Alignment 2.0: Strategic use of new internet technologies in government

Albert Meijer [a,*], Marcel Thaens [b]

[a] *University of Utrecht, Utrecht School of Governance, Bijlhouwerstraat 6, NL3511ZC Utrecht, The Netherlands*
[b] *Erasmus University Rotterdam, Faculty of Social Sciences, PO Box 1738, NL3000DR Rotterdam, The Netherlands*

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ABSTRACT

This paper challenges the view that strategies for using Web 2.0 should primarily be based upon technological characteristics. The value of the organizational strategic alignment approach for developing specific operational Web 2.0 strategies for government organizations is explored both theoretically and empirically. On the basis of a review of the literature we conclude that there are no a priori reasons why the idea of a fit between IT strategy and business strategic orientation cannot be applied to the development of operational Web 2.0 strategies for government organizations. The empirical exploration based on intervention research at the Dutch Department of Education results in the identification of five configurations: organizational transparency, organizational interactions, policy sector transparency, policy sector interactions and process and policy innovation. These configurations are logically consistent with the strategic orientations of the three directorates of the Department of Education. This overview does not pretend to be exhaustive but validates the idea that an alignment approach leads to differences in operational strategies. The configuration approach provides organizations with useful a starting point for developing their Web 2.0 strategies.

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1. Introduction

The potential of Web 2.0 for transforming government has been highlighted by various authors (Crovitz, 2008; Eggers, 2005) and Obama's presidential election has given these ideas a boost (Green, 2009). However, these ideas seem to suggest a one-size-fits-all approach. Differences between government organizations are ignored and the authors seem to suggest that these differences are irrelevant. Web 2.0 leads the way for all organizations and this technology, they suggest, leads to similar transformations in all organizations. This failure to acknowledge the specific demands of government organizations accounts for many failures in the deployment of new technologies in government (Meijer, Boersma & Wagenaar, 2009).

This paper challenges the view that strategies for using new technologies should primarily be based upon technological characteristics. Gurus highlight the potential of Web 2.0 technologies and imply that these technologies can bring improvements to a wide variety of (governance) practices (Tapscott & Williams, 2006). We emphasize that technological characteristics have an innovative potential but strategic innovation can only be achieved when these characteristics are connected with organizational strategic orientations (Chan, Huff, Barclay, & Copeland, 1997; King, 1978). General strategies often prove to have little value for organizations (Mintzberg, Ahlstrand & Lampel,

1998). Instead of general patterns of use, specific configurations should guide organizations in the development of web 2.0 strategies. We will argue, both theoretically and empirically, that combinations of organizational strategic orientations and Web 2.0 technology deployment can be categorized in the form of configurations.

This paper aims to bridge the gap between broad visions of Government 2.0 and the specific needs and demands of government organizations. The research focuses on the strategic potential of Web 2.0 for specific government organizations. We will explore whether the organizational strategic alignment approach is useful for developing specific operational Web 2.0 strategies for government organizations (Chan et al., 1997). The explorative research aims to identify different consistent patterns of organizational strategic orientations and Web 2.0 strategies. The question guiding the research is: do government organizations align their operational Web 2.0 strategies with their organizational strategic orientations and is it possible to identify patterns in this alignment? An identification of patterns of organizational strategies is useful for government organizations that are developing these strategies since these patterns can guide organizations to a more fitting strategy than the dominant one-size-fits-all strategy that is propagated by gurus.

Web 2.0 technologies offer opportunities to all of the three different organizations that are central in our research. Each organization has its own strategic orientations. Does this make any difference in the way these organizations think about using the opportunities offered by Web 2.0? And if so, then how does it make a difference? In other words: what role do the specific objectives of

* Corresponding author.
E-mail addresses: a.j.meijer@usg.uu.nl (A. Meijer), thaens@fsw.eur.nl (M. Thaens).

each of these organizations play in thinking about making use of these opportunities? And in what way does this show? Can patterns be identified in the way organizations relate their organizational strategic orientations to their Web 2.0 strategies?

We aim to expand our knowledge about the relation between organizational strategic orientations and the innovative potential of Web 2.0 technologies. The empirical research consists of workshops with civil servants. The strategic value of Web 2.0 for government is explored through a series of three workshops at different directorates of the Dutch Department of Education. Civil servants were asked to consider opportunities offered by Web 2.0 for attaining the objectives of their directorates. The outputs of these workshops were analyzed to find strategic directions for using Web 2.0 for governance that follow organizational objectives. This research leads to specific insights in the value of a targeted approach to developing a Web 2.0 strategy for government organizations.

2. Developing an operational Web 2.0 strategy

Web 2.0 has grown to be a hype in debates about innovation in governance. "2.0" is a metaphorical indication for the idea that a new generation of internet application has been developed. Tim O'Reilly (2005), widely credited for launching the term "Web 2.0," defines it as:

> The network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation," and going beyond the page metaphor of Web 1.0 to deliver rich user experiences (O'Reilly, 2005).

