LAND REGISTRATION AND CADASTRE, ONE OR TWO AGENCIES?
Stage 2 of the research

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Abstract

In recent years the debate on whether to opt to organise land registration and cadastre under one roof has been dealt with regularly by European umbrella organisations. To date, there is no general consensus. Some countries defend their integrated model; some land registration or cadastre organisations would favour such integration but do not think it is politically achievable in their countries. And especially when non-integrated organisations are well-managed opposition to integration can be strong. The European umbrella organisations therefore have always refrained from giving a firm position in this issue.

This paper describes a research project that is being carried out by the Working Party on Land Administration (WPLA) in this issue. The research consolidates the arguments in the debate. The core question of this research was to unpack how the processes of merging and integration of cadastres and land registers could be further qualified, and how one could further distinct different components from merging. It is based on the analysis and outcome of a questionnaire, sent to 52 European countries. The topics in the questionnaire were derived from the components of the European Framework for Quality Modelling (EFQM).

The collective responses to the questionnaire show that currently the merger processes and the debates about mergers have primarily an internal focus, evolving around internal (intra-organizational) operational processes and at strategic management level. The management of a collective societal relevance, and the handling of customers is still largely handled separately. The balance between the internal performance (to gain an organisational benefit - mainly in terms of efficiency) and the external performance (to gain societal benefits – mainly in the form of effectiveness and appropriateness) is still insufficient.

Key Words: Cadastre, Land Registration, Governance, Quality Management, EFQM

Introduction

Over the past years the Working Party on Land Administration (WPLA) of the UNECE has been engaged in a research in the organizational aspects of cadastre and land registration organisations. Laarakker, de Vries, and Wouters (2015) describe the results of the first phase of this research. Based on a literature research and an analysis of the World-Bank-doing-business-report the conclusion was drawn that no hard empirical evidence is available to promote the integrated model of cadastre and land registration organisations, despite the fact that a number of countries in the UNECE region have decided to decide to such mergers in the past years.

Also a narrative analysis was executed based on personal stories on merger discussions and the practice and time paths of merger decisions (either to merge, or not to merge). This narrative analysis revealed that often mergers discussion can be traced back to either a very hard and discrete change in statutory law, or a more gradual and continuous demand for more interoperability and more simplification of tasks. Whilst most staff members commented that in practice more interoperability takes a long time due to altering daily processes and responsibilities, interoperability calls and even formal organisational mergers have in practice not fundamentally changed the internal behaviour and culture within the organisation, let alone fundamentally changed or even integrated the former distinctive databases.

A scientific publication has been produced based on these first findings: (de Vries, Laarakker, and Wouters 2015). In addition to the conclusions found earlier, the article describes how encouraging and intensifying collaboration with information resources is in fact leading to an organisational transformation in which new unwritten procedures and attitudes are manifested leading to new communities of practice. These new organisational rules challenge historically grown and formally structured procedures, which can lead to internal resistance or discretionary behaviour of individual staff members. Therefore it was advised to stimulate mergers and further integration with a more evolutionary approach rooted in the professional tasks descriptions of individual staff members and the processes related to quality assessments thereof. The extent, purpose and success of mergers hence directly relate to quality assessments, which could potentially be very context and organisation specific.

Problems with understanding mergers between cadastres and land registers

Since the above mentioned research did not provide a clear justification for issuing the order "Thou shalt merge" (also originally foreseen in documents such as Cadastre2014), WPLA considered what other support it could give to its members to shine light on this issue. Obviously every country operates in its

own very specific context and is strongly contingent upon the history of institutional development. This implies that regardless of generic models of land administration, specific issues related to (inter- and intra-) organisational and informational alignment remain to be solved. This includes amongst other local choices on software and database development, re-organising operational processes, and adapting to changing needs in volume and type of data and services. Hence, even disregarding diverse political and economic situations, WPLA is currently not in the position to comment on the mergers on individual countries. Still, it would like to advice on the primary underlying features which come alongside the mergers. In this context the merger unknown was rephrased from 'what are current merger processes and why are they needed' to 'what forms of integration can be referred to as mergers, and how do they contribute to a fundamental change in organisational quality'.

