Collaboration Networks in Governments

Just face lifting or can you actually lift yourself in the hair?

Svein Arne Østevik
University College of Borås, UCB
Calistoga Springs Research Institute
sao@octagroup.com

Lars Albinsson
University College of Borås, UCB
Calistoga Springs Research Institute
lars@maestro.se

Abstract

Collaboration Networks in Governments have become quite popular, promising improvements at lower costs, especially in the field of eGoverment. The challenges facing European governments demand new approaches. But do these Collaborative Networks offer new approaches or will they just serve as distributors of old solutions to old problems?

In this paper we use theories on Co-Design and C-level networks to see how such a network can increase the members capability to develop themselves.

We suggest an approach where Collaborative Networks are designed to host activities where the aim is not only to improve core business processes but more important - makes an attempt to improve also the improvement processes.

Key words: Collaborative networks, Organisational Improvement, eServices, eGovernment, Co-Design.

Contents

Introduction

Within several areas of our society there is a growing need and interest of organising in inter-organisational collaborative networks. It can be companies or government organisations creating networks to share each other's experiences in certain areas or doing shared development projects to lower risk taking and share development costs.

The situation in Sweden can serve as an example of the reasons and driving forces for this. Today Sweden is organised in 290 municipalities from the City of Stockholm with about half a million inhabitants to quite small municipalities with about 10 000 inhabitants. All of these municipalities have to fulfil the vision stated by the central government (and the European commission) of the 24-hour government society. This means that the municipalities in Sweden are under hard pressure to develop and redesign their core processes and to make them available on the Internet. For most of the municipalities there is very limited financial resources available for developing new e-government services.

The understanding of this situation has been one of the driving forces when people working in the municipalities are searching for new and more creative solutions to be able to fulfil the 24-hour vision. One of the outcomes of this effort is that a number of geographically spread Swedish municipalities have organized themselves into a collaborative network called "Sambruksplattformen" ("The Collaboration platform").

This kind of collaborative networks between municipalities has also been identified in Scotland, Ireland, Norway and Belgium. Certainly other similar networks exist or are under way being established throughout Europe.

The main idea behind the collaborative network we have studied is to reduce risk and minimize development costs of e-services by collaboration, sharing and reuse.

Many key persons in the EU acknowledge that the changes governments are facing is dramatic and require new approaches:

> Ministers agreed that effective *e*Government requires internal re-organisation: changes in structures and work organisation, training and skills, as well as in employment conditions.
>
> *From the MINISTERIAL DECLARATION*[1]
> *Brussels, 29th November 2001*

With this background the questions addressed in this paper are:

- How do we design criteria for designing and evaluating collaborative networks aiming to deal with this situation?
- How do the existing initiatives measure up using these criteria?
- Using these criteria, how could these collaborative networks be improved?

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1 http://europa.eu.int/information_society/eeurope/egovconf/doc/ministerial_declaration_en_2001.pdf

Research method

The research method is case studies using two theories. The first is Douglas C. Engelbarts Augmentation theory [4]. The second is the ideal oriented co-design theory [2,3] by Olov Forsgren and Lars Albinsson. We take a design research approach, where the objective of the inquiry is to design useful knowledge and suggestions for people involved in establishing collaborative networks.

The empirical base for this paper is documentation from and short interviews with key persons in the collaboration consortium called "collaboration platform". The query where produced in cooperation between 11 municipalities, persons from the Swedish Agency for Public Management and also one person from the Swedish association of local Authorities.

Other cases have included:

- The Avanti project[2], an EU/IST funded collaboration between Stockholm, London, Edinburgh and Ventspils with technical partner Microsoft and Fujitsu. The aim was to design electronic assistants helping elderly, disabled people etc to access government services on the internet.
- The Scottish initiative, e –city network[3]

Douglas C. Engelbart's ABC model

To understand Douglas C. Engelbart´s ABC model he introduce two terms; the *Capability Infrastructure* and the A*ugmentation system.*

An organisations infrastructure can be divided into two categories; Human system elements (language, procedures, organisation, methods, skills, knowledge etc) and Tool system elements (computing, manipulation, retrieval, viewing etc). The *capability* of such an *infrastructure*, when humans are conditioned and trained to employ them, will augment their basic capabilities so that they, and their organisations, can exercise capabilities of much higher nature than would otherwise be possible. This is what Engelbart has named our *Augmentation System*.