The basic idea behind the concept "Web 2.0" is that the old generation of unidirectional technologies and passive receivers of information has been replaced by multidirectional applications which make all users into both senders and receivers of information (Frissen et al., 2008; Pascu, Osimo, Ulbrich, Turlea & Burgelman, 2007; Carr, 2008 and, for a more critical discussion, Zimmer, 2008; Jarrett, 2008). The "new" internet is referred to as the participatory or social web: communication in many-to-many networks is a key characteristic of these new technologies. YouTube, Wikipedia and FaceBook are some of the best known examples of Web 2.0 technologies. These applications have become immensely popular and are all based on the idea that content should be provided by the user. Users put films on the internet that can be viewed by other users, they collectively build a new encyclopedia and present their pictures and life stories to each other. 'User generated content' is a second key characteristic of Web 2.0. RSS feed and MyGoogle share the idea that information should be adjusted to the needs of the individual. Earlier websites leaned upon the idea of broadcasting since the same information was presented to all users. Newer applications enable users to indicate their personal preferences. Personalization is a third characteristic of Web 2.0.

These three characteristics–many-to-many networks, user-generated content and personalization–have resulted in enormously successful internet initiatives such as RSS, MySpace, Wikipedia, and YouTube (Rapoza, 2006). These initiatives attract large numbers of visitors and participants and dominate the internet. One can raise the question whether these principles of Web 2.0 could also be useful for realizing objectives in the public sector. Could many-to-many networks, user-generated content and personalization strengthen government policies?

New technologies offer new possibilities for governments to realize the dreams they often have had for a long time of becoming more efficient, more transparent, more effective and more responsive. As was the case with the rise of the internet "1.0" some 15 years ago, again with the recent "2.0" developments the expectations of what technologies can mean for government are set high. An illustration of these expectations can be found in the work of Eggers (2005). In his book *Government 2.0* he states that technology can help government to transform itself into a "Citizen-Centered Government" by using technology government can drastically improve the delivery of services to citizens. However, the impact of technologies on government goes much further, he claims. By using technology (and especially web 2.0 technology) it becomes possible to improve education, cut red tape, reduce gridlock and enhance democracy (Eggers, 2005).

The potential may be there but at the same time Eggers (2005) remarks that "Government has been especially slow to realize the full potential of digital technology" (p. 5). This slow pace of adoption of new technologies has also been shown in a study on modernization in Denmark, Germany, The Netherlands and the United Kingdom by Bekkers and Korteland (2006). In all these countries ICT is put forward as an instrument which can be used to achieve different goals of modernization. These goals include for instance a shift towards self-government, market-governance and self-regulation and an empowerment of citizens which forces public administration to become more responsive and to become more transparent and efficient. The political values these shifts in governance express are efficiency, accountability and liberty. However, based on their research they conclude that the potential of ICT in order to achieve institutional innovation has not been fully acknowledged (Bekkers & Korteland, 2006).

There seems to be a gap between far reaching ideas about the potential of new technologies and the operational realities of government organizations (see also Giarte Research, 2001). This gap calls for an operational strategy, a strategy that connects the potential of new technologies to the specific strategic orientations of government organizations. This type of strategy is based on an assessment of the value of new technologies to strengthen organizational strategies. How can Web 2.0 technologies contribute to the realization of organizational objectives?

Developing an operational Web 2.0 strategy is not straightforward. Bekkers, van Duivenboden and Thaens (2006) have pointed out that government organizations often overestimate the contribution of ICT while at the same time the unintended and indirect consequences of ICT are very often neglected. They also state that the results and effects of ICT are being influenced by the complex and dynamic institutional setting in which it is developed, introduced and used and in which other factors play an important role. Results and effects are the product of the contingent, and thus unique and local, co-evolution of developments in different environments (technological, political, economical and socio-cultural). At the same time, in these environments different stakeholders operate, which try to influence the way in which problems are conceived and solutions are developed and implemented (Bekkers et al., 2006, p. 237). Furthermore, several case studies on ICT-driven innovation show that the social and political embeddedness of the interactions and relationships between relevant actors–organizations and institutions–are important to foster an innovative ICT climate (Bekkers et al., 2006, p. 238).

For government organizations these considerations mean that they have to think about developing a clear strategy to be able to realize the potential benefits offered by Web 2.0 technology. The core characteristics of Web 2.0–many-to-many network, user-generated content and personalization–offer them a potential of becoming more transparent, more efficient and more responsive, but lessons from the past show that it is important to have an eye for the factors that play a

role in determining the success of such technology (Meijer & Zouridis, 2006). That means that organizations that plan to use Web 2.0 technology need to focus on their own strategic orientations. In other words: organizations have to find ways to connect the core characteristics of Web 2.0 in an intelligent manner to the objectives of their own organizations.

Strategic business alignment has been developed in the management and information sciences to connect business planning and information systems planning (Calhoun & Lederer, 1990; King, 1970; Teo & King, 1999). The basic premise on which this approach is based is that for strategic information systems planning to be effective, there must be some level of coordination between business planning and information systems planning. Alignment will ensure that business value will be achieved from IT investments and IT is exploited for strategic advantage (Goldsmith, 1991). The integration of knowledge about technology and knowledge about organizational processes, shared domain knowledge between IT and business executives, is regarded as a crucial success factor for alignment (Reich & Benbasat, 2000). Methods for strategic business alignment concentrate on improving the linkages between IT departments and operational management.

