WIKIWIJS PROGRAM PLAN

2011 – 2013

Version 1.0
15 August 2011

OPEN EDUCATIONAL RESOURCES VIA WIKIWIJS IN A SUSTAINABLE PERSPECTIVE

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2. INTRODUCTION

GOAL OF THIS PROGRAM PLAN

This program plan is the continuation of the 2009-2011 Wikiwijs program plan, which was commissioned by the Netherlands Ministry of Education, Culture and Science in 2009 and conducted by the Open Universiteit (Open University) in the Netherlands and Stichting Kennisnet (knowledge centre for IT in education). The first program was initiated based on a 2008 recommendation by the Education Council of the Netherlands to make greater use of open educational resources.[1] The program was initiated in 2009 and in December of that year a test version of Wikiwijs was launched in the presence of Ronald Plasterk who was the Minister of Education, Culture and Science at that time.

Following the initial program, the Netherlands Council of Ministers approved a new grant for Wikiwijs in April 2010. The new funds cover the period 2011-2013. It was agreed that the Ministry of Education, Culture and Science would continue to act as the program's commissioner. This program plan will serve as a basis for decisions relating to the financing and accountability of this program.

This plan opens with a description of the current Wikiwijs situation and the teaching experiences gained. The multi-year objectives are then formulated based on the vision for Wikiwijs in its final stage in 2013.The plan also identifies obstacles and shortcoming that need to be addressed in order to achieve these objectives. An objectives tree is then introduced to establish the relationship between the individual objectives. They are also assigned Key Performance Indicators (KPIs). The plan then addresses the question of how these objectives will be met by discussing its strategies and basic principles. Finally, the program organization, budget, scheduling and audit cycles are outlined.

An annual plan will be drawn up yearly based on this program plan, incorporating input from various stakeholders. The annual plan will subsequently be adjusted in consultation with the program principal and form part of the audit cycle that has been developed together with the program principal.

STRATEGIC CONTEXT

Wikiwijs is not a goal unto itself. It is a tool with which to promote the development and use of open educational resources and, in doing so, to improve the quality of teaching. Wikiwijs will be a central platform for teachers in the Netherlands, from primary to university education, where they can find, use and adapt Open Educational Resources (OER). Here, teachers can develop their own educational resources, store them and share them with colleagues. They will also be able to combine open educational resources with 'closed' educational resources (no free access). It is a tool which offers teachers greater freedom in using educational resources as they see fit and which will contribute to enhancing the status and professionalism of teachers.

INTENDED EFFECTS ON SOCIETY

TEACHING QUALITY

Research shows that Information Technology (IT) helps improve the quality of teaching and can result in higher productivity when used correctly. IT makes it possible to respond appropriately and effectively to the needs and talents of individuals and to factor in the diversity of pupils, students and teachers.

The availability and user-friendliness of open educational resources is an important precondition in this regard. This has been one of the main stumbling blocks for teachers for many years. Wikiwijs is a tool which results in the improved availability of high-quality open educational resources, since teachers are involved in the use and reuse, assessment and development of new or current resources. This process means that they can share their expertise on a much larger scale and much more easily than ever before.

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[1] Advies onderwijsraad Onderwijs en Open Leermiddelen 2008 (Recommendation on education and open learning resources 2008)

Wikiwijs also contributes to the professionalism of teachers and to enhancing the status of the profession. It enables teachers to work together to develop educational resources, each on the basis of their own strengths. This gives teachers new opportunities for becoming involved in the material that they teach and for raising their level of professionalism.

From their place of work or home, teachers can join a field-specific knowledge community where they can stay up to date on the latest developments. Taking advantage of the latest insight, teachers can jointly develop and/or organize new (or updated) OER.

These cooperative efforts are not limited to a single field of teaching, but can also take place on an intra curricular basis (e.g. between secondary and higher education), which can be a real benefit to quality, both with regard to the educational resources and to the transitions between educational sectors.

IMPROVING EFFICIENCY

Combining IT and educational resources in the form of OER can bring about greater efficiency. Time can be saved if OER are easily available. This is due firstly to being able to find the available resources more quickly and easily. Secondly, it is because teachers can make use of resources produced by others when preparing their lessons and lectures. They therefore do not need to start from scratch. If institutions make greater use of OER, they will save money, which will pave the way for investment in innovation. Moreover, an improved range of OER can also have consequences for the price of commercial alternatives. Achieving greater efficiency depends on the availability and ease of access to relevant and usable educational resources.

Indirectly, a central repository for OER will contribute to the labour productivity of all workers in the Netherlands, due to the improved quality of teaching, both as a preparation for the labour market and for in-company training and refresher courses. A repository like this will also be a real benefit to the vision on permanent education. The availability of OER allows workers and job-seekers to maintain and expand their professional expertise, both inside and outside the formal educational sector. This effect has been examined in more detail in the MKBA survey, which was conducted by research agency RIGO as part of the 2010 grant application.[2]

IMPROVING SERVICES

Using IT makes it possible to structure teaching more flexibly and individually to improve learning quality. A sufficient quantity of OER must be available, of course. As shown in the 'Vier in Balans Monitor' (Four in balance monitor) (Kennisnet, 2009[3] and 2010[4]), the availability of usable OER is one of the obstacles to achieving effective IT use. With respect to availability, it is important that (1) *sufficient* resources are made available and (2) that users can find the *correct* resources.

Research is an important Wikiwijs component. Research results are used to optimize the use of Wikiwijs and OER.

Wikiwijs aims to help solve a number of social issues. The ultimate effects of Wikiwijs are not easy to gauge. This is why it is important to make use of various data on accountability and program management. These relate to the social effects, assessment by users and partners and the direct results.

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[2] MKBA Wikiwijs 2010 RIGO
[3] http://www.kennisnet.nl/cpb/onderzoek/docs/4IB2009_NL_def.pdf
[4] http://redactie.kennisnet.nl/attachments/session=cloud_mmbase+2243321/moni_2010.pdf

3. INITIAL SITUATION

The title of the second program plan clearly indicates that Wikiwijs is intended to initiate a development which will be continued in the years to come. For this reason, a subsidy grant application was submitted in 2010 to the then Ministry of Economic Affairs/*ICT Impuls* which has since been awarded to the Ministry of Education, Culture and Science. This provided resources to invest in the program through 2013 and beyond.

END SITUATION AFTER PREVIOUS PROGRAM PLAN

The time required to start up initiatives in the field of OER and to allow them to mature must also not be discounted. Sector organizations, educational institutions, collection managers and teachers increasingly recognize the value of developing and sharing their own educational resources, but need time to organize themselves, to overcome obstacles and to get the organization moving. Teachers also require time to acquire skills in this field. The Wikiwijs baseline measurement[5] shows that all sectors (primary/secondary/senior secondary vocational education have already been examined, higher education will follow) intend to do more with digital resources, but that many teachers feel that they lack the requisite skills. Wikiwijs makes it easier to tackle these obstacles/shortcomings, through the application of infrastructure, expertise and support.

RESULTS ACHIEVED IN 2009 - 2011

The initial phase of the program was completed at the end of February 2011. In general, it can be concluded that the following major results were achieved:

+ There is a stable, functioning repository and search portal where users search for, find, make (or organize), share and assess educational resources. Users can also provide ratings and reviews.
+ 50 collections have been made accessible on Wikiwijs through Edurep and 17 collections through Lorenet. This means a total of about one million objects.
+ A quality certification system has been developed which allows (trusted) third parties to "recommend" specific objects to their audiences. VO content and Teleblik are the first parties to make use of this.
+ Pupil vocabularies and sample arrangements for the focus subjects in primary, secondary and senior secondary vocational education are available.
+ More and more users are visiting the site, using, assessing and sharing the educational resources. The main repository had a total of 680 extra uploads in 2010. In addition there were many more uploads in associated sites (such as the Digischool Repository)
+ More and more users, both online and offline, are contributing ideas, offering criticism and suggestions or sharing knowledge with the Wikiwijs organization.
+ Various channels have been created which enable user interaction with Wikiwijs, such as the User Advice Group, the newsletter, the helpdesk, the 'Wikiwijs in teaching' weblog, Twitter and a LinkedIn group.
+ Support is provided for users and educational institutions through various means, such as a Tips tab, the helpdesk and workshops. In conjunction with Wikiwijs, the national pedagogical centres (LPCs) are developing a range of professional training courses to develop digital skills. There is a limited partnership with Leraar24 (website containing information for teachers).
+ A sizeable stakeholder management program has been established in which contact is maintained with all relevant parties at steering group and/or program level.
+ Effective partnerships have been forged with Innovatieplatform VO (IP-VO; innovation platform for secondary education), SURFfoundation, Digischool, Groene Kennis Coöperatie (innovation platform for green education and companies), Stichting Consortium Beroepsonderwijs (vocational education consortium), Stichting Leerplanontwikkeling (Netherlands institute for curriculum development) and the national pedagogical centres.
+ Research is being conducted into the context and effect of Wikiwijs; the baseline measurement has been published (for primary, secondary and senior secondary vocational education).

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[5] http://content.wikiwijs.nl/nulmetingwikiwijs2009

The following are intended results which have not yet been achieved, or only partially:

- The current quantity of educational resources in Wikiwijs is insufficient to meet the expectations of some users: some expect a wide range of high-quality material to be available for immediate download and use. Although the range available in Wikiwijs has increased (partly due to the higher number of uploads in Digischool) the process of approaching collection managers is labour-intensive and partly depends on partners such as IP-VO.
- The number of users is concentrated in certain sectors and the majority are in primary and secondary education. The number of users and rate of use in the other sectors are lagging behind. The lag in the higher education sector is due to late project initiation (September 2010) in this sector.
- Wikiwijs brand recognition is still too low.
- The number of pupil vocabularies[6] in Wikiwijs is still too limited; vocabularies are only available for language and arithmetic, and Dutch and maths. In conjunction with the Netherlands institute for curriculum development (SLO), the plan is to develop pupil vocabularies for all subjects and levels.
- Teachers are unaccustomed to using sample arrangements of learning trajectories and they are used too infrequently. This is due to the following:
  - only a few learning trajectory vocabularies are available and there are few educational resources which have been metadated with the vocabularies;
  - learning trajectory awareness is still low among teachers. Teachers also lack experience in their use;
  - the method for visualizing learning trajectories is experimental and still under development.

