

# Designing a National Geographic Information Agency for the New Millennium

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## Summary

The need to rationalise operations and to increase user financing will be parts of the challenge for most national mapping organisations in the first years of the new millennium. Having to satisfy demands from users, rather than setting production targets, means going in a direction that is more similar to private sector business operations than what has been the custom and tradition. The need to create an organisation that covers a business area in line with business demands for services and an environment that will help recruiting and keeping qualified and engaged staff puts management to new tests. These challenges must however be met and changes made in order to secure a place in a rapidly changing environment.

Much can be learnt from general management experiences, but also from what other mapping organisations have gone, or are going, through. The National Land Survey of Sweden has worked extensively with user financing and business development. This can be of relevance to many others who are on the verge of going from being a map producer to becoming a geographic information agency.

## Introduction

The fast changes in our society, irrespective of where in the global marketplace we exist, bring about new demands and challenges. The need for a clear mission and defined strategies is bigger than ever before.

For national mapping agencies it is necessary to handle the demands from the owner, the customers and the staff in shaping an organisation that still has a place in the information age of the new millennium.

We can be certain that things will change continuously – and at ever-increasing pace – and we have to adapt to that. Someone said that we will never again have such a leisurely time as we are having right now! But what will this mean in more practical terms?

First of all, the title of this paper gives an indication of what I am thinking of. It's no longer about mapping, but about something else. Information – and communication in all possible ways – is what the start of the new millennium is all about. As heads of what used to be a traditional mapping operation this means changes, and challenges.

## Missions and strategies

These changes in our operational environment create a need for a clear mission, and the strategies to reach the target set. It was not long ago that most things, including the need for government funded national mapping programmes with a continuous air photography streak over the country, were taken for granted. There was really no need to think why or to explain what it was all about. Things like mapping were perhaps not noted the way other parts of the public sector were, but there was a certain nice stability to it.

But now we know better. All walls can tumble down, and faster than we imagined. Empires have fallen, traditional policies been deserted in favour of new ideas and ideals. Being in charge of any operation today requires a good picture of the world around us, and the demands that exist. Based on that a defined *raison d'être*, business idea, mission statement or vision that can be explained not only to other professionals but also to those making the decisions that affect us – be they ministries of finance, rescue services or one-time customers – is needed.

Defining a mission will however not be enough; we need to know how to get there too. These strategies – as will the mission – will of course differ between different agencies and countries. But I am sure that certain elements will be common to many that embark on an exercise to establish the mission and the strategies for their agencies.

Measures to rationalise operations and an increasing need for user financing are certain to be demands from our owners that will appear in many places. The need to create an organisation that covers a business area in line with customer demands is likely to crop up, as is the need for creating an environment that will help us recruit and keep qualified and engaged staff. These are most certainly not new items on the agenda, but perhaps the need to consider them seriously has become bigger and more urgent.

As practical examples in this respect, the changes that the National Land Survey has undergone recently are very illustrative. In 1997 a more distinct organisation with three divisions, each one with specific business areas but with a mandate to cooperate whenever suitable, was introduced. Parts of the organisation were altered from a geographic structure to one of business areas. Staff reductions were made and focus was put on the need to concentrate on income earning activities. In fact, this period of change was named phase 1, something we had to go through before it would be possible to talk about growth or development.

## Financing and cost recovery

Most of our organisations have a background with most, if not all, funding of operational costs from the coffers of the national government. One thing that has become very clear in many parts of the world however, is the way these coffers have shrunk. The days of increasing levels of ambitions have been substituted with demands for cost recovery and user financing. And I'm sure this is for the good.

By recovering more of the costs from our users – for which I use the term user financing – it is possible to provide better services, and the services that are required. The cost at which geographic information is provided at, for example, the federal level in the United States – a nominal fee to cover, in principle, only the distribution costs – will in the long run have devastating effects.

Let me explain why this is the case. When we enter a digital era, when we leave the time of being a mapping operation to being an information provider, the ways in which our users operate also changes. The need for up-to-date information rather than what was deemed to be suitable from a planning or production point of view becomes the focus. The only way to be able to provide something that is as up-to-date as the customers require is by having them making a considerable contribution to the costs for this. What the national government might be expected to fund solely is the basic exercise to create the digital data sets that will be the basis for future use. But the constant task of keeping these databases up-to-date is not something we can expect government funding for. Others must contribute, and I see no better alternative than the users of the information. And the value, in terms of reduced costs and better services on their side, to the users of up-to-date information is a clear indication that the government need not be the only fund provider.