[2] The Avanti Project Web site: www.avantiproject.org
[3] The Scottish initiative, e-city network: www.e-city-index.com

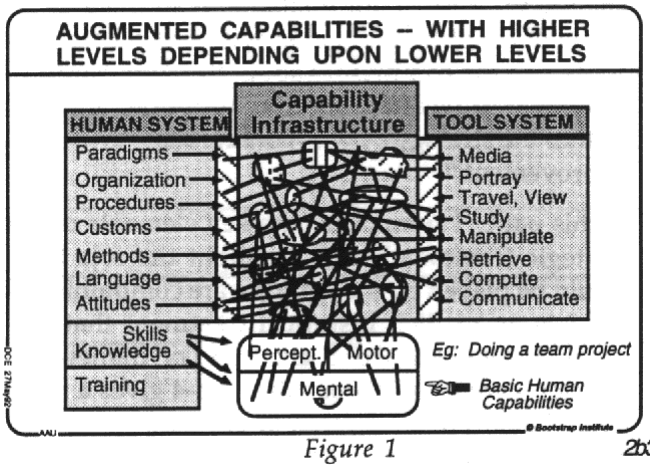

Figure 2, The Augmentation system, copied from the referred article

When trying to redesign one part in this infrastructure we soon become aware that we are trying to affect a complex system that has a life and evolutionary dynamic of its own. Rather than looking at details in the capability infrastructure we should view improvements as a multi element co-evolution process. This means that if you want to improve the capabilities of an organisation you need to give explicit attention to the co-evolution of both the Tool System and the Human system.

Another principle that Dr Engelbart has formulated is the following; “if the scale is changed for critical parameters within a complex system, the effects will at first appear as *quantitative* changes in general appearance, but after a certain point, further scale change in these parameters will yield ever-more striking qualitative changes in the system.” And he uses the development and use of digital technology in organisations as his prime example where we see a radical change in the scale of a tool system capability, which affect the whole capability infrastructure in a very radical and fast way. Organisations have never before needed to adapt to such radical changes in so short a time as a few decades, he stated.

Looking at an organisations capability infrastructure as consisting of a tool system and a human system (as in figure 1) how do we deal with organisational improvements? And here Dr Engelbart introduces the ABC model of organisational improvement.

The ABC model for organisational improvement

First we can divide an organisation’s activities in two categories A and B. A activities are representing the core business activities of an organisation like manufacturing, marketing, sales, product R & D etc (still consisting of both a human and a tool system). B activities are those activities that support A level activities with the aim to improve them. We can say that B activities are improving the organisations ability to perform A work. It could be introducing e-mail, a new account system or e-services to the customers. B should be a permanent “continuous improvement” activity and do also consist of a human and a tool system. We think of B activities as activities mostly organised in projects where the aim is to change and improve A level activities as a specific result of the project.

The next question then is how do we improve the capability of our B activities. For such an important task we need yet another explicit organisation activity, the organisations C-activities. Executive efforts such as staffing and funding to improve B activities should qualify as C activities. But C activities should also introduce new knowledge and skills into the B activity providing better means for participatory interaction with its A activity clients. Activities that aim to improve the organisations capability of performing successful projects is an example of a typical C level activity. Another example of C level activity is to introduce new perspectives, as new knowledge or a new skill to the B-level.