LESSONS LEARNED

The first Wikiwijs program resulted in a variety of lessons learned. These were evaluated and have been factored into the strategy and various activities in the program for 2011-2013. After the conclusion of the program in February 2011, the final report of the 2009-2011 program served as the framework for an extensive evaluation. The main lessons learned so far have been:

THERE ARE HUGE DIFFERENCES WITHIN THE TEACHER TARGET GROUP

There are huge differences between teachers from different sectors, but also within sectors and even within educational institutions. These involve differences in skills and policy, but also in IT facilities and the applications used. Teachers use many different applications to develop OER materials, depending on the sector and the user's level. It is risky to opt for a strategy with a single Wikiwijs authoring environment for all users. This is why Wikiwijs chose to develop a strategy which involved allowing as many applications as possible to connect to Wikiwijs, rather than integrating a single development application. In this sense, Wikiwijs provides a suite (an environment with multiple options) which links to a variety of external applications.

An option has also been developed that allows Wikiwijs to be integrated into internet browsers, intranets, websites and other applications used in education. This approach provides the smoothest possible link to the current working environment of the teacher target group.

TEACHERS' EXPECTATIONS VARY WIDELY

There are many expectations regarding Wikiwijs, some of which do not correspond to the Wikiwijs concept or its current phase of development. It is crucial that this is taken into account when it comes to communicating with users and when developing the Wikiwijs architecture.

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[6] The available vocabularies for arithmetic and language are only partly pupil vocabularies. These vocabularies can be completed in more detail once the learning trajectories have been developed further. Learning trajectories are still being studied and the discussion is ongoing.

The main misconceptions are:

    a.   Wikiwijs is a wiki application like Wikipedia;
    b.   Wikiwijs provides direct access to educational materials, instead of linking to other collections;
    c.   Wikiwijs is only for primary, secondary and senior secondary vocational education;
    d.   Wikiwijs is engaged in quality assurance;
    e.   Wikiwijs requires no experience in search strategies for creating educational resources;
    f.   Wikiwijs only provides access to ready-made lessons.

The misconceptions listed here may lead to users' negative experiences being exacerbated and their positive experiences being tempered. It should be noted that the number of negative reactions to Wikiwijs has decreased sharply since the 1.0 release in September 2010.

FEW TEACHERS ARE CURRENTLY CAPABLE OF DEVELOPING AND SHARING RESOURCES

The majority of users visit Wikiwijs to make direct use of resources. In general, about 3% of users involved in crowd-sourcing also actively contribute to the content. This means that the group of users needs to be large and that the obstacles in particular for sharing educational resources must be removed. The main obstacles are:

- unfamiliarity with the options and restrictions (copyright);
- insecurity about the quality of one's own content;
- lack of awareness of the relevance of one's own material to other teachers;
- effort required for collecting and processing meta-data.

Many teachers expect some kind of supervision and editing, which could help eliminate feelings of insecurity related to the points listed above. Wikiwijs does not assess content quality as a matter of principle. Nevertheless, we need to identify ways of removing obstacles to sharing.

PEOPLE AND ORGANIZATIONS NEED TIME TO ADAPT

Research has shown (Vier in Balans Monitor 2010) that developments relating to the use of IT (in primary, secondary and senior secondary vocational education) progress steadily, but that they also occur too slowly to satisfy the ambitions and challenges of the various sectors. We also see that the schools, colleges and universities require a great deal of time to process this new information, to gauge teaching staff response and to come to a decision. Institutional strategies with regard to open educational resources are often still quite limited. Wikiwijs can make a difference by communicating directly to the target group and by creating a network of contacts in which expertise, successes and learning experiences can be shared. Research and financial incentives can also be used to accelerate the process of strategy and policy development. The basic principle remains, however, that Wikiwijs facilitates and connects, and that it is up to the organizations themselves to determine their own policy and activities.

It is essential that we continuously reiterate what Wikiwijs is, what it is not (or not yet) and how Wikiwijs will evolve over the coming years. This is emphasized in stakeholder communications. The challenge for Wikiwijs is not to captivate the early adaptors, but chiefly to seek out and retain the early and late majority.

CONCLUSION: SITUATION AFTER THE INITIAL PROGRAM

It may be concluded that the intended measureable results and Key Performance Indicators (KPIs) have largely been achieved. There has also been an increase in the number of educational resources, users and organizations present on Wikiwijs. In short, current usage statistics indicate that Wikiwijs is off to a promising start.

However, growth remains limited and the creation of critical mass, such as the quantity of educational resources and learning trajectories, has only partly been achieved. In particular, the sharing of educational resources is still too limited. This can be established based on the fact that user numbers and usage are not exhibiting autonomous and self-perpetuating growth. There is still a high level of dependence on the initiating organizations: Kennisnet and the Open Universiteit in the Netherlands. We can also conclude that:

- there are widely varying expectations about Wikiwijs; these need to be managed;

- organizations require time to adapt. Substantial investment is therefore being made in stakeholder management in order to encourage them and to actively facilitate them in becoming involved in open educational resources;

- there are still few teachers who develop their own material and share it. This is due to a number of obstacles which need to be addressed by Wikiwijs where possible. This can be done by providing appropriate encouragement to teachers and demonstrating the added value that the Wikiwijs concept can have for them in their professional endeavours.

These obstacles are analysed further in this program plan. Please see the Multi-year objectives and Obstacle analysis sections.

INTRODUCTION

The Wikiwijs mission has been formulated for the years 2011 – 2013 based on the experience gained during the initial program period and on a revised strategy. There are two main objectives:

A.   improving access to open educational resources;
B.   making teachers better equipped to make use of open educational resources.

Following an analysis of the challenges and inventory of additional tasks, the multi-year objectives and sub-objectives for the second Wikiwijs program were drawn up. This was developed into an objectives tree, which depicts all the objectives and how they interconnect.

The annual plan is drawn up yearly on the basis of the multi-year objectives in the program. The annual plan outlines the intended results, operational conditions and potential risks. The quantitative objectives will also be revised on the basis of the results achieved. These are established in conjunction with the program principal and the major stakeholders (also see the management model). Each annual plan lists which bottlenecks have been solved and which activities are still required in order to achieve the desired results.

STRATEGY AND MISSION

Wikiwijs Strategy
Teachers in the Netherlands, from primary to university education, should have the freedom and opportunity to make use of user-friendly open (and closed) educational resources in their teaching activities as they see fit. To this end, all teachers should have access to a central platform where they can find, use and adapt digital educational resources. Here, teachers can develop, store and share their own educational resources with colleagues, but also combine open educational resources with closed educational resources. The central platform will stimulate the development of open educational resources and contribute to improving the status and professionalism of teachers. This will enhance quality, improve efficiency and contribute to the accessibility as well as boost innovation in teaching.

Wikiwijs 2011-2013 mission
As a platform, Wikiwijs needs to evolve in such a way over the coming years that it becomes and remains the logical central location for users and new or current partners to search for, share, adapt, develop and arrange open educational resources. Users can link the resources available in Wikiwijs to closed (paid) educational resources.
As an organization, Wikiwijs will focus on improving opportunities for teachers to use open educational resources. Major challenges in this regard include the status of teachers, the flexibility of educational institutions and the user-friendliness of the technical solutions. Also, the added value of the use of open educational resources must be made explicit. The aim is for Wikiwijs to be so firmly established by the end of 2013 that the continuity of the platform is guaranteed without additional grant money.

ANALYSIS OF CHALLENGES TO USING OPEN EDUCATIONAL RESOURCES (OER)

The results from the initial program show that there are still obstacles to using open educational resources. These obstacles will be addressed in the second phase of the program. The obstacles are listed below. These will be developed in more detail in consultation with the stakeholders as the plan is implemented.

The main obstacles are:

1. the quantity of available OER;
2. the usability of the OER;
3. the dependence on content owners in assigning meta-data, linking collections etc.;
4. teachers' (and school management's) skill in using open educational resources;
5. teachers' (and school management's) willingness to use open educational resources.

The obstacles are explained in more detail below.

1.   THE QUANTITY OF AVAILABLE OPEN EDUCATIONAL RESOURCES

The quantity of available open educational resources depends on the willingness and opportunities available to share educational resources. Many educational resources are developed and used within teachers' own working environments and are not made available to others outside their own organization. This may be for a number of reasons: teachers generally do not hold copyright; the Wikiwijs licence type, which in a number of cases does not match the required type or a licence type that is already in use; the threat of free-riding by other institutions; the laborious application of metadata (also see obstacle 3); and the lack of a strategy and/or policy at the educational institution with respect to open educational resources. One consequence is that a major proportion of educational resources which are publicly funded are only publicly accessible to a limited degree.

2.   THE USABILITY OF THE OPEN EDUCATIONAL RESOURCES

The usability of open educational resources remains limited, for instance due to insight into the quality and/or context of use. Research by the Netherlands institute for curriculum development (SLO[7]) shows that 90% of teachers in primary and secondary education make use of method-based teaching. The teacher's need for additional educational resources is quality-driven, which means that (especially with respect to educational resources from other teachers/educational institutes) there is a need for quality assurance. The quality of educational resources must therefore be made more explicit and it must become easier to distinguish between relevant (good) and irrelevant (poor) educational resources. Each situation is different, of course, and the specific context must therefore always be taken into consideration. There are already measures in place (such as quality control system), but their impact is limited for now. This will be expanded over the next few years.