Given the rephrased merger unknown, the second stage of the research project has drilled down deeper into the question: "What features define the quality of land administration services?" The scope of the research was to determine if a more refined set of characteristics of intra- and inter-organisational structure and operational practices can be related to any of the national performance and benchmark indicators of the land administration system. This can be the basis for strategic challenges related to land administration organizational, structure, ICT-solutions, architecture, process and work flows. Furthermore, whilst the study concentrated on the land administration domain, including actors such as cadastre, land registries, notaries, surveyors, the findings could also be relevant for the electronic government domain, as many actors in this domain also tend to increase their levels of integration. What could perhaps be specific about the merger experiences in land administration as compared to other e-Government trajectories may be that the majority of and agencies have a long history of collaboration and trials and pilots of mergers, and could thus act as a pilot ground.


Methodology

To evaluate the granularity of intra- and inter-organisational structure and operational practices we relied on an analytical framework derived from the EFQM model (European Foundation for Quality Management 2012). With this model we developed a structured questionnaire aimed at deriving the contemporary/current practices which reflect merger aspects. This model was combined with a set of general questions, after which the draft design of the questionnaire was validated by representatives of WPLA, ELRA (European Land Registrars Association), and PCC (Permanent Committee on Cadastres in the EU). Finally the questionnaire was executed with the online survey tool SurveyMonkey.

Before discussion the results to the questionnaire, first the EFQM-model is shortly explained and the resulting design of the questionnaire and execution of the survey is summarized.

EFQM-model

The approach for this assessment is based on the concept of total quality management. The EFQM model is used as a framework for the analysis. This model can be used to assess an organisation's progress towards excellence. It is visualized in Figure 1.
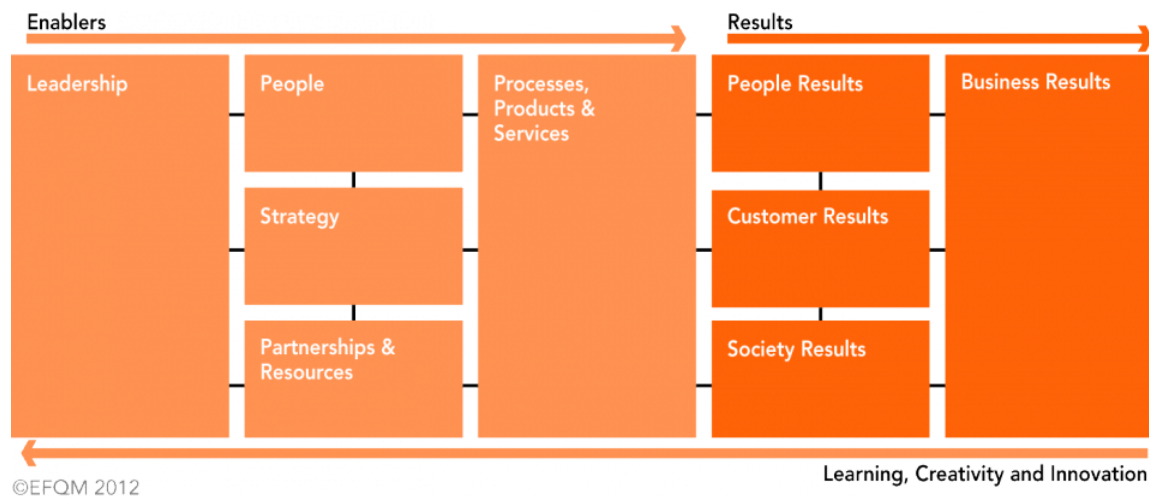
Figure 1: EFQM model

The terms "Enablers" and "Results" are used to designate two categories of criteria. Enabler criteria are concerned with how the organisation undertakes key activities and Results criteria are concerned with what results are being achieved. These results are defined widely. It is not only results for clients that matter but the organisation's activities also affect the staff and society as a whole. The sum of these results gives the total business results. The arrows are used to stress the dynamic character of the model. Enablers lead to results, results have to be assessed and lead to learning and innovation. It creates a continuous circle of improvement.

The philosophy of the methodology is that enablers and results have to be in balance. It can be compared with the old proverb of the weakest link that constitutes the strength of the chain. Enablers have to be on a certain level to reach certain results. Strong leadership is useless when people are not educated or well

defined processes will not be executed if resources are not available. So to reach an optimal level of excellence all enablers and all fields of result have to be in balance as much as possible.