This is in no way in any contradiction with the interests of the private sector to be able to add value and provide new and improved products. On the contrary, more up-to-date information, and a larger number of users and usage, can only be of advantage to those value-adding entrepreneurs. And I really see no reason why the national government should, in times of economic constraint, fund something that in principle is a subsidy to certain parts of the private sector.

## **Customer satisfaction**

There has for quite some time been talk about market orientation, a need to become more commercial, and so on, among mapping agencies. Much of this has really not been more than words. I think it is now time for us to really look at our customers, and see who they are and what they want and expect from us. We must realise that it is customer satisfaction that is the key issue in this respect. And a customer is anyone who pays us to do something, that is, including the national government.

This is a direct consequence of the way of looking at financing described above. If we cannot satisfy the customer, then why should he come back. He will look at other possibilities. And if he doesn't come back, the flow of customers will probably end sooner than later. And there will be a shortage of funds for providing the services requested before that!

Providing satisfaction to the customer requires a thorough knowledge of the customers. How do they operate, where do they plan to go, where do they make money and where do they not – the questions to which we need to find the answers are numerous. But if and when we do, we also need know something more about our own future. Which are the areas in which we shall operate and provide services, and what should we leave aside. Traditions have a tendency to keep us doing the things we have always done, but that is a kind of luxury we can't allow ourselves in today's environment.

## Rational operations

An increasing involvement of customers in the financing of our operations increases the pressure to operate in an efficient manner. Costs must be kept down, value for money must be provided, and we have to be able to show where our costs go. Nothing remarkable about that, rather like the conditions any public limited company have to work under.

In practical terms it can mean the following:

- a constant reassessment of what to operate in-house and what can and should be bought from others who are better at providing a particular service;
- developing and introducing new technologies and working methods as and when it is rational,
- reassessment of the products and services provided continuously; and
- regular benchmarking exercises in order to be able to – with some legitimacy – state that operations are as efficient as possible.

In my own organisation this has led us to embark on an exercise of changes. An increasing part of our basic production work is being put on tender. We started out with 15 percent of the total production value and include things such as aerial photography and geodetic measuring. The tendering process attracted bids from a number of parties, domestic as well as foreign, and we are now enlarging the volume put up for tender. Traditional printing and storage of maps is being replaced by print-on-demand operations. Of course – as I am sure everyone else here has started by now – we are using the Internet as a way to reach the market and the customers. Today we can, for example, provide parts of the cadastral index maps through the Internet, as well as other parts of the cadastral information. For subscribers we provide full access to our Land Data Bank System through the Internet.

But it has also meant that we, being an agency that have operations that compete with other, private companies, really try to make sure that we do so on conditions that are as similar to those of our competitors as possible. For long-term success and stability, this is a necessity.

## Taking charge

The basis for this work, and the culture and attitudes that follow with it, can be found in the documents we – and then I am referring to everyone in the organisation – have elaborated. Called Vi Våljer Väg or VVV (roughly translated to We Take the Wheel), it consists of four parts:

- a vision;
- the strategies;
- the rules; and
- the key indicators.

These documents, and especially the first two, contain – in brief – descriptions of the things that are most important to us. Some examples:

- Everything we do is based on an order. We focus on the services and products that the customers need and request. Our customers include everything from the national government, local administration and private companies, to individuals (from the Vision document).
- The quality of our basic information and our ability to deliver correct and relevant information is governed by user needs (from the Vision document).
- In order to be able to meet the customers' demands more rapidly we shall reduce the time 'from idea to market' for new products and services. An efficient production development program is an essential resource in this ambition (from the Strategies document).
- The fact that we, to a certain extent, operate in a monopolistic environment, stresses the need for attention to customer demands. Our functions as an authority amplify the demands we have to put on ourselves concerning being objective and competent in all operations (from the Vision document).
- We have high demands on ourselves concerning being objective and on our integrity, and pay special attention to compete in a just way (from the Rules document).

From a management point of view – but also from an employee perspective – the key indicators are important. We now have started keeping track on facts about market shares for strategic products, service levels, revenue per employee, staff turnover and staff attitudes. What we, in full understanding with our trade union representatives, are moving towards is to set targets at an individual level and then be able to follow this up in an organised way.