Another aspect is that there is insufficient insight into the extent to which the available educational resources are appropriate for the lessons/curriculum. As a result, it is difficult to gain insight into the usability of the educational resources both at teacher and organization/sector levels. This means that it is difficult to gauge the availability of educational resources for specific curriculum components and to identify where further development is required. Removing this obstacle is a precondition for the wide-scale management of educational resources (e.g. at sector level).

Finally, a frequent complaint is that the collections are difficult or impossible to use since they are equipped with unique log-in procedures. Users consequently give up too easily due to the extra time or effort required. Elimination of these obstacles would greatly improve the user-friendliness of Wikiwijs; however, this requires the cooperation of the content owners in question.

3.   DEPENDENCE ON CONTENT OWNERS

Content owners (teachers, educational institutions, publishers and expertise centres) are an essential factor in making educational resources more accessible. In their capacity as owners, the content owners are responsible for making content accessible and easy to find in Wikiwijs. The Achilles heel for the usability of the educational resources is correct and complete collection of metadata. In many cases, the quality of the metadata leaves a lot to be desired and the available content is difficult to find, resulting in limited use. It also involves activities such as linking to Edurep, implementing new standards (also essential for use of content in learning trajectories), eliminating log-in obstacles and opting for an open licence as needed so that collections can be changed. These efforts are sometimes contrary to the internal interests of the organizations involved. As a result, there may be a lack of time, priority or resources for implementing them. In some cases, Wikiwijs can make a certain amount of resources available (in the form of advice and support or budget). The sheer number of collections is too high, however, to expect Wikiwijs to assume central responsibility for these tasks and resource. Moreover, it is in everyone's best interest that the collections retain their independence.

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[7] http://www.slo.nl/leermiddelenmonitor

4. THE TEACHERS' SKILLS

Teachers' skills (both digital and otherwise) are an obstacle to the further growth of open educational resources. In particular, their search skills are underdeveloped, as are their skills for using, reusing and organizing materials found in collections. There is also hesitation or insecurity about using open educational resources. This impression is confirmed by the 'Vier in Balans Monitor 2010'[8]. One major point here is that the professionalism of teachers can only be influenced by Wikiwijs to a limited extent given the scope of the chain involved: the Coöperatie Leraren (teachers association, formerly SBL), employer and employee organizations, teacher training courses, national pedagogical centres and the government are involved as actors.

5. THE WILLINGNESS OF TEACHERS AND EDUCATIONAL INSTITUTIONS

Teachers (and school management) are often willing to use open educational resources, as demonstrated by the Wikiwijs baseline measurement for primary, secondary and senior secondary vocational education. However, they often feel resistance when it comes to actually using them. In addition to the obstacles described above, such as the requisite professionalism, they also feel that using OER will increase their workload. This is related to the perceived workload that has been identified in many sectors of teaching. This was also identified as a major obstacle in the Wikiwijs User Advice Group. Further investigation is therefore needed into the impact of working with OER and the conditions for a net time savings (or cost).

Teachers see their working environment, i.e. the school, colleagues and management, as a major reason for using OER. One of the recommendations of the Wikiwijs baseline measurement is to encourage peer pressure among teachers to start using these resources. This can only be achieved if the educational institutions have developed and implemented a clear strategy and policy in this regard.

Educational institutions are also using OER to a limited extent, and in many cases there are few policy and structural measures in place. There are too many uncertainties in this field, in spite of the recognition that OER are a major development. There are a number of frontrunners in higher education (TU Delft, Open Universiteit in the Netherlands) which already have several years of experience using open educational resources and there is now a large group of institutions that has definitive plans or serious interest in this topic.

The obstacles discussed above are chiefly related to the primary, secondary and senior secondary vocational education sectors. The higher professional and university education sectors have only been connected to Wikiwijs and included in surveys since the fourth quarter of 2010.

ADDITIONAL TASKS ARISING FROM THE MISSION

In addition to resolving the identified obstacles, the Wikiwijs mission for the years 2011-2013 and current developments also give rise to the following tasks:

1. continuity of the platform after 2013;
2. linking up with other Dutch initiatives with respect to open educational resources in the field;
3. joining forces and synergy.

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[8] Vier in balans monitor 2010

Wikiwijs Program 2011-2013   Open educational resources via Wikiwijs in a sustainable perspective

The tasks are explained briefly below.

1. CONTINUITY OF THE PLATFORM AFTER 2013

The grant for this program plan runs until the end of 2013. It must then be clear how the continuity of Wikiwijs as a platform will be guaranteed, taking into account the basic principle that no additional grant money will be needed. During the course of the program, it is important to explore future scenarios for Wikiwijs in close consultation with all stakeholders. A choice needs to be made long before the end of 2013 to ensure that there is sufficient capacity in 2013 for working on guaranteeing the continuity of Wikiwijs.

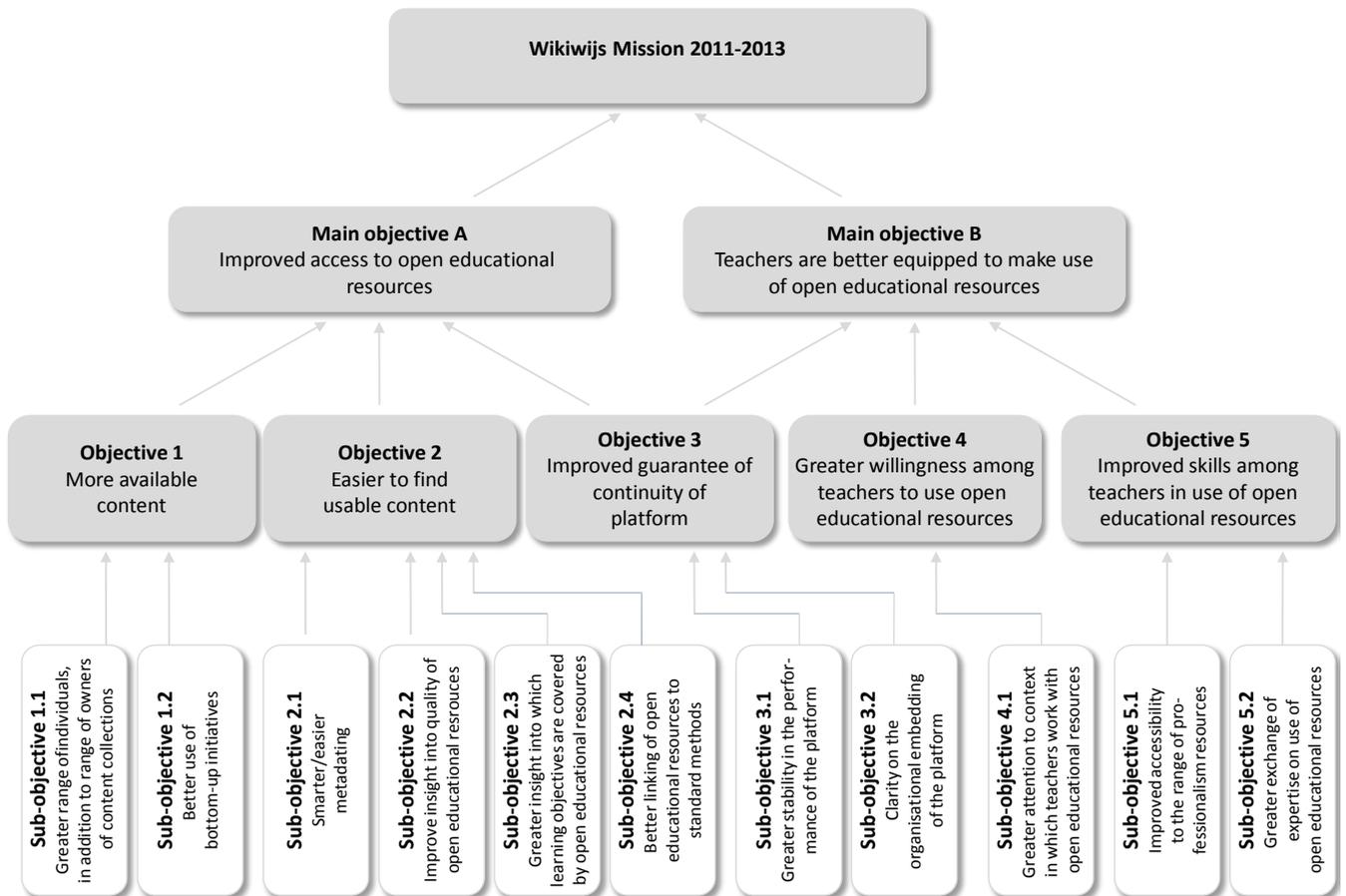### 2. LINKING UP WITH INITIATIVES IN THE FIELD

There are not only obstacles, but there are also initiatives taking place in education in which teachers are using open educational resources with a great deal of enthusiasm. Examples include Digischool, Groen Gelinkt and VO-content. Wikiwijs can cooperate with these initiatives and ensure that the scope of their open educational resources is as wide as possible.

3. JOINING FORCES AND SYNERGY

The Wikiwijs mission has certain things in common with the missions of other current programs and other platforms relating to educational resources. Wherever possible, the idea is for Wikiwijs join forces and avoid overlap. An example here is a survey by SLO and Wikiwijs on the opportunities for integrating the Wikiwijs and Leermiddelenplein (learning resources square) platforms.

OBJECTIVES TREE

The objectives for 2011 – 2013 have been formulated on the basis of the obstacles and the additional tasks for the Wikiwijs program, as an extension of the strategy and mission. The objectives form the basis for the activities and further elaboration of the program. The objectives tree diagram below depicts the interconnecting relationships. The objectives that are measurable via a Key Performance Indicator (KPI) are also indicated. These KPIs are explained in more detail in the Qualitative objectives in 2011 section.