The choice for EFQM may not be evident from the start. There is indeed a large body of literature on how to design and evaluate comparative studies with a strong root in practice-based experience. Recently, Jónsdóttir Johannessen and Hornbæk (2012) note for example with regard to technical evaluations that not so much the technical use must be evaluated, but rather the utility. With regard to work flow and decision making processes Verweij et al. (2013) use fuzzy set qualitative comparative analysis – a relatively new approach in public administration research – to systematically compare the decision-making processes and outcomes of 14 Dutch spatial planning projects. With regard to ICT impact, Misuraca, Codagnone, and Rossel (2013) argue that there is a need to redefine many conceptual and technical dimensions of the measuring ICT input and organizational adaptation with impact evaluation causal models and hypotheses. What these recent publications have in common is that they all call for redefined ontologies to reflect and measure organizational attributes combined with an improved way of attributing the effects that changes generate. Though the above-mentioned evaluation approaches are all relevant and could all be appropriate for the present study, EFQM is most of all practical and well tested. It makes a clear distinction between enablers and results. A slightly adapted EFQM model – which better suits the peculiarities of land administration organizations could derive the conceptual model.

Development of questionnaire

The components of the EFQM model provided the core input for the questions in the questionnaire. However, before using these components for specific quality questions, we first posed three types of initial generic questions as a checkpoint for the more specific EFQM related questions. Respondents were first asked to list the organisations in their country responsible for the processes of adjudication, demarcation, surveying and registration. The reason for this question was to verify whether there still existed distinct organisations, or whether the respondents still perceived the organisational processes still as distinct and separate (hence not integrated nor merged). A second generic question referred to whether respondents expected a change in these structures in the near future. This question tested whether formal merging (in case of non-merged organisations) is a realistic option. Thirdly we asked about the respondents' perception of integration. We used a still topical article of (Ziegler 2004), who refers to different degrees of information systems integration: manual integration, integration by common interface, integration by applications, integration by middleware and integration by uniform data access. This question aimed to test whether full integration of operational process could be a realistic alternative or a de facto equivalent for full mergers of organisations.

The development of the EFQM related questions used both closed and open questions related to each EFQM components. The open question used a 4-scale answering scheme for one or more statements related to each component, while the open questions aimed to seek examples, cases and documents backing up their closed questions.

Methodology of interpreting the results

In the interpretation of the responses a combination of qualitative analysis and interpretative analysis was employed. This combination used an 'hermeneutic' cyclic approach. Hermeneutics, the art and science of interpretation, is based on the idea that the understanding of the whole can only be based on the understanding of smaller parts combined with a cycle of interpretation. According to this approach people cannot be separated from their knowledge, therefore there is a clear link between the researcher and research subject. For organisational research Gummesson, (2000) describes that a proper insight in cases is based on personal experiences (as undocumented knowledge), literature (as documented knowledge), and systematic interpretation (as sense-making and theory-building exercise). Gummesson (2003) adds thereby that such a process is by nature subjective. Subjectivity can however be tested or validated by communicating results with other knowledge holders and by building empirical plausibility.

Results

Twenty country representatives responded to the questionnaire. Although this number may be limited for a full-fletched statistical analysis (which was not even the intention of this research), it should be stated that with the help of the WPLA secretariat it was ensured that the respondents were all very experienced staff members who are (or have been) involved in all aspects of land administration and organizational change. The collective of answers can thus be considered significant.

On the first generic question (on the organisational responsibilities of land administration processes) the responses prove that the issue of merging land registration and cadastral processes is not restricted to one or two (public) organisations. In most countries the private sector is involved in demarcation and surveying of cadastral boundaries. This means that all cadastral and land registration activities cannot be brought into one government organization. Hence, the strategic development of the sector has to be managed by inter-organisational governance structures instead of a single public sector mandate. For the issue of mergers it also implies that an organisational merger from a structural perspective is actually an irrelevant conceptualisation of mergers.

On the second generic question – on whether organisational changes are foreseen - two countries are in the process of merging the organisations, whereas one country has started to outsource surveying work. This finding re-confirms that land administration processes are apparently increasingly embedded in multi-dimensional and inter-organisational governance structures. A merger of operational governance might thus be a more appropriate conceptualisation of reality than a merger of operational structures.

Responding to the third generic question - the discussion on the integration of information systems - respondents assessed their systems as follows (Table 1):

Type of integration	Number of respondents
Manual integration	1
Common interface	2
Integration by applications	5
Integration by middle ware	3
Uniform data access	7

Table 1. Perceived extent of integration of information systems related to land administration

The number in the table indicate that a significant number of respondents perceive the integration of information systems as complete, yet the majority considers the integration as not complete or far from complete. Uniform data access through a seamless and fully automated back office only occur in a minority of cases, whilst manual integration is still one of the operational options. This finding confirms that the technological challenges in the data realm are still noticeable despite external pressures to enhance integration and technological narratives presenting the ease of integration. It also confirms that the merger discussion has to take this aspect of information integration into account as a noteworthy sub-component of mergers.