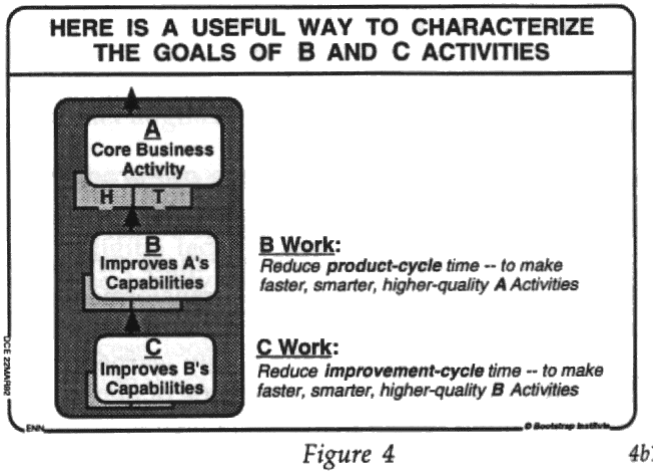

Figure 3; The ABC model, copied from the referred article

An investment that boosts the A capability provides a one-shot boost. An investment that boosts the B capability boosts the subsequent rate by which the A capability increases. And an investment in C capability boosts the rate at which the rate of improvement can increase. The better we get, the better we get at getting better – for which Engelbart use the term “bootstrapping”.

Motorola’s CEO, Christopher Galvin made use of these three levels in a speech at an conference on electronic media in Los Angeles, 1993:

> “We have come to believe that the organisations the learn how to learn the best, will in fact become the most successful.”

Engelbarts C-level corresponds to the “System Philosopher” in Forsgren’s Co-Design theory [5]. He points out the need for reflection on how well the systems development process as such performs, from the different stakeholders perspective. We understand his idea as that the systems development is initiated by changes amongst stakeholders. This is also applicable to the development process itself. Therefore its necessary to have a least one stakeholder, the “System Philosopher”, who expresses an active interest in that development process per se, otherwise there is a risk that an inappropriate development process is unsuccessfully applied over and over again.

A practical approach to the ABC model

The MIT project [1], collaboration between IKEA, Volvo and Pharmacia supported by the universities of Umeå, Linköping and Lund, was a major C-level network. The challenge, from this perspective, was:

- Organisations do not always realise the need of C-level work. They often attempt solving problems with same methodologies that got them into the problem.
- When attempting C-level work its difficult to know how to do that. In many case the work "deteriorates" to B-level.
- However, when successful, the C-level work is of great value.

The MIT project approach was to engage different stakeholders in the companies in discussions of quality criteria. These quality criteria was transformed into a measuring system that was used to benchmark systems and services. The measuring system was also used to design and evaluate methodologies, organisations and technologies.

The Collaborative platform

During spring 2003 11 Swedish municipalities together with the Swedish Agency for Public Management (Statskontoret) took an initiative for collaboration regarding issues related to development of e-services.

The group has stated that:

- The total costs to introduce e-services is very high
- That this costs for most of the municipalities in Sweden is too high
- That new ways of collaboration is necessary
- That the profit and gain from the suggested collaboration is high

An inquiry took place in collaboration between the 11 municipalities where ideas and concepts was worked out, established and documented in a pre-study published in October 2003. [6]

Some central guidelines

From the central government have established a few guidelines regarding the vision about the "24-hour government" which is relevant for the development of e-services in the municipalities.

The government has set 3 guiding principles for the development;
Openness – citizens and company representatives will have the possibility to look into and follow how a matter is treated
Service – everybody should have the right to same high level of service, independent of where in the country you live
Efficiency – it is important that the public sector systematically are improving their processes and structures to collect efficiency gains through collaboration with others

Further from the citizen perspective it should be enough to have only one contact point for a matter to be handled, regardless if several organisations are involved in the process.

E-services

The definition of e-services is decided to be “municipality services targeted to citizens and companies”. E-administration and e-democracy has not been taken into consideration during this work.

The following model is used to explain the different e-government definitions:

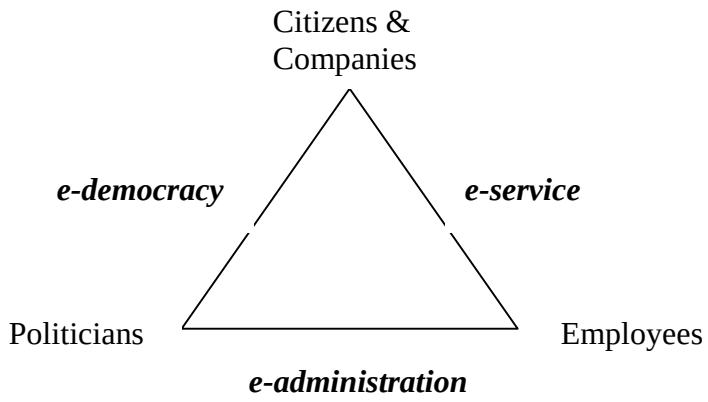

Figure 1, A model of different e-government definitions

Conditions in the Municipalities

The Swedish municipalities do have big challenges ahead. An older population together with a relative smaller number of taxpayers put a hard pressure on local budgets. At the same time the citizens do expect better service and openness in line with the vision of the 24-hour government.