Henderson & Venkatraman (1993) define strategic alignment in terms of four fundamental domains of strategic choice: business strategy, information technology strategy, organizational infrastructure and processes and information technology infrastructure and processes. In their model alignment relates to two levels: the strategic level and the infrastructural and process level. In our research we only focus on the strategic level and for the moment we will leave out the exploration of alignment of infrastructures.

The idea of strategic business alignment has been developed for the private sector (Chan et al., 1997; King, 1978; Luftman, 2003). At its core, the strategic business alignment approach is based on the idea of configurations (Mintzberg, 1983). In the work of Mintzberg these configurations are considered as ideal organizational forms that provide a framework to understand and design organizational structures. Each configuration contains six components: operating core, strategic apex, middle line, techno structure, support staff and ideology. The components are linked by four different flows: authority, work material, information and decision processes. Together with different kinds of design decisions and different mechanisms for the coordination of work, these components and flows lead to different configurations. What is important to notice for our research is that in this theory, each configuration represents a force that pulls organizations in different organizational directions. An effective organization will favor some sort of configuration (seen as a logically consistent clustering of its elements) to reach a certain harmony in its internal processes and to be able to respond in an effective way to its environment.

The basic idea behind the alignment thinking approach is that an organization should try to find a fit between its IT strategy and its business strategic orientation. Although the strategic business alignment has not frequently been applied to government organizations and although we are not aware of applications of this approach to Web 2.0, there are no *a priori* reasons why this configurations approach cannot be applied to the development of operational Web 2.0 strategies for government organizations.

3. Research methods

The strategic value of Web 2.0 for governance is developed and investigated through a series of workshops with civil servants at three different directorates at the Dutch Department of Education. These workshops are part of intervention research in which a self selecting sample of respondents is used. This means that the researchers organized and facilitated the workshops and the workshops aimed to offer the participants ideas for further developing Web 2.0 strategies.

The objectives of the workshops were to categorize ideas that civil servants view a promising uses of Web 2.0 for their specific directorate and to investigate which of these ideas are regarded as most useful in view of the goals of the directorate. The different directorates themselves determined who of their civil servants attended the workshops.

The analysis in this paper focuses on these lists of ideas and the selection of most promising ideas. The analysis aims to shed light on the contextual nature of these ideas or, more precisely, the relation between the ideas and strategic orientations of government organizations. Through these workshops the perceptions of civil servants are measured. The underlying idea is that civil servants have the contextual knowledge that is needed to develop a specific strategy. Civil servants can present specific information about ideas that are relevant in view of the position and objectives of their directorate. A limitation of this approach is that these civil servants may not be able to think of radically new ideas since they are embedded in the context. This limitation, however, is accepted on the basis of the idea that radically new ideas generally prove to be less viable than context-dependent forms of innovation.

Three directorates at the Dutch Department of Education were selected for this series of workshops based on a most different case design:

(1) *Policy directorate*. The directorate Vocational and Adult Education qualifies as a policy directorate. It has been created to support policies concerning vocational and adult education. In the organization it has been positioned in the directorate-general 'Higher Education, Vocational Education, Science and Emancipation'.

(2) *Staff directorate*. The directorate Knowledge qualifies as a staff directorate which has been created to support processes of information exchange and knowledge development in the department and the policy sector. This directorate has been positioned under the responsibility of the deputy secretary-general.

(3) *Project directorate*. The directorate Learning and Working is a joint directorate of the departments of Education and Social Affairs. It has been set up for this cabinet period to strengthen cooperation in the sector. The temporary character of this directorate makes it a project directorate.

Participants in the workshop were selected by contact persons for the three directorates. The contact persons were told that participants did not need to have any prior knowledge about Web 2.0. An overview of the participants per directorate is presented in Table 1.

This table shows that most participants are between 30 and 40 with some participants below 30 and some above 40. A slight majority of the participants is female and most participants are policy or project advisors. The three groups are comparable in number and type

Table 1
Participants in the workshops.

	Age	Sex	Position
Policy directorate (March 30, 2009)	20–30: 2 30–40: 2 40–50: 1 50–60: 1	M: 2 W: 4	Manager: 1 Policy advisor: 5
Staff directorate (March, 30 2009)	20–30: 3 30–40: 3 40–50: 1 50–60: 1	M: 4 W: 4	Manager: 1 Policy advisor: 4 Trainee: 3
Project directorate (April 2, 2009)	20–30: 2 30–40: 3 40–50: 2	M: 3 W: 4	Project advisor: 3 Communication advisor: 3 Project coordinator internet: 1

of participants. The number of managers is limited: most participants are policy, communication and project advisors.