Tables 2 until 11 present the number of responses in relation to the components of the EFQM model (expressed as a scale of 4 of agreeing). Each are further discussed hereunder.

Component LEADERSHIP	I fully agree	I largely agree	I partly agree	I disagree	Total
The organization(s) responsible for the C&LR processes has (have) a clear joint vision on the execution of their tasks	9	5	5	1	20
This vision is based on thorough knowledge and analysis of the environment of all C&LR organizations (clients, stakeholders, ministers, etc.	9	7	3	1	20
The vision is based on strengths, capabilities and the unique positions of all C&LR organizations	9	4	6	1	20
All C&LR organizations are adapted to optimal execution of integrated all C&LR services	7	8	0	5	20
All managers express a positive attitude towards cooperation with other land administration organizations	8	7	3	1	19
All managers are offering a powerful stimulus to improvement, renewal and innovation of integrated all C&LR processes	6	6	6	1	19

Table 2. Responses to the leadership component

Table 2 shows that the issue of leadership of all C&LR organizations is in principle not questioned. The only point where the respondents are somewhat divided is the issue of integrated cadastral and land register services. In the explanation of why this is so, one of the respondents comments that coordinated leadership does not exist if there is not a clear vision of integration. Despite formal arrangements and regular meetings between CEOs of the respective organisations it is only easier to integrate if the two parts of the organisation share the same office and report to the same manager. Different managers and management structures hence may prevent a coherent integrated service in some cases. Other more

positive experiences refer to the recognition of mutual benefits which can only start at the top. If these are equally recognized than each of the individual CEOs can also stimulate a collaborating environment.

Table 3 presents the results for the component strategy and policy.

Component STRATEGY AND POLICY	I fully agree	I largely agree	I partly agree	I disagree	Total
The organization(s) responsible for the C&LR processes has (have) a clear joint vision on the execution of their tasks	9	5	5	1	20
This vision is based on thorough knowledge and analysis of the environment of all C&LR organizations (clients, stakeholders, minister, etc.)	9	7	3	1	20
This vision is based on strengths, capabilities and the unique positions of all C&LR organizations	9	4	6	1	20
All C&LR organizations are adapted to optimal execution of the integrated C&LR services	7	8	0	5	20
All managers express a positive attitude towards cooperation with other land administration organizations	8	7	3	1	19
All managers are offering a powerful stimulus to improvement, renewal and innovation of integrated C&LR processes	6	6	6	1	19

Table 3. Responses to the Strategy and policy component

Roughly 60-75% of the respondents are considering that the cadastre and land register agencies in their respective countries are integrating strategies and policies at the highest organizational levels. Under this heading the respondents were also asked to list the laws that regulate the cadastral and land registration processes. Background of the question was that also in merged situations the laws that regulate the processes can be different, creating obstacles for alignment of processes. The number of laws mentioned ranged from 1 to a great number. This suggests that the formal instruments to merge seem to be in place,

and are used to justify or support strategic behaviour and strategic actions. Practical examples of such actions to which respondents refereed include:

- Working groups towards merger
- Introduction of a unique parcel identification
- The development of integrated products
- The development of one-stop service solutions like integrated information systems
- The creation of a positive cooperation culture

The open question in relation to this component also showed that then perceived practical results of such strategic actions improved the joint results, such as:

- Improvement of software with external partners
- National cadastre project organise brainstorming meetings with stakeholders
- Change of the law: from obligation to use cadastral parcel number in the deed also the obligation to use the boundaries from the cadastre.
- Sharing KPI's but no joint corporate KPI's

Some respondents, however, also indicated that no specific coordinated strategy exists. This would imply that whilst the formal instruments (laws, regulations, polices) are available these are not always effectively translated into practical coordinative actions.

Table 4 shows the responses regarding the People component.