Wikiwijs Mission 2011-2013

Main objective A
Improved access to open educational resources

Main objective B
Teachers are better equipped to make use of open educational resources

Objective 1
More available content

Objective 2
Easier to find usable content

Objective 3
Improved guarantee of continuity of platform

Objective 4
Greater willingness among teachers to use open educational resources

Objective 5
Improved skills among teachers in use of open educational resources

Sub-objective 1.1
Greater range of individuals, in addition to range of owners of content collections

Sub-objective 1.2
Better use of bottom-up initiatives

Sub-objective 2.1
Smarter/easier metadating

Sub-objective 2.2
Improve insight into quality of open educational resrouces

Sub-objective 2.3
Greater insight into which learning objectives are covered by open educational resources

Sub-objective 2.4
Better linking of open educational resources to standard methods

Sub-objective 3.1
Greater stability in the performance of the platform

Sub-objective 3.2
Clarity on the organisational embedding of the platform

Sub-objective 4.1
Greater attention to context in which teachers work with open educational resources

Sub-objective 5.1
Improved accessibility to the range of professionalism resources

Sub-objective 5.2
Greater exchange of expertise on use of open educational resources

TARGET GROUPS AND POSITIONING

The primary target group of Wikiwijs is made up of teachers from all levels of education. Educational institutions are major actors in this respect; after all, schools are the working environment for teachers. School policy, IT facilities and the support provided to teachers also largely determine the extent to which (and how) the educational process is shaped. School managements and institutional boards, as well as course developers and IT & Government employees are therefore secondary target groups.

Pupils and students are also viewed as a secondary target group. They can provide extra leverage for the use of OER if they make their need for IT known to their teachers and/or institution. Requirements regarding open educational resources will be discussed with pupil and student organizations.

Based on the Wikiwijs program's five objectives, the target groups are as follows (not exhaustive):

Objective	Target group
1. More available content	Content owners, teachers who develop resources, professional developers, publishers
2. Easier-to-find usable content	Content: teachers, pupils, mark of quality groups, sector organizations Technical: software developers, hardware suppliers
3. Improved guarantee of continuity of platform	Sector organizations, publishers, Kennisnet/Open Universiteit
4. Greater willingness among teachers to use OER	Teachers, expertise centres, communities
5. Greater skills among teachers in use of OER	Teachers, national pedagogical centres, teacher training courses

In terms of target group, the focus of the first phase of the Wikiwijs program was on the early adopters. In the current program, the ambition is to expand this focus to include the early and late majority.

Wikiwijs is aimed at the entire educational spectrum. In addition to providing a website which gives access to open educational resources, functionality and support, Wikiwijs is also a platform where other organizations and platforms (such as Electronic Learning Environments) can join forces and thereby contribute to the use of open educational resources. This specific part of the strategy is also mentioned in the Strategies section.

When it comes to publicity, we must also consider the fact that the availability of resources (also see obstacles) is currently far from ideal. We also need to make clear that teachers will need some experience and/or practice using Wikiwijs before it can be used effectively. This cannot be emphasized enough, because we want to avoid disappointment due to high expectations that the actual user experience cannot hope to satisfy.

LINKING TO THE MINISTRY OF EDUCATION'S POLICY OBJECTIVES

The objectives of Wikiwijs link up with a number of major policy objectives of the Ministry of Education. These links are generally implicit, yet occasionally explicit. There will be regular discussions on the synergy between the Wikiwijs objectives and those of the Ministry of Education, primarily the ministry's Knowledge directorate.

- **Status of teachers.** With a view to making the teaching profession more attractive, the Dutch government has introduced the 'Leerkracht van Nederland (Teacher of the Netherlands)' action plan. The ambition of Wikiwijs matches the ambition of the action plan to enable teachers to exert greater influence on the content of their lessons, to develop, add to and/or correct their own lesson resources. Wikiwijs will also work on the professionalism agenda together with Coöperatie Leraren.
- **Language and arithmetic/mathematics.** Guidelines have been developed with a view to improving the performance of pupils in language and arithmetic/mathematics. These guidelines describe what pupils should be able to do and know at specific times throughout their school careers. These guidelines are known as reference levels. The learning trajectories which Wikiwijs is developing together with the Netherlands institute for curriculum development (SLO) have already been adjusted to match these reference levels. Wikiwijs can also play a major part in making educational resources more accessible as further support for this policy. For instance, in 2011 Wikiwijs will open up educational resources for the *Steunpunt taal en rekenen mbo* (senior secondary vocational education language and arithmetic/mathematics support desk). Wikiwijs is also a useful tool that can be used in other sectors for opening up and disseminating educational resources and learning trajectories.
- **Excellence objectives**. Wikiwijs can play a major part in stimulating the development of talent. After all, the provision of tailor-made teaching creates the need for more and different educational resources. Excellence education is relevant in all educational sectors and has a cross-sector aspect which matches the structure of Wikiwijs. For example, lesson resources for higher education can also easily be found and used for senior general secondary and pre-university education. Research will also be conducted into ways in which Wikiwijs can respond even better to the excellence objectives in higher education.

- **Back to basics.** The Dutch government's ambition is to belong to the top-5 strongest knowledge economies. This requires getting the best out of pupils and students. The '*Beter Presteren* (Better performance)' action plan will be used in secondary education to emphasize subjects which determine success in further education and on the labour market. More emphasis on key subjects simply means more teaching hours for Dutch, English and maths. This corresponds to the points mentioned above.
- **Establishing a profile and cooperation in higher education**. The Commissie Toekomstbestendig Hoger Onderwijs Stelsel (future-proof higher education system committee) recommends the introduction of greater variety in the system. In doing so, universities and universities of applied sciences must raise their profiles by making pertinent decisions on what type of institution they want to be and which target groups they wish to serve. Cooperation between institutions from different educational sectors, is also a major factor in this context[9].

Not only does Wikiwijs correspond to the policy objectives of the Ministry of Education, there are also various Wikiwijs topics in which the government can play a part, in particular the Ministry of Education. These include:

- **Raising teachers' professional profile**. This is a major condition for the use of open educational resources. The extent to which teachers are capable (and believe themselves to be capable) of using these resources correctly and benefiting from them is still too low. Since many parties are involved in this theme (teachers, teacher training courses, Association for the Professional Qualities of Teachers (SBL), Ruud de Moor Centre) which are directly or indirectly related (financially) to the government, it is essential that the government intervenes where necessary to establish new parameters. One of the main developments here is the Professions in Education Act, which requires teachers to continue acquiring skills, including digital competences. For higher education, the framework for professionalism is the Basic Teaching Qualification contract, which contains agreements skills development for teachers.
- **Copyright**. Wikiwijs focuses on teachers developing and reusing OER. However, the copyright on educational resources, including those developed by teachers, is almost always held by the educational institution. Although the Collective Labour Agreements allow for deviation from this rule, in practice few institutions are prepared and/or able to share their content with other educational institutions. One of the measures which the government needs to introduce is to include mandatory open licences on educational resources which have been created thanks to government funding[10]. It would also be helpful to conduct research into the mechanisms that cause people not to share open educational resources.

These and other topics are included on the agenda of the regular meetings between the Wikiwijs steering group and the Ministry of Education.

QUANTITATIVE OBJECTIVES

KEY PERFORMANCE INDICATORS (KPIS)

In the Wikiwijs strategy, in addition to the website other platforms, communities and channels relating to OER play an essential part in the roll-out strategy (see also Roll-out strategies). This strategy was not covered by the structure of KPIs in the initial Wikiwijs program, which assumed a single platform strategy. For this reason, both the KPIs and their target values have been tightened.

The impact of Wikiwijs can best be obtained by measuring the use of Wikiwijs and how it is assessed by users. The KPIs for downloads, uploads, assessment and the number of assessments are essential indicators for the impact of Wikiwijs. The KPIs which focus on the number of platform hits only partly influence the impact of Wikiwijs. The assessment of professionalism resources is also a subordinate performance indicator (PI), as many of the professionalism activities occur outside Wikiwijs and the KPI therefore only has limited significance.

Incidentally, within this framework, in addition to assessment another relevant aspect is which resources are stored under favourites or sent on to colleagues. For the time being, this is not being used in the Assessment KPI, but is being used internally to determine the relevance of the resources.

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[9] http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2010/04/13/advies-van-de-commissie-toekomstbestendig-hoger-onderwi.html

[10] One area for attention is the use of publicly-financed learning resources by private institutions and the question of whether this is a case of indirect subsidization.

Over 2010, the KPIs for downloads, uploads and assessment were as follows:

KPI objectives	Q1	Q2	Q3	Q4	Total 2010	Target for 2010
Hits	35,493	31,580	68,292	86,846	222,211	150,000
Downloads	7,387	7,951	16,315	108,695	140,348	15,000
Uploads (1%)	45	74	81	488	688	1,500
Assessment of educational resources	7	8	8	7	8	7
Number of assessments (1.5%)	81	140	191	239	651	1,500

It is noticeable in the results achieved in 2010 that the number of uploads lagged behind the target. There are various reasons for this, such as the labour-intensive process of metadating, copyright and informing teachers of the options provided by Digischool. Please also see the described bottleneck. We also see that the number of downloads grew sharply, to far above the target. This is chiefly due to the more intensive use of Wikiwijs following its integration with the Green Content Corner (intended for the agricultural educational sector). Incidentally, the latter had no impact on the number of hits, as the integration occurred at the back end. In future, other parties, for instance Electronic Learning Environments, could also be linked to Wikiwijs in a similar manner. Partly due to the structure, the KPIs which measure the use of Wikiwijs (downloads/uploads) are more relevant than the KPI for hits. After all, it is no longer necessary to visit wikiwijs.nl to use Wikiwijs materials.