The workshop started with a short introduction in which the aims of the workshop were mentioned and the researchers and participants in the workshop introduced themselves. The researchers stated explicitly that the goal of the workshop is to explore promising venues for using Web 2.0 within a period of 5 years to strengthen the directorate's strategy to reach policy and organizational goals. The workshop consisted of the following phases:[1]

(1) *Phase 1: Introducing Web 2.0*. The principles behind Web 2.0 were presented to the participants: transparency, peer-to-peer, user participation, exchange of information and worldwide coverage. These principles were illustrated with examples from the public and private sector in the Netherlands, the US and the UK.[2]

(2) *Phase 2: Introducing the directorate*. The contact person was asked to give a brief presentation about the goals and activities of the directorate. This introduction was needed to set out the 'playing field' and the context. Contact persons also sent additional documentation about the objectives to the researchers.

(3) *Phase 3: Generating ideas*. The participants were asked to write down ideas for using Web 2.0 technologies for reaching the organizational and policy objectives of their directorate within 5 years. They had to write down one idea per sheet of paper. These papers were stuck to large sheets of paper on the wall. The workshop leaders asked the participants to expand on their ideas (if an explanation was needed).

(4) *Phase 4: Selecting ideas*. All participants were each given three labels that they could stick onto the ideas that they regarded as most promising for their directorate.

The workshops resulted in a variety of data:

(1) An overview of the strategic orientations of the three directorates;

(2) A list of ideas for using Web 2.0 technologies for that specific directorate;

(3) A ranking of the ideas in terms of usefulness for the directorate.

Most of this material was written down on sheets of paper by the participants and a research assistant was present at all three workshops to takes notes of the discussions. Additional data concerning the strategic orientations of the directorates were gathered through document analysis and analysis of information on the departmental website (www.minocw.nl). The material has been analyzed qualitatively. Looking at the results of the workshops, we have found different dimensions that refer to the (possible) use of Web 2.0 technology by organizations. These dimensions were used to develop a coding tree to analyze the variety in ideas that came up during the workshops.

Looking back at the research from a methodological point of view, the conclusion can be that the workshops can be regarded as a productive form of knowledge creation. Our research has shown that developers of operation Web 2.0 strategies can tap into the contextual knowledge of civil servants to generate a wide variety of ideas for using Web 2.0 to realize organizational objectives. These civil servants with little knowledge of the new technologies proved to be productive

in generating ideas after a short briefing about the potential of the new technologies.

4. Strategic orientations of the directorates

Information about the strategic orientations of the directorates was obtained through the presentations at the workshops and through additional document study. These strategic orientations are presented here and analyzed in terms of the actors they refer to and the kind of behavior the directorate aims to stimulate or activate.

The directorate Vocational and Adult Education–the policy directorate–has three objectives:[3]

(1) *Ensure the availability of good vocational education*. Vocational education needs to have a good fit with the requirements of the labor market. The quality of education needs to be improved on a continuous basis.

(2) *Provide a perspective on lifelong learning*. Adult education needs to be available to retrain people for the changing needs of the labor market. Education provides the basis for employment.

(3) *Create an emergency exit for the educational system*. Some students do not have the capacities or possibilities to participate in other educational programs. Vocational education needs to provide these students a minimum level of education.

All these three objectives refer to the maintenance of educational facilities in the policy sector. Educational institutes have to create programs and the directorate stimulates, activates and steers these actors in the direction of the policy objectives.

The directorate Knowledge–the staff directorate–has the following three objectives:[4]

(1) *Stimulate the development and use of knowledge*. The directorate provides a bridge between the policy sector, scientific communities and policymakers at the department of Education. It stimulates the use of knowledge and innovation in education, culture and science.

(2) *Improve data and information management*. The directorate is responsible for the collection, generation and analysis of information that is relevant for actors in the policy sector and policymakers at the department of Education.

(3) *Initiate new ways of (interactive) policy-making*. The directorate has to develop knowledge about news ways of policymaking and it can support and stimulate other directorates to develop new ways of policymaking.

This directorate has both external clients–the actors in the educational policy-sector–and internal clients—other directorates in the department of education. The objectives point at the use of existing information but also the development of innovative ways of working in the policy sector and innovative ways to develop policies.

The directorate Learning and Working–the Project Directorate–has the following policy objectives:[5]

(1) *Stimulate participation in cooperative networks*. The directorate aims to realize 90,000 combinations of learning and working in the policy sector in cooperation with local government, local employment benefit agencies, employers and education institutes.

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[1] The workshop also consisted of a fifth phase: identifying barriers and ways of overcoming them. The participants were asked to work in couples and identify institutional and practice barriers for one of the selected ideas. At the same time, they were also asked to think of ways to overcome these barriers. These barriers and ways of overcoming them were presented to the group and the others were given a chance to supplement both the barriers and ways of overcoming them. This sixth phase was useful for the directorates but did not play a role in our analysis.

[2] The following initiatives were shown to the participants: www.innocentive.com, www.fixmystreet.com, forum.werk.nl and www.politieonderzoeken.nl.

[3] This list of objectives is based upon the presentation in the workshop (The Hague, March 30, 2009).

[4] This list of objectives is based on the objectives that were presented at the workshop (The Hague, March 30, 2009) and the description of the directorate at the departmental website.

[5] The objectives are based on the directorate's recent strategic document (OCW & SCW, 2007, *Doorpakken met Leren & Werken. Plan van Aanpak 2008 – 2011*, Den Haag).

(2) *Stimulate flexible and efficient education.* The directorate stimulates vocational institutes to develop flexible programs that enable adults to combine work, care and education.