Component PEOPLE	I fully agree	I largely agree	I partly agree	I disagree	Total
HRM policy is stimulating staff and employees to realize the joint strategy	4	6	6	4	20
C&LR organizations regularly discuss their HRM policies	6	2	5	7	20
C&LR organizations have a joint HRM strategy	8	1	4	7	20
C&LR organizations use the same remuneration / salary scheme	11	2	2	5	20
C&LR organizations stimulate exchange of staff members	4	3	6	7	20

Table 4. Responses to the People component

The more or less equal numbers of agreement and disagreement indicate in this case that in half of countries the human resources of both organizations are managed by one (comprehensive) system, whereas in the other half there are distinctive human resource conditions and management strategies. The latter has serious consequences for the stimulation of a consistent corporate culture of the entire organizational system. If de facto the different organizations are administered with a different set of human resource regulations, possibly with different salary schemes or working conditions and relying different daily practices and routines, than the sense of integration, or even the willingness, to integrate may be seriously hampered.

Table 5 shows the responses on the component of partnerships and joint or separate resources management.

Component PARTNERSHIP AND RESOURCES	I fully agree	I largely agree	I partly agree	I disagree	Total
C&LR organizations have a joint vision how financing of all activities should take place	7	5	4	3	19
The means and (human) resources available to C&LR organizations are sufficient to realize the joint strategy	4	5	3	7	19
Cost and income are allocated to defined product groups and customer segments irrespective of the C&LR organization	4	3	5	7	19
C&LR organizations have a joint vision on knowledge management	4	5	4	6	19
C&LR organizations rely on the same procedures and staff members when procuring	5	4	3	6	18
C&LR organizations evaluate each other's performance and discuss this regularly	4	6	4	5	19

Table 5. Responses to the Partnership and Resources component

It is apparent that the degree to which resources management is shared differs considerably among the represented countries. The majority of respondents indicate that finances remain handled in different manners and that resources procurement are still handled separately. This practice resembles what (de Vries and Ester 2015) found in relation to the financial coordination of basic registers in the Netherlands.

Overall transaction costs tend to be looked at on individual transaction cost level instead of at systematic organizing system level. The result is some form of duplication of decentralised cost accounting practices which in itself prolongs inefficiency in the handling of resources. For those countries where a more integrated management of resources takes place, this is fostered by collaborative knowledge seminars and project-based collaboration, for example.

Table 6 provides an overview related to the Processes component.

Component PROCESSES	I fully agree	I largely agree	I partly agree	I disagree	Total
All C&LR processes are designed in alignment with the strategy	7	5	3	3	18
All employees of respective C&LR organizations understand their contribution to the overall joint objectives	5	6	5	2	18
Professionals have enough freedom in how and when to execute documented processes	6	7	5	1	19
All C&LR processes are monitored such that interdependent processes are improved	7	4	7	1	19

Table 6. Responses to the Process component

Apparently, the degree to which processes are or are being integrated is fairly high. A relatively small portion of respondents experience difficulties with operational process integration. Yet, in the space for further comments, most respondents refer to either 'one-stop' principles or the idea that exchange of information improves the quality of the products and services. The processes are clearly perceived as the key fuel for the quality of services, and the majority of staff members is closely related to the operational needs of the processes and the justification of the processes. The only hesitation that staff members have is in relation to the coordination of the processes. Although the coordination takes place informally, it is not always possible to fit the coordination activities within the statutory and organisational rules. The implies that the degree of integration in the coordination of inter-organisational processes can still be improved.

Tables 7 until 11 summarize the results in relation to the results or outcomes. Table 7 shows how respondents reacted on the component Customer results.

Component CUSTOMER RESULTS	I fully agree	I largely agree	I partly agree	I disagree	Total
C&LR organizations only have a single joint strategy for shared customers groups	6	4	2	7	19
C&LR organizations execute only customer surveys	4	3	2	10	19
C&LR organizations work with all customers to realize the strategy	3	6	4	6	19
All clients perceive the C&LR organizations as one single integrated entity	4	4	4	7	19

Table 7. Responses to the Customers Results component

The variety in the figures in Table 7 indicate that the integration in results for customers is predominantly seen as an internal matter of strategy rather than an external approach to operate to customers as a single, seamless organisational entity. Staff members perceive and recognize that a single strategy is necessary and transparent, however customers are still approached from the original separate organizational entities. Remarkable is the fact that apparently even the customers' surveys are handled separately. On the other hand, this may also seem logical if particular customers are only interested in particular products. In this case, one would have single product-customer relations, and the improvement of these products would even in a fully integrated organization related only to that single product. For the concept of mergers this unified customer approach may thus be less relevant. A single strategy towards the methodology of communicating with customers can be reached, however, the content and improvement of single product-customer relations may thus be not dependent on a fully integrated organization, or otherwise put, may be not a crucial characteristic of a merger cadastre.