The objectives from the subsidy proposal were initially drawn up for the period up to and including 2015. These have since been translated into annual objectives up to and including 2013. Here, exponential growth in use is assumed of over 60% per year. In view of our experiences so far, in which there is as yet no autonomous growth, it is logical to focus the objectives of Wikiwijs on the end objective rather than forecasting linear growth. The targets for downloads and uploads and assessments have been rounded up to the nearest thousand.

The quantitative objectives for the KPIs for the period 2011-2013 are as follows:

KPI objectives	2011	2012	2013
Downloads	225,000	359,000	575,000
Uploads	1,300	2,000	3,200
Assessment of educational resources	7	7	7
Number of assessments	1,000	1,600	2,500

As results can deviate up or down, the quantitative objectives are set on an annual basis. Each year, which objectives are feasible and desirable are established in conjunction with the program's commissioner using the end objectives as a starting point.

The target for downloads is based on the desired growth of 60%. This is a common growth percentage target for new websites. A lower growth percentage means that growth is too low for the website to be of any significance. The objectives for the number of uploads (1%) and assessments (1.5%) are derived from the number of hits. This results in growth of over 60%, the feasibility of which has not yet been established.

The target for the average assessment of the educational resources has been set at 7, as the basic principle is that the quantity of available educational resources in Wikiwijs and the number of assessments of the educational resources is growing.

Experience has so far shown that at Wikiwijs, but also on comparable websites, results vary widely from month to month and even from quarter to quarter, influenced by the holiday periods in particular and the start of the lesson/lecture cycle. The annual objectives are therefore not translated into monthly objectives. The cumulative results achieved for each month and quarter are examined to check whether the annual objective is being met and, if necessary, so that additional measures can be taken.

The key figures for 2005-2009 (source: Ministry of Education, Culture and Science) give the number of teachers in the Netherlands for each educational sector. In 2011, on the basis of these key figures, the number of teachers is expected to be about 330,000.

Development of the number of teachers per educational sector (fte x 1,000)

	2005	2006	2007	2008	2009
Primary Education	130.5	131.5	132.0	133.7	135.7
Secondary Education	82.8	84.4	85.8	86.2	88.0
vocational training and adult education	36.5	37.1	38.5	38.3	38.6
higher professional education	24.5	25.6	27.4	28.6	--
university education	36.9	36.6	36.9	37.7	--
Total	311.2	315.2	320.6	324.5	

Source: Ministry of Education, Culture and Science, "Kerncijfers 2006-2009"

Wikiwijs research into OER shows that across all the educational sectors about 20% of teachers use Wikiwijs to search for OER. If this percentage is applied to the key figures for 2005-2009, this translates into about 65,000 teachers. Teachers in primary and preparatory secondary vocational education make above-average use of Wikiwijs and teachers in the other sectors below average.

Research also shows that about half of teachers occasionally make their own OER. This therefore involves about 165,000 teachers. This occurs on a higher than average basis among teachers in higher professional and senior general secondary/pre-university education, in primary education this is below average. When the crowd-sourcing percentage of 3% is placed against this, the potential number of uploaders is about 5,000 teachers. This maximum could rise if more teachers start to develop their own resources.

The Digischool Foundation has been active in OER for 15 years in close conjunction with teachers in primary and secondary education. With the aid of active communities, Digischool provides teachers with a user-friendly environment to discuss and share OER.

A few Digischool indicators over 2010 and 2011 are listed below.

Key figures OER Digischool	% growth in 2010	Number 2010	% growth in 2011	Target 2011
Downloads Primary Education	20%	2,157,947	10%	2,300,000
Uploads Primary Education	15%	1,758	15%	2,020
Downloads Secondary Education	20%	498,093	15%	570,000
Uploads Secondary Education	15%	1,532	15%	1,760

Source: Digischool

The Digischool Foundation focuses solely on teachers in primary and secondary education. As of 2011, this involves about 140,000 and 90,000 teachers respectively. The number of downloads per primary school teacher is 16.4 and per secondary school teacher 6.3. Assuming the use among primary and secondary school teachers is less than 100%, the number of downloads per teacher is probably higher.

The percentage of teachers uploading digital resources in primary education (measured across the total number of teachers) is about 1.5% and in secondary education about 2%.

Various strategies describing the methods to be employed have been drawn up with a view to achieving the objectives and results. These strategies have been developed in outline and are being worked out in more detail with the various stakeholders. The strategies are as follows:

1. Ownership by the educational field
2. User participation
3. Sectoral approach
4. Dissemination and adaptive approach
5. Creation of added value for all parties

The strategies are explained below.

OWNERSHIP BY THE EDUCATIONAL FIELD

Ownership is a major basic principle in the strategy aimed at implementing Wikiwijs in all sectors. In the end view of Wikiwijs as of mid-2013, ownership of the entire educational field is organized. Ideally, ownership involves one or more party in each educational sector taking a leading role, together with Kennisnet and the Open Universiteit in the Netherlands, and shaping developments in the field of open educational resources. Support organizations also play an important role in this. Wikiwijs aims to increase ownership by the educational field via stakeholder management and existing communities.

Wikiwijs is actively seeking cooperation with stakeholders in the educational field. Through coordination, support and influence, Wikiwijs ensures that the platform for OER matches as much as possible the wishes of the target group. Stakeholders in the educational field differ in the extent to which they are involved in Wikiwijs. Section 7, Program organization, looks at this in more detail.

Ultimately, the idea is that teachers feel that they are the owners of Wikiwijs as the central location for searching for OER. Existing communities form an important link in the chain here. Many teachers are already active in (online) communities and discuss other OER. Examples of existing communities include Digischool, the new Coöperatie Leraren and the Beroepsvereniging mbo (senior secondary vocational education association).

USER PARTICIPATION

Wikiwijs focuses on teachers as its main users, and user participation is the basic principle in all Wikiwijs activities.

The main form of user participation is sharing and (further) developing educational resources. Assessment is also a major part of the user participation process. This process can be encouraged by devoting special attention to teachers and their resources, both on the website and via other channels.

Moreover, users fulfil an essential part in developing Wikiwijs. Consistently focusing on users, both in determining needs and in developing Wikiwijs, is the best way of guaranteeing that Wikiwijs does indeed match to the needs of users. Currently this is organized by means of the User Advice Group and an online co-creation platform for gathering ideas and feedback. Research is also being conducted into the needs of users and the user-friendliness of the platform.

In the cooperation with partners, too, it is important to involve users in the development process, via the stakeholders. This ensures support for the platform. A good example of this is the Special Interest Group OER for higher education set up by SURF. It is up to Wikiwijs to shape this basic principle properly in the roll-out strategy with partners.

SECTORAL APPROACH

Wikiwijs is a platform for all educational sectors. The target group is therefore very varied, i.e. teachers in all educational sectors. Between these sectors, the operational field of the individual teachers, context and dynamics of the organization differ substantially. This means that there is in fact not one single target group, but many different target groups. There are also huge differences in how the sectors are organized and in the ambitions of the various sector organizations. The sector organizations are a major link in the communication chain with the employers and boards of the educational institutions.

Wikiwijs will therefore develop a strategy for each sector which takes the specific context and dynamics as its starting point. The strategy will focus on shaping and organizing developments with the most ambitious partners in the relevant educational sector. This matches up with the strategy for shaping ownership in the entire educational field.

This starts with developing a common strategy and making arrangements on the roles and responsibilities of the organizations and Wikiwijs. Irrespective of the roles the various sector organizations play in their own sectors, they will almost always be involved as much as possible in what is going on in their sector.

In addition to the sector organizations, the focus is on the frontrunners in the sectors. These include a wide range of organizations, e.g. institutions or support organizations. The frontrunners can serve as an example to other institutions and organizations and the strategy is therefore focused on facilitating these frontrunners and sharing and disseminating lessons learned. In the green sector and the secondary education sector (IP-VO), there are currently already substantial initiatives by sector organizations on open educational resources. In higher education, the initiatives are being led by leading institutions such as TU Delft and the OU in the Netherlands. There will be further coordination with the relevant parties to decide which sector approach can achieve the best results and which activities are to be initiated by which parties.

DISSEMINATION AND ADAPTIVE APPROACH

With a view to creating as large a reach as possible, in addition to making educational resources more accessible via its own website, another Wikiwijs strategy is to link existing channels for teachers (websites, intranets and educational applications) to Wikiwijs and to enable them to find and share educational resources in Wikiwijs. This allows users to make use of Wikiwijs in their familiar working environment. So far, a search widget and web-service function have already been developed as part of this strategy. Implementation of this strategy is being continued in conjunction with, among others, Electronic Learning Environment suppliers, IT coordinators and school/institution boards.