(3) *Communicate ideas about learning and working to citizens and employers.* Through Click, Call and Face (a website, a telephone service and offices for visits), information is provided and awareness of the importance of lifelong learning is raised.

(4) *Develop a concept for lifelong learning.* A think-tank will develop ideas about the question how lifelong learning can be institutionalized in the policy sector through financial incentives, education brokers and a conference.

A typical characteristic of this directorate is that it was created with a sunset clause: the directorate will only exist as long as this government is in power (i.e. 4 years). The objectives of this directorate concern the creation of new networks and also new programs and concepts. The basic idea is that the directorate increases connections, awareness and conceptual ideas in the policy sector so that the sector can work towards the idea of lifelong learning without further government steering and support after the directorate has ceased to exist in 2011.

The strategic orientations of the three directorates are categorized according to the target groups of the policies and the behavior that the directorates aim to stimulate. All directorates aim to influence the behavior of other actors inside or outside the department of education. Table 2 shows that the Policy and Project Directorates have actors outside the department as their target group whereas the staff directorate has actors both inside and outside the department as their target groups. All directorates may be cooperating with actors within and outside the department but their policy objectives reflect differences in primary target groups.

The directorates also differ in the type of change they aim to achieve in their target groups. Cooperation refers to the directorate and their target groups working cooperatively towards pre-established policy objectives such as lifelong learning and adequate data management. Innovation differs in the sense that the directorate does not only aim to stimulate cooperation but it also wants the target group to develop new products and practices. A third type of stimulated behavior is self-steering: the directorate hopes to achieve that it becomes superfluous. Interaction patterns and routines are to be developed that guarantee that the target groups work towards desired outcomes without further intervention from the directorate.

5. Coding tree: dimensions in Web 2.0 usage

The first step in the analysis of the ideas presented by the participants was the development of a coding tree. The coding tree was developed on the basis of the empirical material. The coding tree consists of four dimensions and eight categories were developed on the basis of these dimensions. Logically, one would expect 16 categories on the basis of these eight dimensions but some categories were merged because they should exist logically but could not be distinguished on the basis of the empirical material.

The logic of creating four categories on the basis of two dimensions works for the first two dimensions. The first dimension of this tree is internal versus external use of Web 2.0. Web 2.0 initiatives are

expected to be valuable both for improving the internal organization and for creating external dynamics that fitted the policy objectives. External use of Web 2.0 was defined as access to information and communication for at least one actor from outside central government. The workshop resulted in various examples of both types of uses.

A second dimension in our coding tree that was developed on the basis of the material from the workshops was Web 2.0 as transparency and interaction. A broad list of ideas referred to the idea that Web 2.0 can be used to enhance transparency but also to strengthen interaction between actors. Interaction was defined as having the possibility to have multiple communications between the actors involved.

Based on these two dimensions the following categories as part of the coding tree were used:

(1) *Improving internal transparency.* Web 2.0 technology can be used to increase internal transparency, whereby internal is defined as within national government. Examples are an online social network of civil servants, publishing all relevant data on the internet and a wiki for civil servants with relevant information about the policy field. The internal transparency may also refer to transparency within government at large. One participant mentioned sharing information about societal themes with other government departments.

(2) *Improving internal interactions.* Participants mentioned opportunities to improve cooperation within their organization though Web 2.0 applications. Examples are the creation of a collaborative space on the Intranet, developing policies in digital communities within a government department, using Twitter to provide feedback on concept papers and the exchange of best policy practices.

(3) *Improving external transparency.* These ideas refer to initiatives to make a policy sector more transparent. Examples are transparency of educational opportunities with evaluations by users, creating more clarity about educational policies through an interactive website, an interactive map within successful and less successful practices and naming and shaming education institutes.

(4) *Improving external interactions.* Many participants mentioned ideas to improve interactions between actors in the policy sector. Examples are connecting companies and educational institutes to create internships, setting up communities of experts and practitioners to exchange information and experiences, creating online social networks in the policy sector and setting up a Linkedin community for learning and working.

The ideas that have been discussed so far highlight ways to support current practices. Some ideas explicitly stated ways to trigger (organizational or policy) innovation. Innovation was defined as creating deliberate changes in existing patterns of interaction. This dimension leads to the following categories:

(5) *Innovating educational processes.* Some ideas referred to innovations within the sector. Examples are putting webcams in class rooms to improve feedback, creating options for distance peer feedback,

(6) *Innovating policy processes.* Another form of innovation concerns new relations between government and the policy sector. Examples are a website to involve teachers in new government ideas concerning language and mathematics, pretesting support for new policies through a Web 2.0 application, strengthening horizontal accountability, creating opportunities to provide feedback on expert reports to the minister.

When Web 2.0 is used to strengthen transparency, interactions and innovation, technology is directly linked to content. Some other ideas referred to Web 2.0 as a form (e.g. using Google Maps). Content

Table 2
Objectives of the directorates.