Table 8 gives an overview of how results and effects for employees are currently considered.

Component PEOPLE (EMPLOYEES) RESULTS	I fully agree	I largely agree	I partly agree	I disagree	Total
C&LR organizations execute a single standard employee satisfaction survey for all departments	6	3	2	8	19
All employees rely on a single policy for employee development related to a joint strategy for C&LR organizations	6	4	2	7	19

All employees of all C&LR organizations perceive that their organization successfully achieves their mutual goals for employees	4	5	3	7	19

Table 8. Responses to the People (employees) Results component

Remarkably the results presented in Table 8 largely resemble those of Table 7. The results for customers are apparently closely associated with the results for individual employees. The explanatory reasoning and justification for these answers differs however. One respondent explicitly mentioned that the labour regimes in the separate organizations are simply very different. Combing or integrating these is therefore too complicated in the short run. Another respondent noted that employee satisfaction is nor factored in all the strategies developed by the government. Hence, this issue is relevant beyond the issue of cadastral mergers. It relates to all government agencies.

Table 9 provides the responses vis-à-vis society results.

Component SOCIETY RESULTS	I fully agree	I largely agree	I partly agree	I disagree	Total
C&LR organizations have an integrated overview of stakeholders, both public as non-public	6	5	5	2	18
C&LR organizations have a joint vision on their responsibilities in society	8	4	6	1	19
C&LR organizations successfully achieve their goals for employees and management	5	5	2	6	18
C&LR always refer to the same mutual documents to express their goals in society	5	7	5	2	19
C&LR organizations have one single standard way to measure and report on their added value in terms of cost/benefit for society	5	5	5	4	19

Table 9. Responses to the Results for society component

The variety in response is quite high in Table 9, indicating that whilst both cadastre and land registers aim for similar societal outcomes, such a security of land rights and property, there are no uniform means to measure such outcomes. One respondent even argued that different stakeholders benefit in different ways from the varied products and services of either organisation.

Table 10 reveals the respondents' perceptions regarding the business results.

Component BUSINESS RESULTS	I fully agree	I largely agree	I partly agree	I disagree	Total
Yearly results are analysed in one single integrated way	8	4	2	6	20
Efficiency and effectiveness of C&LR are planned in one joint manner	7	4	0	9	20
Yearly results of all C&LR organizations are used to strengthen the joint strategy	7	3	1	9	20

Table 10. Responses to the Results for Business results component

The results in Table 10 are quite dichotomous. There seems an equal share of respondent who completely agree and those who completely disagree. There is seemingly a large difference between joint efficiency and effectiveness management of the entire processes. This issue is likely related to the fact whether organisations are effectively (operationally and financially) managed and governed as one organisation or as two organisations. In a financially autonomous and integrated organisation, the perception of a joint and integrated efficiency strategy is a hard requirement.

Table 11 summarizes how respondents view the degree to which the results lead to improvement and innovation .

Component IMPROVEMENT AND INNOVATION	I fully agree	I largely agree	I partly agree	I disagree	Total
Only results of joint client and staff satisfaction surveys are used to further develop integrated strategy and policy	3	4	4	8	19
C&LR organizations have a joint change management to learn from experiences	4	2	7	6	19
C&LR organizations are able to organize support for the joint strategic goals by their stakeholders	4	2	8	4	18
Mistakes are never made twice	3	5	7	3	18

Table 11. Responses to the Results for the Improvement and innovation component

The majority of respondents disagree with the integrated improvement and innovation questions presented in Table 11. Joint, integrated or merged change management is thus far from reality, even in organizations of which the structure and processes are merged. One respondent clarified this type of response by stating that the strategy and policy for innovation are largely dictated by the available or not available finances and not by the (changing) needs of the stakeholders. With regard to the mistakes, this is taken for granted.

Discussion - the connotation of enablers and results to the merger qualifications

When combining the qualitative results of the previous section one can observe that the responses related to the results exhibit a larger variety than the responses related to the enablers. The integration in many of the enablers seems to have been internalized and adopted, whereas the integration of external strategies and customer management is apparently still a major problem or bottleneck. Some relate this specifically to different institutional frameworks, others also justify this fact by stating that the variety among stakeholders and societal needs make a single strategy perhaps not effective. A diversified external customer management strategy may be more relevant than integrating customer management methodologies.