Part of this strategy also involves Wikiwijs facilitating the development of so-called sub-sites in addition to standard websites. This creates greater reach by giving specific target groups, for instance secondary school maths teachers, their own sub-domain in Wikiwijs (ie: math.wikiwijs.nl) where they can find tailor-made materials, educational resources, editorial content and corporate style. This technical facility will be delivered in the second quarter of 2011. More generally, it can be said that Wikiwijs is a platform in which organizations can develop their own strategy and activities, including within the framework of a Sectoral strategy as described above, as long as these match the basic principles of Wikiwijs.
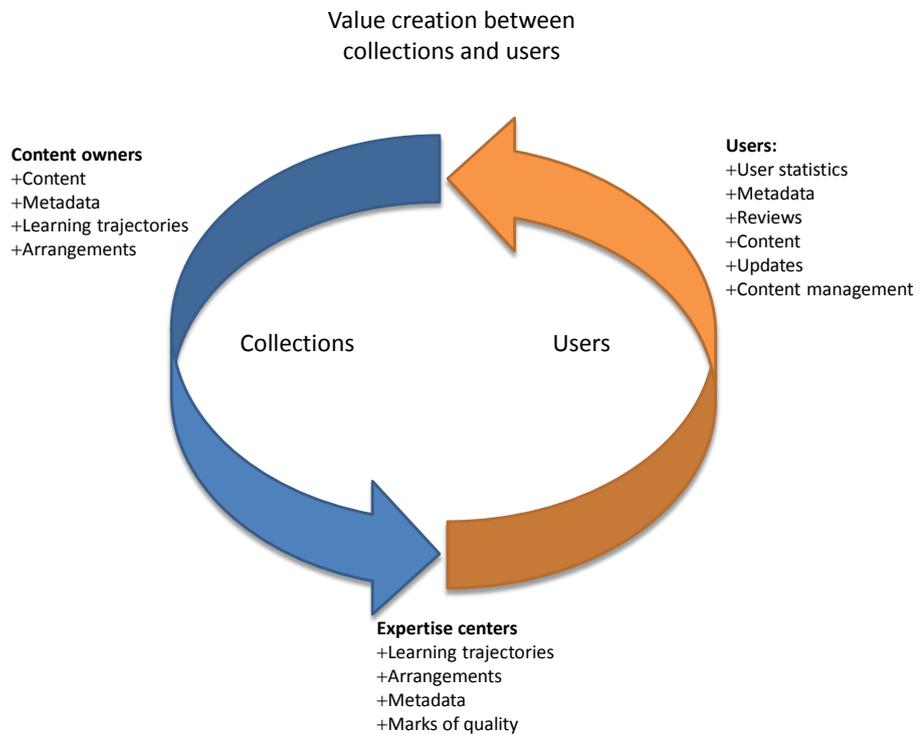
Commercial parties need to be given the capacity to develop and shape their roles in Wikiwijs. It is possible to include educational content which needs to be paid for. Wikiwijs aims to fundamentally open up educational resources, enabling logical links between all types of content, open and closed, digital and paper. Wherever possible, Wikiwijs will work together with GEU (the Dutch association of Educational Publishers) in this. The educational publishers possess a great deal of valuable experience in methods and educational resources. This experience can be put into practice via pilot projects.

CREATION OF ADDED VALUE FOR ALL PARTIES

To achieve the best possible level of participation, the value of participating in Wikiwijs must be obvious. Wikiwijs has deliberately opted to make its added value clear to users, content owners and other stakeholders.

This can be done, for instance, by using statistics on how educational resources are used and assessed. This demonstrates the value of their collections to content owners (how often the collections are viewed, which objects are popular, how often items are downloaded). Content owners can use this information to decide how the collections can be further developed and managed. Content owners, expertise centres and users can also contribute to improving the quality of educational resources and clarifying the quality, for instance via the use of marks of quality.

See the diagram below depicting the value creation between the different parties[11].

Value creation between collections and users

Content owners
+Content
+Metadata
+Learning trajectories
+Arrangements

Users:
+User statistics
+Metadata
+Reviews
+Content
+Updates
+Content management

Collections   Users

Expertise centers
+Learning trajectories
+Arrangements
+Metadata
+Marks of quality

To consolidate this process, it is essential that, in addition to the proposition for users, propositions are also developed for content owners and expertise centres which describe the potential added value of Wikiwijs for them. The proposition serves as a basic principle for communication to these parties. If necessary, an appeal will be made to the social task and responsibility of public content owners and expertise centres to participate in Wikiwijs, where applicable in consultation with the Ministry of Education, Culture and Science.

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[11] Users may also be content owners and vice versa. This also involves the value which the different roles can have for each other. Users who share content with others may also benefit from other users who enrich, assess or update this content.

BASIC PRINCIPLES

The main principles of Wikiwijs remain unchanged:

- Wikiwijs is an open platform.
- Wikiwijs is primarily created for and by teachers. This also means that ownership of Wikiwijs lies in the educational field, i.e. primarily with users.
- Wikiwijs makes no payments for the development of educational resources, purchasing licences for software or for support resources.
- In realizing the various components of Wikiwijs, the use of open standards is mandatory and maximum use will be made of open sources. This is done as much as possible on the basis of existing and available components.
- A clear and unambiguous description of the resources is required so that educational resources are simple to find: metadata standards are used here, based on open standards.
- Research forms the basis for Wikiwijs decisions and provides input for formulating further policy regarding open educational resources.

    The following basic principle has been added:
- Wikiwijs needs to be sustainable. This means that Wikiwijs stakeholders must offer capacity for linking their 'own' targets to Wikiwijs and bearing their roles and responsibilities with respect to Wikiwijs. This is also the basic principle for the future Wikiwijs management model.

BUDGET

The budget is based on the subsidy application for Wikiwijs 2011-2013, whereby a reduction to 70% of the original budget has been included and no item for unforeseen costs has been included in the budget. Unforeseen costs are therefore budgeted at project level. The aim here is to achieve the maximum impact with respect to the Wikiwijs objectives, without the risk of overdepletion.

For the time being, this budget outline follows the structure of the existing program organization. If necessary, this structure can be altered, following approval by the steering group. At project level, activities are calculated annually and provided with an annual budget, as part of the activities plan to be developed annually.

In relation to the extension of the initial Wikiwijs program up to and including February 2011, the 2011 budget is spread over the period March - December 2011. The end date for the total program remains December 2013.

It must still be possible to run Wikiwijs after 2013, when this program plan has been implemented. Stichting Kennisnet and the Open Universiteit in the Netherlands have committed themselves to this, as long as circumstances remain unchanged. This guarantees the sustainability of the platform and the linked provisions and services and therefore provides educational institutions and other organizations with a basis for incorporating and expanding the developments outlined here. New developments can subsequently occur as stakeholders make new investments in Wikiwijs.

Total	2011	2012	2013	Totaal
Program management	€ 144,948	€ 132,869	€ 167,039	€ 444,856
Communication	€ 127,326	€ 116,716	€ 146,732	€ 390,773
Content	€ 187,176	€ 171,578	€ 215,703	€ 574,457
Accessibility	€ 333,947	€ 306,118	€ 384,843	€ 1,024,908
Professionalism	€ 146,318	€ 134,125	€ 168,768	€ 449,211
Communities	€ 174,487	€ 159,946	€ 201,080	€ 535,514
Research	€ 85,749	€ 78,603	€ 98,818	€ 263,170
Total	€ 1,199,951	€ 1,099,955	€ 1,382,984	€ 3,682,890

RISKS AND MEASURES

This section outlines the main risks. A second table for each risk contains those measures being implemented to prevent this risk. The risks are updated annually in the Activities Plan.

No.	Risk	Risk (10 = high; 1 = low)	Impact (10 = high; 1 = low)	Period (1=short; 2=medium; 3=long)
1	Teachers do not see the added value of Wikiwijs /do not use Wikiwijs.	5	9	2
2	Individual content owners do not share their collections on Wikiwijs.	6	8	1
3	It is impossible to link all (existing) initiatives to the Wikiwijs platform.	7	6	2
4	It is difficult to develop new technology for collecting and processing metadata.	6	5	3
5	Teachers develop /arrange much less than expected.	6	5	2
6	Insufficient will among third parties to allow their educational resources to be found within Wikiwijs, among other things by means of collecting and processing metadata	4	6	2
7	Learning trajectories vocabularies are not implemented quickly enough.	6	7	2
8	Not enough social metadata is inputted.	4	7	1
9	NL LOM (Learning Object Metadata) is being implemented too late.	5	6	2

1	<u>Teachers do not see the added value of Wikiwijs /do not use Wikiwijs:</u> • Great emphasis on good communication and explanation; • Open input from teachers, 24 x 7; • Sound support, both online and physically; • Broad support, for all aspects involving OER (developing, metadating, copyright etc.); • Constantly improve user-friendliness.
2	<u>Individual content owners do not share their collections:</u> • Information on added value of sharing collections; • Advice on how to deal with CC[12] licences; • Solving metadata and licence problems, only for non-commercial collections.
3	<u>It is impossible to link all (existing) initiatives to the Wikiwijs platform:</u> • As much coordination as possible with existing initiatives and support for new initiatives; • Budget separately for linking in the activities plan; • Apply standards (via Edustandaard); • Continue to develop standards in conjunction with the parties involved.
4	<u>It is difficult to develop new technology for metadata:</u> • External review of technological options; • Cooperation with comparable (international) initiatives; • Use of social metadata as complement to or replacement for metadata.
5	<u>Teachers develop /arrange much less than expected:</u> • Good communication; • Sound support (online, workshops, service desk, training by third parties); • Take measures for developing open educational resources beyond teachers alone (also approach institutions, management and professional sectors intensively); • Encourage the development of policy at sector and school organization level; • Work alongside existing initiatives and complement each other.
6	<u>Insufficient will among third parties to allow their educational resources to be found within Wikiwijs:</u> • Good and intensive coordination at as early a stage as possible; • Intensive use of Wikiwijs steering group members; • Provide support for labour-intensive work, such as collecting and processing metadata; • Offer several licence options.
7	<u>Learning tractories vocabularies are not implemented quickly enough:</u> • Intensify cooperation with Netherlands institute for curriculum development (SLO); • Content owners helped more with metadata; • Central metadata processing; • Automatic metadata processing.

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[12] CC = Creative Commons; licensing structure for open content which indicates under which terms and conditions content may be reused.

8	Not enough social metadata is inputted:
	▪ Create an alliance or conclude a delivery agreement with SLO and/or other parties; ▪ Additional financing for developing learning trajectories.
9	NL LOM (Learning Object Metadata) is being implemented too late:
	▪ Monitor implementation of NL LOM at Edurep and content owners and if necessary provide support via Edustandaard.