	Primary target groups (inside or outside the department of education)	Stimulated behavior of target groups (cooperation, self-steering, innovation)
Policy directorate	External	Cooperation
Staff directorate	Internal and external	Cooperation and innovation
Project directorate	External	Self-steering

is defined as referring to specific characteristics of the policy field (relations, information, rules, etc.). The last two categories of the coding tree were based upon this content-form dimension of the use of Web 2.0 technology:

(7) *New presentations of information.* These ideas refer to new manners to present the data to an internal or external audience. Google maps, knowledge maps and presenting films on YouTube are examples of this category of ideas.
(8) *Creating conditions for improving transparency and interactions.* These ideas refer to improving the data in such a way that they can be used for transparency, interactions and innovation. Storing all data in XML, geotagging the data, providing data in mash-ups and integrating social network profiles are examples.

This coding tree was used to analyze the ideas and the prioritization of these ideas by the participants in the workshops.

6. Findings regarding the ideas about the use of Web 2.0 technology

6.1. Ideas

In all the three workshops with the different directorates, the ideas could be categorized on the basis of the earlier described categories from the coding tree. The results are shown in Table 3.

The table shows the following differences between the directorates:

(1) *External versus internal focus.* The Policy Directorate and the Project Directorate focus mainly on external transparency and interactions. Compared with the Staff Directorate, relatively fewer ideas have been mentioned about internal transparency and interactions. The Staff Directorate has 27.1% of the ideas in the categories that focus on internal improvements with 15.4% for the Policy Directorate and 4,8 % for the Project Directorate.
(2) *Innovation versus current practices.* The Staff Directorate does not only have a stronger focus on internal transparency and interactions. The number of ideas about educational and policy innovations is also substantially higher than in the cases of the two other departments. The Staff Directorate has 31.3% of the ideas in innovation with 16.6% for the Project Directorate and only 5.1% for the Policy Directorate in these categories.
(3) *Transparency versus interaction.* When focusing on external uses of Web 2.0, the Staff Directorate and the Policy Directorate have a strong orientation towards strengthening interactions. The participants from the Policy Directorate focused more on strengthening external transparency with a stunning 52.4% of the ideas in this category.

Another striking aspect is the differences in number of ideas for "new presentations of information" and "creating conditions for

improving transparency and interactions." However, these differences do not seem to result from differences between the directorates. The differences in number of ideas concerning presentations and conditions can be attributed to the participation of one participant with a technical background.

These first analyses show clear distinctions between the directorates. Are these distinctions maintained when it comes to the selection of the most promising ideas?

6.2. Prioritized ideas

The participants were asked to position three stickers on the ideas they regarded as most promising for their directorate. The results of their prioritization are presented in Table 4.

The prioritizing of the ideas seems to confirm the analysis of the differences between the directorates on the basis of the list of all ideas:

(1) *External versus internal focus.* The Policy Directorate has prioritized ideas mainly in the category "improving external interactions" (50%) and "improving external transparency" (20%). The participants from the Project Directorate have prioritized mainly ideas in the category "improving external transparency" (66.7%). The Staff Directorate also pays attention to strengthening external interactions (30.4%) but also, and much stronger than the other two, focuses on internal transparency and interactions (4.3% and 26.1% respectively). The other directorates did not prioritize any ideas referring to internal transparency or interaction.
(2) *Innovation versus current practices.* The Policy Directorate prioritized "innovating educational processes" with 15% of the stickers and the Project Directorate prioritized "innovating policy processes" with 19.0% of the stickers. The Staff Directorate had a much stronger emphasis on innovation with 4.3% of the stickers for "innovating educational processes" and 26.1% for 'innovating policy processes." This directorate thus has a stronger focus on innovation.
(3) *Transparency versus interaction.* The Project Directorate has a much stronger focus on transparency than the other two: 66.7% of the stickers for "improving external transparency" with only 20% for the Policy Directorate and 8.7% for the Staff Directorate in this category.

These findings give us information about the nature of contextual strategies. The scores highlight that the participants from different directorates focus on other opportunities for the use of Web 2.0.

Table 3
Overview of number of ideas per category.

	Policy directorate (N = 39)		Staff directorate (N = 48)		Project directorate (N = 42)	
Improving internal transparency	10.3%	4	6.3%	3	0	0
Improving internal interactions.	5.1%	2	20.8%	10	4.8%	2
Improving external transparency	28.2%	11	10.4%	5	52.4%	22
Improving external interactions	35.9%	14	27.1%	13	26.2%	11
Innovating educational processes	5.1%	2	16.7%	8	7.1%	3
Innovating policy processes	0%	0	14.6%	7	9.5%	4
New presentations of information	10.3%	4	2.1%	1	0%	0
Creating conditions for improving transparency and interactions	5.1%	2	2.1%	1	0%	0

Table 4
Overview of number of priority stickers per category[a].

	Policy directorate (N = 20)		Staff directorate (N = 21)		Project directorate (N = 21)	
Improving internal transparency	0%	0	4.3%	1	0%	0
Improving internal interactions	0%	0	26.1%	6	0%	0
Improving external transparency	20%	4	8.7%	2	66.7%	14
Improving external interactions	50%	10	30.4%	7	14.3%	3
Innovating educational processes	15%	3	4.3%	1	0%	0
Innovating policy processes	0%	0	26.1%	6	19.0%	4
New presentations of information	10%	2	0%	0	0%	0
Creating conditions for improving transparency and interactions	5%	1	0%	0	0%	0

[a] NOTE: The number of stickers may add up to more than three times the number of participants for the policy directorate. Some participants seem to have taken more than three stickers.