In this perspective better exploring of IT can in parallel solve two problems; better service to the citizens and higher efficiency in municipality operations.

Objectives

The objectives of municipal e-services are;

- Higher quality and better availability on municipal services for citizens and companies
- Reduced costs for municipality administration

The objectives of the collaborative platform are:

- To lower costs for development, maintenance and operation of e-services
- To reduce time to market for development and introduction of the services

Identified areas of collaboration

Four areas for collaboration have been identified so far:

1. e-services
2. Information and handling processes – methods and tools
3. Common basic functions
4. Technical platform

E-services

About 100 e-services have been identified and 80 of these has been prioritised and catalogued in 16 different categories.

Information and handling processes

The members of the collaborative platform wish to establish a common development model for development of municipal e-services.

Common basic functions

Some basic functions are identified which will be the same for a number of the developed e-services. Examples of these functions are identification, electronic signature and secure data transmission.

Technical platform

The technical platform should be open and be able to integrate with existing information systems operating in the municipalities today. Further it should be open in the way that it can explore future technologies where simple web-services have been identified as an example of a promising technology.

The Collaborative platform from the ABC perspective

An important question for the collaborative platform should be: Is the proposed strategy for the platform going to provide an improvement in the capabilities of its members toward a higher performance in the municipalities through the introduction of e-services? To answer this we will analyse the proposed activities in the inquiry using Engelbarts ABC model.

The following five activities are proposed and explicitly stated in the query (pre study).

1. A meeting place and a think tank for discussions about development of e-services
2. A forum where the members, in mutual understanding, want to create common guidelines
3. An arena for collaboration around the development and maintenance of common specific functions and services. (Also other interests common for the municipalities can be relevant.)

4. An internal marketplace for collaboration and exchange of visions, strategies, analyses, specifications, competences and resources. This also includes specific e-services and components.
5. An authority for operational sharing of joint purchases, outsourced operations etc through merging into different legal forms.

1. Meeting place

Every Swedish municipality, together with others sharing same interests, are invited to participate in open conference and seminar programs about development of e-services. The content and structure of these programs are decided by the board of the collaboration platform on a yearly base.

Depending on the content and structure of these programs, this activity could be an excellent C – and B level activity according to Engelbarts ABC model. Here exists a possibility to invite persons with new knowledge and skills contributing to discussions on improvement on both B and A level activities.

It could for example be persons representing the citizen's perspective participating in discussions of some important aspects of municipal e-services. When developing public electronic services where the target users are outside the organisation it is even more difficult than normal to develop high performance information systems. To have a good discussion about the users perceptions to grasp which aspects and requirements are the most essential for an e-service to be successful should be a great input in the development process.

Another example could be invited guests from other countries with some learning experiences from live tests and implementations of e-services. It could also be persons from the academic bringing in findings of general knowledge to the network fruitful for their continuous improvement of for example the area of project methodology.

2. Forum

This activity is organised through different areas of specific interests where the participators are recruited within the member organisations of the collaborative platform. The areas of interest can wary over time and each area of interest are hosted by one appointed person. These different sub-forums can develop and provide common guidelines and recommendations for the members of the network.

Again depending on the issues handled in the sub-forums this activity could be a B or C level activity according to Engelbarts ABC model. If one of the forums are handling issues regarding for example XML standards or other standards this becomes important "tools" used by B activities aiming to improve tasks and processes handled by the A level.