In a more quantitative way one can also compare the results per collective sets of either enabler or results components. When averaging the degree to which respondents agree or disagree with each of the statements it is possible to rank all quality aspects, based on the average degree of agreement of all questions per component. If the 4-scale rank corresponds to the numbers 4 (for fully agree) to 1 (for disagree) than the average number of agreeing is calculated by the vector per statement times the vector for the scales. After this the average values for all questions are again averaged to result in an average value per component. This enables a ranking of all components, as shown on Table 12. The degree of agreement is a proxy for the degree of integration because all questions related to the degree to which each component was integrated. In other words, Table 12 shows for which components integration is currently taking place.

Component	Average degree of agreement / integration (4 is the proxy for full integration – 1 is a proxy for no integration)
Leadership	3.04
Strategy and policy	3.04
Processes	2.88
Society results	2.74
Business results	2.52
People	2.50
Partnerships and resources	2.44
People (employees) results	2.39
Customer results	2.28
Improvement and innovation	2.27

Table 12. Average degree of agreement – a proxy for degree of integration

The ranking in Table 12 indicate that organizations are perceived to reach the highest degree of integration in collective leadership and joint strategies, and the lowest degree of integration in handling customers and collectively dealing with improvements and innovations. These quantitative ranks indicate that there is still an operational focus in the question of integration instead of a customer focus.

When differentiating these results in the enablers and results one can derive the comparative average values of enablers and results. Table 13 shows these values and reveals that the perceived degree of integration is substantially higher for the enabler components than for the results components. This would suggest that the integration is primarily developed and appreciated from an internal perspective and not from a systems perspective, whereby results are created or improved in the external environment, such as society at large or customers in the more narrow sense.

Enablers		Results	
Leadership	3.04	People results	2.39
People	2.50	Customer results	2.28
Strategy	3.04	Society results	2.74
Partnerships and resources	2.44	Business results	2.52
Processes, products and services	2.88		
Average	2.78	Average	2.48

Table 13. Comparison between the degree of integration of enablers and of results

On a larger outlook one can debate whether there is a sufficient relation between the internal performance (to gain an organisational benefit - mainly in terms of efficiency) and the external performance (to gain societal benefits – mainly in the form of effectiveness and appropriateness). The perception is at least that this relation is not in balance. It is still seen as complicated to relate these with evident indicators.

Conclusions

The core question of this research was to unpack how the processes of merging and integration of cadastres and land registers could be further qualified, and how one could further distinct different components from merging. The analytical model of EFQM in connection with the survey results among key experts clarify that the degree of integration and merging is larger in the enabling components of an organizing system as compared to the results components of such a system. This implies that currently merging processes primarily have an internal focus, evolving around internal (intra-organizational) operational processes and at strategic management level.

Connecting the operational process to a larger system whereby customers and societal relevance are taken into account is still lacking in most cases. This raises the question whether there is a necessity in the order or sequence in which merging can take place or is effectively taking place. Instead of merging organisations in a systematic and linear way, the actual merging starts with integration of operational processes at the lowest levels, and only then the larger pictures, taking into account the broader environment of the organizing system of land administration is taken care of. This confirms earlier findings in (de Vries, Laarakker, and Wouters 2015) that the mergers are following different co-evolving streams of organizational change and development. These streams are related but not necessarily causally and effectively connected. Instead, they evolve in seemingly independent ways. Merging, in other words, is more than enforcing or coordinating to merge. It is also dealing with unforeseen and unmanageable factors which either stimulate or resist merger objectives.

From the findings is it not possible to provide a single standard advice for separate or merged cadastre or land register agencies. Still however, the findings indirectly highlight to need to include external parties (especially regular product, service and information customers, clients, suppliers) in the merger discussions and in the resulting quality discussions. If the innovation and improvements in the internal processes (even in merged organisations) are executed in isolation of changing needs and of use of alternative usage of technologies by external parties for example, than it can obstruct significant changes in efficiency and effectiveness for the land administration system as a whole. For separate agencies one

could even think of more common or coordinated marketing and customer relations management systems than what seems to be separate at this time. The next step in the practical continuation of this research would however be to bring these findings into the discussions of the task force of the WPLA and the forum of experts dealing with this merger issues. With such a discussion and further feedback practical and feasible implications and changes in both strategic and operational processes can be further highlighted.

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