7. PROGRAM ORGANIZATION

MANAGEMENT MODEL

The program was commissioned and subsidized by the Ministry of Education, Culture and Science. The ministry has delegated the management of Wikiwijs to the Open Universiteit in the Netherlands and Kennisnet. The steering group comprises representatives at director and senior management level at the Open Universiteit in the Netherlands and Kennisnet. It is responsible for drawing up the required frameworks and guaranteeing that progress is within these frameworks. It renders account of this progress to the Ministry of Education, Culture and Science each quarter. Please also see the planning and audit cycles. The figure below depicts the organizational structure of the program:

```
           Ministry of Education,
           Culture and Science

              Steering group

           Program management

             Project managers

                 Projects

        Management activities Wikiwijs platform

           Stakeholder management

               Communication
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Wikiwijs Program Management Model

Involvement of stakeholders
Wikiwijs holds discussions with stakeholders on how they can become involved in Wikiwijs. The basic principle here is that stakeholders are involved or wish to be involved to varying degrees. This is shown in the Wikiwijs Stakeholders figure by means of rings.

As an illustration, an initial classification is made which will be altered once concrete agreements have been concluded with stakeholders.
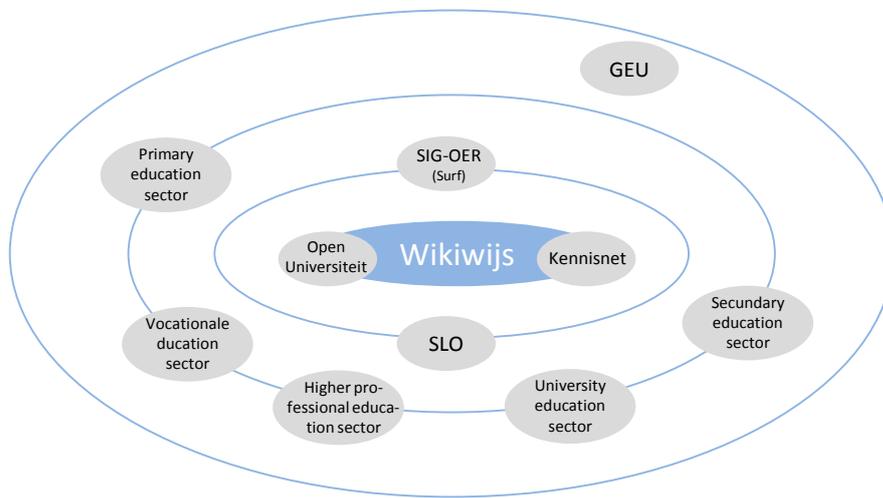
Wikiwijs Stakeholders

Projects

The projects comprise various activities which, in addition to project-based activities, also include more operational activities, i.e. management activities. This involves, for instance, release management, version management, the Service Desk and regular communications such as the editorial function and newsletter. It is the task of the program manager to monitor the dependencies and synergy between the various activities.

Stakeholder management is coordinated by the program manager, but the steering group and project leaders will also make a major contribution to this. The program commissioner will also be informed and, where necessary, involved in the relationship with stakeholders.

AMENDMENT OF PROJECTS AND MANAGEMENT ORGANIZATION

The Wikiwijs program organization will be amended on a number of points in relation to the new phase which Wikiwijs is to enter. The revised structure will distinguish between activities which are organized on a project basis and operational activities. These operational activities are the result of the various projects which partly comprise operational processes, often housed in the existing organization of participating organizations.

The transition from project to management organization was started in mid-2010 and will be further anchored in mid-2011. Program management is the coordinating factor in both aspects of the program and reports on this to the Wikiwijs steering group and the commissioner. The proportion of operational activities will increase towards the end of this program. After completion of the program, the management activities will be continued by Stichting Kennisnet and the Open Universiteit in the Netherlands. In doing so, those activities will be implemented which enable Wikiwijs to remain functional for users and other stakeholders at the same level, including support for users.

STAKEHOLDER MANAGEMENT

The stakeholder management of Wikiwijs is an integral part of the program and is implemented at steering group, program manager and project leader levels. The program manager coordinates the stakeholder management and in doing so aims to achieve synergy and cohesion between the various activities with stakeholders. If necessary, the commissioner is informed of the progress with the various stakeholders, in particular of those parties for which the commissioner also acts as client/funder.

Wikiwijs stakeholders can roughly be divided into four groups.

1. Users (teachers, students)
2. Decision-makers/interest groups
3. Suppliers/service providers
4. Educational institutions

Wikiwijs is in touch with parties from all of these categories and examines common interests and opportunities. In some cases, this will lead to some form of cooperation.

Within these categories, the following stakeholder levels can be distinguished:

▪ **Shared operational field**. This only involves a common operational field, without a concrete overlap in activities or interests. At this level, mutual developments are monitored and parties are only informed of Wikiwijs. Only in a limited number of cases is there bilateral contact.
▪ **Shared interests**. Here there are overlapping interests, which may involve both opportunities and risks. In this case there is almost always bilateral contact with the organization to investigate this further and if necessary to make follow-up agreements.
▪ **Shared objectives**. Here there is cooperation at objective level and a concrete list is drawn up of those activities which will be conducted jointly. This may be laid down in an alliance with a view to guaranteeing mutual dependencies and determining preconditions. In future, there will be close cooperation with several parties, as described in the end view for Wikiwijs, in particular with respect to ownership of Wikiwijs (section on Multi-year objectives 2011-2013).

In cases where Wikiwijs is the client (e.g. for constructing the platform), a contract is always concluded.
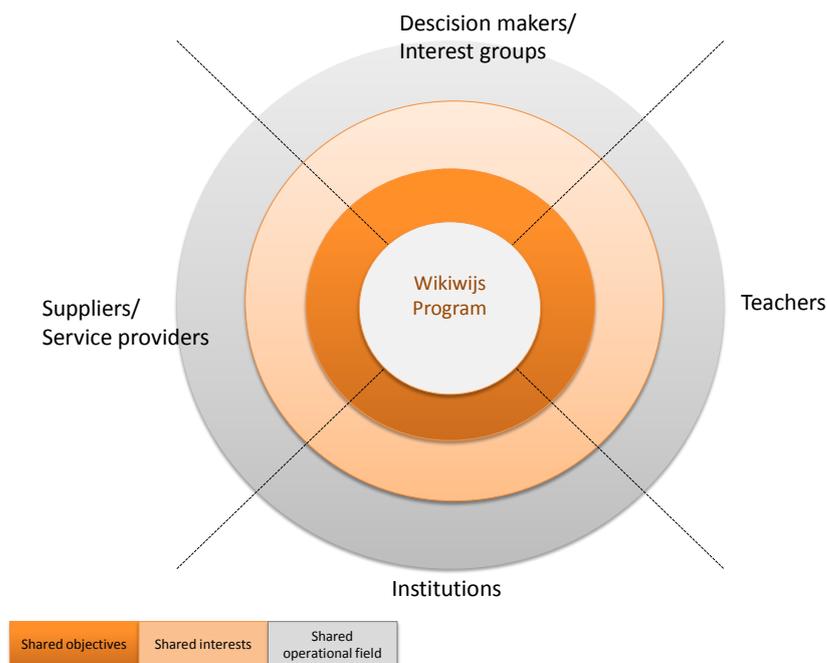
Proposition management, as part of stakeholder management, comes under the end responsibility of the program manager. Its aim is to achieve the intended benefits for the various Wikiwijs target groups and in doing so to manage the necessary propositions which Wikiwijs supplies. This requires a distinction to be made between the different target groups (users, content owners, suppliers of applications etc.) and that the added value provided by Wikiwijs must be investigated and determined for each target group. This value must subsequently be communicated. One major aspect of proposition management is therefore relationship management, insofar as the number of parties is clear and can be approached individually.

With respect to approaching users and potential content owners and mark of quality groups, communication will occur via different channels, such as conferences, online communities etc. Existing and new propositions will be coordinated with the steering group.

LIST OF STAKEHOLDERS

Please find below a list of the main stakeholders at the moment. The list is primarily classed according to sector, whereby a number of parties are active in several sectors. There are also stakeholders which by definition are active in several sectors.

Primary education sector
- PO-Raad (primary education council)
- SLO (Netherlands institute for curriculum development)
- Digischool
- Universities for teacher education
- SBL (Association for the Professional Qualities of Teachers)/Coöperatie Leraren (teacher association)
- Natonco (national teaching cooperation)

Secondary education sector
- VO-Raad (Secondary education council)/IP-VO
- Digischool
- SLO (Netherlands institute for curriculum development)
- Freudenthal Institute for Science and Mathematics Education
- OVC (college)
- Teacher training courses
- SBL (Association for the Professional Qualities of Teachers)/Coöperatie Leraren (teachers association)

Senior secondary vocational education sector
- MBO Raad (senior secondary vocational education council)
- SamboICT (alliance of educational centres)
- Stichting Consortium Beroepsonderwijs (vocational education foundation)
- Stichting Praktijkleren (Work-based Learning Foundation)
- MBO Taal en rekenen (senior secondary vocational education language and arithmetic)
- SLO (Netherlands institute for curriculum development)
- Digischool
- Knowledge centres / Colo (Association of Dutch National Centres of Expertise on Vocational Education, Training and the Labour Market)
- SBL (Association for the Professional Qualities of Teachers)/Coöperatie Leraren (teacher association)

Green sector
- Groene Kennis Coöperatie (green company/educational platform)
- Het Ontwikkelcentrum (specialist in developing educational content)
- AOC Raad (knowledge centres council)

Higher vocational education sector
- HBO-Raad (higher professional education council)
- SURFfoundation (including SIG-OER)
- SURFnet
- Netwerk Open Hogeschool (Open Universities of Applied Sciences Network)
- Fontys University of Applied Sciences
- The Hague University of Applied Sciences
- HAN University of Applied Sciences
- Hanze University of Applied Sciences

University sector
- VSNU (Association of Universities in the Netherlands)
- SURFfoundation (including SIG-OER)
- SURFnet
- TU Delft
- Leiden University
- University of Groningen

Other stakeholders
- AOB (General Union of Education)
- CNV Onderwijs (Christian Teachers' Union in the Netherlands)
- VVVO (secondary education association)
- GEU (group of educational publishers)
- Dactique (Electronic Learning Environment party)
- Its'Learning (Electronic Learning Environment party)
- LPCs (national pedagogical centres)
- VVEA
- SBL (Association for the Professional Qualities of Teachers)
- ISO (national student organization)