But there could also be a C level forum occupied with the issue of which standards that needs to be agreed upon in order to fulfil the vision of shared e-service applications between the municipalities. This forum should not decide on

the specific standard chosen, only be aware of what kind of standards are needed to improve B level activities and to affect A level activities as a further consequence.

3. Arena

The arena for collaboration is used for development and maintenance of common modules and methods such as calculation models, requirement specifications of e-services, management models, common tools for analyse of operations etc. Collaboration in this activity means that the municipalities directly involved in a specific question do commit to follow and use the outputs from this activity.

The arena seems mainly to belong to Engelbarts B level activity. If a project is formed to develop a specification of requirements for a specific e-service, this activity itself does not directly affect the A level operations. However the output of the project, if it is successful, will after the development and introduction process have a direct impact on the A level activities of the municipalities engaged.

But the development of methods could be a typical C level activity, if carried out as a design activity, rather than just a choice of existing methods using existing criteria. How these initiatives are taken and which is the right forum for this discussions are not mentioned in the paper.

4. Internal marketplace

The objective of the internal marketplace is to make it possible for the members to sell and bay products and services of each other. These are of course restricted to products and services where one municipality (or a collaborative group of municipalities) has the necessary copyright and ownership of the product or service at hand.

Activities connected to the marketplace are from one perspective typical A level activities. It is about purchase and sales, which Engelbart connects to core operations of an organisation and therefore theses activities belong to the A, level.

On the other hand selling of software products and services of this kind do not belong to the core operations of the municipalities today. So the design of the marketplace, its quality criteria and role is a C-level activity. To initiate and set up this marketplace is a typical B level activity for the collaborative network.

You could also say that for a specific B level project (to develop a certain e-service) the activity to go and look at the marketplace to find some necessary components that already exists then belong to this B level activity.

The C level activities connected to the marketplace should be to reflect on which kind of qualities the marketplace should have so that collaboration and exchange of tangibles should take place as efficient as possible between the members of the network.

5. Authority

The idea behind the authority (or authorities) are to set up a legal body to handle operational collaboration such as major purchases, skeleton agreements or operations of specific e-services (could be as an ASP, application service provider).

This part of the collaboration is about creating an independent organisation, owned by the members of the collaborative network. This organisation will as all other organisations consist of A, B and C level activities. How this authority should be organised in detail are not covered in the paper other than it should be a company with quite few employees owned by the members and directed by a board of directors and shareholders meetings.

The design of how this organisation should impact they way other organisations run projects and other B-level work is a distinct C-level activity.

Conclusions and suggestions

The collaborative platform is a great opportunity for the members to, in a structured way, initiate and participate in important C and B level activities to boost the capabilities of the member organisations core processes.

The most important activities, and perhaps the most difficult to accomplish, is the C level activities. As we have shown in the study some of the planned activities and forums has the potential to host C level activities.

The first step to accomplish this is to be aware of and to start think about the differences between core activities (A), activities to improve core activities (B) and activities to improve how we perform our improvement activities (C). All organisations cover all this three levels from time to time, but by being conscious and by organising specific C level activities organisations capability can be significantly improved.

The second step is how to assure that C-level activities are being carried out in those forums that are intended for this use. The difference between C and B-level work will be that the B-level uses established quality criteria to choose approaches. The C-level is where new criteria are designed. These quality criteria will form the basis for designing, discussing and evaluating approaches to the B-level. There are two ways to organise this:

- The ideal oriented co-design approach can be used to accomplish this. From the stakeholders ideal scenarios it's possible to establish quality criteria. What are required of methodologies, organisations, technologies to realise the ideal scenarios?
- Case studies should be subject to Best Practise Hearings [3]. These hearing will also aim at producing quality criteria.

An ongoing task in the network should be to plan for and orchestrate C level activities.

A third step is to actively involve research capabilities in the network. The pre-study mentions that R & D is important for the network in order to create new knowledge and to observe important phenomena in the society. Research about he network itself and about specific outcomes from implemented e-services are possible areas of interest that should be studied and be usable knowledge at all three levels of Engelbarts ABC model. Engaged researchers could also be responsible for organising and orchestrating specific C-level activities as mentioned above. This would be a great opportunity for the research community to take an action research approach to public organisations.

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