Table 5
Selected ideas per directorate.

Directorate	Selected ideas	Category
Policy directorate	Creating a forum for teachers to exchange ideas about how to deal with students with a language deficiency	Improving external interactions
	Improving math and language skills through interactive computer games	Innovating educational processes
Staff directorate	Setting up communities to exchange scientific knowledge and practical experiences	Improving external interactions
	Developing policies in interactions with schools and citizens	Innovating policy processes
	Developing collaborative work in internal communities (policy papers, planning, brainstorm sessions)	Improving internal interactions
Project directorate	Publishing consumer opinions about public and private adult education	Improving external transparency
	Enabling citizens and stakeholders to react on the policy advice of a think-tank	Innovating policy processes
	Showing the profit for employers of re-educating employees to other employers	Improving external transparency

The participants selected two or three ideas for a further analysis of barriers and implementation strategies. The selected ideas are listed in Table 5.

The selected ideas confirm the profiles that were developed on the basis of the analysis of the numbers of ideas and the prioritization of these ideas: the Policy Directorate focuses more than the other ones on external interactions, the Staff Directorate focuses more on internal interactions but also on innovation. The Project Directorate focuses more on external transparency. How can we understand these differences?

7. Analysis

Do these results reflect the idea of strategic alignment? The differences in lists of ideas and prioritization of these ideas can be attributed to the different strategic orientations of the directorates. To understand the differences, the profiles are compared with the overview of the strategic orientations of the directorates. Firstly, we will look at the differences in target groups. We will analyze the relation between target groups and percentage of ideas relating to internal improvements. The results are presented in Table 6.

The table shows that the respondents from the Staff Directorate, which is the only one with an internal target group, clearly generated more ideas relating to internal improvements. The distinction is even clearer when we look at the prioritized ideas: over 30% of the priority stickers were given to ideas relating to internal improvements whereas none of the priority stickers of the other two directorates were given to internal improvements. This analysis shows that the difference in target groups is clearly reflected in differences in (prioritized) ideas.

The second type of analysis focuses on the percentage of ideas for external transparency. This relation between the kind of behavior the organization aims to stimulate and (prioritized) ideas is presented in Table 7.

This table shows that the respondents from the Project Directorate have generated a higher percentage of ideas for external transparency. When it comes to prioritized ideas, the differences between the directorates are even clearer: two thirds of the ideas of the Project Directorate relate to external transparency compared with only 20% for the Policy Directorate and 8,7% for the Staff Directorate. How can

we understand these differences? These differences can be attributed to the goal of achieving self-steering and making the directorate superfluous. External transparency is needed to make the sector function as a transparent market.

Thirdly, we will look at differences in stimulated behavior. We will analyze the relation between types of stimulated behavior and percentage of ideas relating to innovation. The relation between stimulated behavior and (prioritized) ideas is presented in Table 8.

This table shows that the respondents from the Staff Directorate, the only directorate with innovation as a type of stimulated behavior, generated a higher percentage of ideas for innovation. These respondents also generated a higher percentage of prioritized ideas. This shows that the focus on innovation in the Staff Directorate is reflected in the percentage of ideas for innovation.

The findings as described so far show that government organizations indeed align their Web 2.0 strategies with their strategic orientations. Beside that, we were also interested in the question if it is possible to identify patterns in this alignment. The empirical research led to the identification of five ideal-typical configurations of using Web 2.0. The configurations are based on their internal consistency and are not tested for their external consistency. The configurations that are based on the dimensions internal–external and transparency-interactions and with innovations as a separate category are presented in Table 9.

The three directorates which have been investigated in this study can be positioned according to these configurations. These configurations are grounded in their strategic organization orientation and lead to different ideas about the use of Web 2.0 technologies. This leads to the overview presented in Table 10.

The table shows that different directorates have different configurations and that these configurations lead to different ideas about the strategic value of Web 2.0 for improving the functioning of the directorate. Improving policy sector interactions is the dominant orientation in the configuration for the policy directorate and improving policy sector transparency is dominant for the project directorate. The staff directorate "Knowledge" has a configuration which is a combination of improving organizational and policy interactions and strengthening innovation. These configurations, as we have argued before, are logically connected with the directorates' strategic orientations. The results falsify the idea that the new technologies have a generic value for all government organizations and highlight that specific logics steer the strategic use of Web 2.0.

Table 6
Relation between target groups and ideas for internal and external improvements.

	Target groups	Percentage of ideas for internal improvements (transparency and interaction)	Percentage of prioritized ideas for internal improvements (transparency and interaction)
Policy directorate	External	15.4%	0%
Staff directorate	Internal and external	27.1%	30.4%
Project directorate	External	4.8%	0%

Table 7
Stimulated behavior and percentage of ideas relating to external transparency.