- LSVB (national student union)
- LAKS (national school pupils action committee)

And of course in various domains:
- Stichting Kennisnet (knowledge centre for IT)
- Open Universiteit in the Netherlands

BUDGET CYCLE

Each year, an activities plan including a budget is drawn up which describes the targets, strategy, activities and required resources. These are linked to the basic principles and multi-year objectives in the Wikiwijs program plan. Where adjustment is required, or in the event of a change to the basic principles and/or circumstances, this will be discussed in advance with the commissioner.

The commissioner will allocate the annual budget on the basis of this annual plan. The agreements and terms and conditions for this are laid down in the 2011-2013 subsidy order.

In its capacity as subsidy provider, the Ministry of Education, Culture and Science supervises progress and advises on adjustments where necessary. The Wikiwijs steering group, in its capacity as commissioner, is responsible for the direct management with a view to results, planning and resources. To this end, in accordance with the order for the current program, agreements will be made on reporting, results and deviations from the intended results. The Wikiwijs steering group currently reports on this to the Ministry of Education, Culture and Science quarterly.

During the program period, go/no-go moments can also be identified at which the continuation of the Wikiwijs program may be reconsidered. This type of decision will be taken on the basis of the objectives and preconditions laid down in the program plan. Explicit use is made here of expertise and experience gained in the previous phase(s) with respect to results, risks, dependencies, planning etc. This allows the program proposal and underlying project plans for subsequent phases to be worked out in more detail and if necessary adjusted with a view to making a well-considered decision on the next stage.

ACCOUNTABILITY

Each quarter, within 30 days of the end of a quarter, a report is delivered to the commissioners which describes and explains the progress, issues and finances. An explanation will be given on the basis of the qualitative and quantitative results.

At the end of each year, the accountants of the two organizations will be asked to audit and approve the financial statements of the Wikiwijs program.

9. SOURCES USED (WITH QR CODES)

Advice by Education Council: Education and open educational resources 2008

http://www.onderwijsraad.nl/upload/publicaties/273/documenten/onderwijs_en_open_leermiddelen.pdf

Kennisnet Vier in Balans Monitor 2009

http://www.kennisnet.nl/cpb/onderzoek/docs/4IB2009_NL_def.pdf

Kennisnet Vier in Balans Monitor 2010
http://onderzoek.kennisnet.nl/vierinbalansmonitor

Wikiwijs 2009 zero measurement
http://content.wikiwijs.nl/nulmetingwikiwijs2009

MKBA Wikiwijs
MKBA Wikiwijs RIGO

SLO Learning resources monitor 2010-2011
http://www.slo.nl/leermiddelenmonitor

Since the start of Wikiwijs in 2009, there have been many relevant developments in education, educational resources and society. Constant monitoring is required to ensure that Wikiwijs keeps up with current developments in education and that Wikiwijs can benefit from new (technological) developments. Please find below a description of the main developments which affect Wikiwijs.

DEVELOPMENTS IN EDUCATIONAL RESOURCES

There have been a huge number of developments in open educational resources since Wikiwijs was initiated. Both in the private and public sectors, these fit in with the advent of more flexible teaching. The ambition to use open educational resources is growing, whether at sector level (VO-Content, Green), in schools (associations) and among teachers. The latter can be shown by the zero measurement conducted within the framework of Wikiwijs.

This trend is expressed in the use of educational resources in communities (such as Digischool, Klascement), whereby clear growth can be observed in both sharing and using OER. Publishers and distributors are also researching opportunities for doing more with OER and have developed various digital products which offer the option to amend or update resources to a lesser or greater extent. As yet, this does not involve open educational resources.

Close monitoring of trends and developments in this field remains essential. Although it is difficult to make predictions, the following relevant developments have been identified:

- The need for flexible and adaptable educational resources will grow in future due to the desire to be able to offer differentiated education.
- The desire of schools (associations) to be able to profile and distinguish themselves with respect to quality is also contributing to the need for more flexible and adaptable educational resources. Schools and school associations are increasingly developing their own resources, often via existing alliances such as Stichting het Zelfstandig Gymnasium (alliance of independent grammar schools).
- It is difficult to create a (commercial) earnings model for the development of flexible and adjustable educational resources, both public and private.
- At the same time, in view of the current budgetary pressure, there will be few opportunities to deploy more funds to purchase more flexible and adaptable educational resources. The independent development (by teachers or schools) of educational resources will also be squeezed by this.
- The professional capacity of teachers is being boosted, including with respect to the choice of educational resources.

This creates a situation in which higher quality is demanded while fewer funds are available.

This development can aid Wikiwijs, as it facilitates sharing and reusing educational resources, with positive effects on the availability of more diverse educational resources, in higher quantities, without these costing additional funds. In this outlook, growth in the requirement for and use of educational resources will therefore largely be made possible by the increase in open educational resources, especially in the long term. This is illustrated in the diagram.
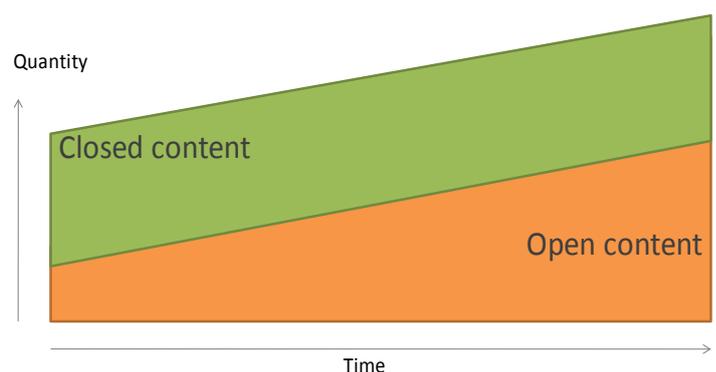
Wikiwijs is greatly affected by various technological developments, in view of the extent to which Wikiwijs is constructed using various technical services and how and the extent to which IT solutions are used by teachers.

For this reason, there is constant monitoring of ongoing technological developments, how Wikiwijs can benefit from them and how Wikiwijs can influence specific developments.

A number of trends are certainly viewed as relevant:

- **Searching, making and sharing educational resources** is in general increasingly being facilitated by free or cheaply-available tools. It is beyond the scope of this document to outline all these opportunities. As an example, take Google docs, which allows users to find free tools for creating educational resources, to work on these together and to share them with others. It is no coincidence that SURF has concluded a contract whereby SURF users are given easy access to these applications.

  As mentioned above, this is leading to growth in OER developed by teachers and schools themselves. In doing so, there is a shift in the type of resources being developed at user level. Whereas 15 years ago it was chiefly simple digital content that was being made, such as texts and presentations, it is now also easy to make interactive content such as assignments and tests. Only with respect to adaptive content is the threshold still relatively high, but the expectation is that here, too, applications will be made available which bring the development of this type of content within easy reach.

  As a consequence, the creation of added value for content will become trickier, see the diagram below. Incidentally, this is a development which poses a challenge to many content producers, including outside education. Although the earnings model for educational resources in general is currently positive, according to educational publishers as well the situation is different for OER.
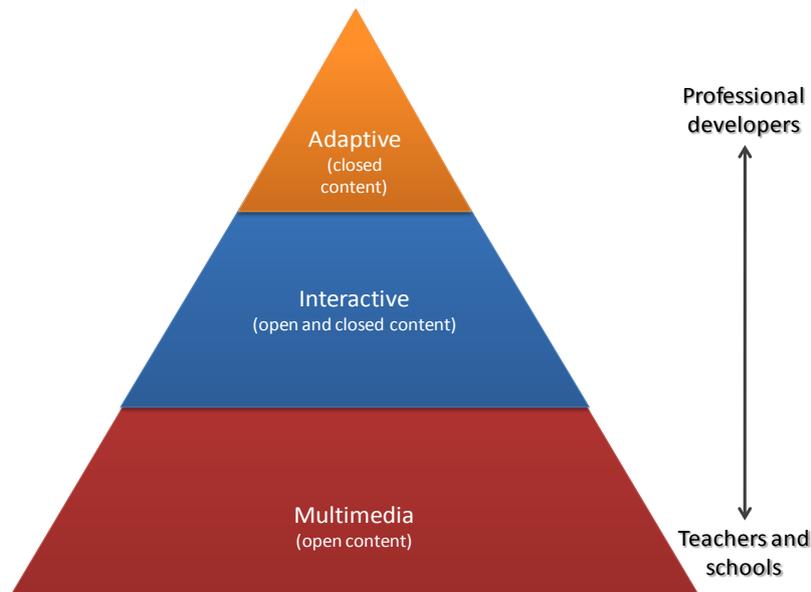
- **The ease of finding educational resources is being aided by new developments in the field of metadata technology.**
  Metadata is mandatory when linking collections to Wikiwijs (or Edurep) or uploading content in Wikiwijs. Extra effort is required to implement new standards such as NL-LOM and learning trajectories vocabularies. Although this effort is essential for the end users, we see that this forms an obstacle to users and content owners in adding content to Wikiwijs.

  This will be anticipated from both directions, i.e. by:
  o Responding to new technologies such as Semantic web/Resource Description Framework (RDF). These technologies will greatly improve the ease of finding content.
  o Research or metadata can be simplified by having this done outside the collection, by third parties (such as expertise centres).
  o In addition, it needs to be made as attractive as possible to content owners for their collections/content to be found by actively emphasizing the added value of Wikiwijs for them in terms of user statistics, publicity and enriching of content by users. This matches up with the Wikiwijs objective for publicly-financed collections to be accessible and usable (see also Multi-year objectives).