## Staff motivation

In order to be able to stay on top of things, it is necessary to have a staff that has the necessary capabilities and motivation. Customer satisfaction can never be achieved without staff that knows why it's needed and their own importance for this. Changing production methods requires new skills, and a more or less constant training of staff. There must be a willingness to change, or things won't change. The growing communication between people, and with customers, requires such skills of the staff too. The culture in our organisations will have to change with the environment in which we work, and much faster than before.

More attention than ever before, and in a more structured way, must be paid to the development of human resources in our organisations. Investments in training will amount to considerable sums, but we must make sure that the money is well spent. Our managers have to be skilled and devoted leaders rather than experts. Staff should feel a pride in both their work and their organisation; it really has to be 'their' organisation.

As having the main responsibility for our agencies, it is in our hands to make sure that the working environment is such that staff get the possibility to make use of its skills. If all our employees are able to develop these skills for the good of our business, then people feel motivated and we will not have an unacceptable rate of employment turnover.

## From producing to providing

Finally, I think the main thing for us to consider when we work with our mission statements and strategies is to look at how to change from being a producer of maps to being a provider of information. That this is something that has already taken place for many, and will do so for more, is without question. The tricky issue is how to do it.

Much of what has been said above refers to this change of focus. But it is a very fundamental change too, that might be easier said than done. It requires a participation and understanding by everyone in the organisation, and an acceptance in the surroundings. There are many ways to accomplish this of course, but we have tried to create a common basis within the National Land Survey that is built on joint efforts and contributions from all.

## The road we choose

The National Land Survey as it is today was born out of several organisations and a long time of committees and investigations. These times and first year was far from good. There was a definitive sense – correctly or not – of non-participation among many of the staff and a lack of acceptable explanations from those who made the decisions. When I was appointed two years ago, it was quite obvious that something needed to be done. And much was underway. Drastic measures to get the economy on its feet, requiring considerable staff cuttings, were, as already mentioned, taken. That was phase one.

But in order to be prepared for what we called phase two – a phase of development – I initiated a process whereby the whole organisation would take part in a process to elaborate and implement four documents that concerned our future. This was the VVV exercise described previously.

The idea was simple. We all work together, everyone gets a chance to voice their opinion but also to be listened to. Ideas and views were to be tossed back and forth, over a limited period of time, and middle management would be directly involved in the final drafting of the four documents.

So we started at the end of 1997 with four rough draft documents – the vision being more thought through and the key indicators, basically a rough sketch of what and why – that were sent directly to all 2 300 staff (as it was then). Each office or unit was made a team, with two others from other parts of the organisation, the task being to send their common views on the documents. These views were to be based on discussions within the teams. The result was quite impressive, and after redrafting and a special meeting with management and unions I could put my name on the documents, two in May and two in October.

These documents, which I think are something that most staff feel is something that they are responsible for, are under implementation. As the vision is for the year 2003, we have some time to accomplish what we want, but many things that have to do with our attitudes are already making a noticeable difference.

## Results for the customers

Having entered phase two means that we are now, as good as we can, really trying to bring products and services to the market that meet needs, demands and expectations. Two very different aspects of this are the extensive use of user financing that we have in place and Swedefacts, a joint effort with Statistics Sweden.

Our model for user financing means that the users to an increasing extent finance the 'maintenance' of our databases and information. The larger the usage becomes, the more apparent the need for up-to-date and correct information becomes. Easier access, more flexibility and more specific demands concerning quality are other demands that we see. By having the users not only contributing to the costs for achieving this, but in fact taking over the financial responsibility, make the demands clearer, and the pressure on us to do the right things bigger. This constitutes a significant change in how we react to market demands and changes, and will lead to increases in the number of users, the number of occasions our data is used and in the number of situations where geographic information is used.

Swedefacts, on the other hand, is a very concrete product. Together with Statistics Sweden we have created an Internet based service for local government, and others, who need to look at statistical information and analyse this in a cost-effective way. Of course, simple GIS technology can do this, and that's just what we've done. Without any training or expertise, the local government official can access the relevant statistical information and analyse and present the results with GIS, all by just connecting to the Swedefacts homepage on the Internet. In fact, this concept might just be what's needed at the European level.

## Conclusion

It is my strong belief that there is an exciting future for National Mapping Agencies, not as that, but as National Geographic Information Agencies, serving the whole community with the services that are requested today and tomorrow.

It is perhaps not easy to enter the new millennium and the information age. It requires hard work and a clear view of where to go. The target must be set and the organisation and attitudes fit for reaching that target. But if so, I am sure many of your future colleagues will be able to boast about the 370 years of operations that the Swedish National Land Survey can do today.