	Stimulated behavior (cooperation, self-steering, innovation)	Percentage of ideas for external transparency	Percentage of prioritized ideas for external transparency
Policy directorate	Cooperation	28.2%	20%
Staff directorate	Cooperation and innovation	10.4%	8,7%
Project directorate	Self-steering	52.4%	66,7%

Table 8
Stimulated behavior and percentage of ideas relating to innovation.

	Stimulated behavior (cooperation, self-steering, innovation)	Percentage of ideas for innovation (of educational and policy processes)	Percentage of prioritized ideas for innovation (of educational and policy processes)
Policy directorate	Cooperation	5.1%	15%
Staff directorate	Cooperation and innovation	31.3%	30.4%
Project directorate	Self-steering	16.6%	19.0%

We do not claim to have presented a full overview of all existing configurations and we realize that other configurations may exist in other directorates and government agencies. We do claim that the configuration of a directorate is a consistent combination of strategic orientation and the Web 2.0 orientation. Further research will show to what extent the configurations we found and additional configurations are present in different government organizations.

8. Alignment 2.0

Our research started with the question about the way government organizations align their operational Web 2.0 strategies with their organizational strategic orientations. The empirical research provided evidence for the idea of alignment. Government 2.0 may be based on generic technological capacities–many-to-many networks, user-generated content and personalization–but the use of these characteristics has to fit the organizational strategic orientations. The 'one-size-fits-all' approach of the application of Web 2.0 technology often implicitly suggested by the advocates of the transformational power of this technology seems not realistic. Not even at the level of one ministry. It turned out that different directorates within this ministry each have different strategic orientations. And based on these orientations, they have also different ideas about the meaning and the surplus value of Web 2.0 technology and applications for their own work. Our research shows that differences in strategic orientations led to variations in (prioritized) ideas for using Web 2.0. Therefore each directorate needs to develop its own specific operational Web 2.0 strategy.

The organizational strategic orientations can be used as a starting point for such a strategy. Civil servants from government organizations can connect key technological characteristics to their strategic orientations to generate ideas that are specific to the government organization. The workshop approach proved to be an effective way to do this. It highlights that strategies should not be developed by IT-specialists with insufficient knowledge from behind their laptops. IT strategists should use creative forms to combine contextual knowledge and knowledge about technologic opportunities. This combination of technological and organizational knowledge is at the heart of our approach for strategic organization alignment and the interaction between these types of knowledge led to the production of new knowledge: valuable building blocks for developing an operational Web 2.0 strategy. The approach has a bottom-up character and resulted in long lists of (prioritized) ideas. In the subsequent development of a full strategy, these building blocks need to be assessed, integrated and put within a wider strategic framework

At the start of our research we were also interested in identifying possible patterns in this alignment. In our empirical research we have identified five configurations in the operational strategies of three directorates at the Dutch Department of Education: organizational transparency, organizational interactions, policy sector transparency, policy sector interactions and process and policy innovation. This overview does not pretend to be exhaustive but validates the idea that an alignment approach leads to differences in operational strategies. Furthermore, these configurations reflect an interesting variation in government organizational strategic orientations. By positioning themselves according to the ideal-typical configurations organizations can use these configurations to guide the development of their operational Web 2.0 strategy. The configurations can help them to think about the use, the focus and the aim of the Web 2.0 technology in relation to their specific strategic orientations. Therefore thinking in configurations can help to open the black box of the often not so productive "one-size-fits-all" approach that seems dominant in thinking about the use of Web 2.0 technology.

These configurations could be tested in further research to investigate to what extent they prove to be of a more general nature. However, it must be considered that we have only looked at three directorates within a policy organization. We are aware of the fact that this is a specific type of organization. Extending the research to other types of organizations, like for example organizations aimed at the execution of policy or regulatory organizations could perhaps lead to other types of configurations.

To conclude, the application of the "old" strategic business alignment approach to "new" Web 2.0 technologies has shown that this old method is still useful. One could even argue that this approach is even more useful with the new technologies for they tend to be more malleable than the old technologies. Adaptation of wikis, social networks and RSS feeds to organizational strategic orientations is simple since they can be tailored to specific needs. Strategic alignment is easier than before and it should indeed form the basis for government Web 2.0 strategies. Let all Web 2.0 strategists in government work on Alignment 2.0.

Table 9
The value of Web 2.0: five configurations.

	Organizational transparency	Organizational interactions	Policy sector transparency	Policy sector interactions	Process and policy innovations
Type of use	Internal	Internal	External	External	Both
Focus	Interactions	Transparency	Interactions	Transparency	Both
Aim	Strengthening current practices	Strengthening current practices	Strengthening current practices	Strengthening current practices	Innovating practices

Table 10

The value of Web 2.0: four configurations.

	Organizational transparency	Organizational interactions	Policy sector transparency	Policy sector interactions	Process and policy innovation
Directorate "Vocational and adult education"	0%	0%	20%	50%	15%
Directorate "Knowledge"	4.3%	26.1%	8.7%	30.4%	30.4%
Directorate "Learning and working"	0%	0%	66.7%	14.3%	19.0%

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Albert Meijer works as an associate professor at Utrecht University.

Marcel Thaens is a professor at Erasmus University Rotterdam.