult is it now, in your opinion, to organize legislative text?	2	1		1,5
How do you consider the level of quality in legislative texts now?	2	1	3	2,0

⁴ Definition of efficiency: Measure of actual output over effective capacity or the ratio of output to input

⁵ Definition of effectiveness: Ability to achieve stated goals or objectives, judged in terms of both output and impact

Appendix C Requirements overview

Basic GUI

- WYSIWYG interface
- Document structure pane
- Annexes
- Multimedia
- Document attributes

Editing functionality

- General editing features
- Templates
- References
- Multiple languages
- Creating Amendments and Consolidations
- Added functionality

Document format

- Multiple XML-Schemas or DTDs
- Formatting
- Export functions
- Impact analysis

Technical requirements

- Storage
- Manage content
- Version Storage
- Security
- Integration
- Workflow -and groupware facilities
- Support
- Search mechanism

