Back from the future

Reshaping our IT through future scenarios.

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1.   EXECUTIVE SUMMARY

In January 2007 Avans University of Applied Sciences (Avans University) started a Think-tank to shape the future of their next generation IT-services & IT-Infrastructure and to generate an IT project portfolio for 2007 – 2010. The main goal was to update our current IT-standards to the upcoming future in order to support the Avans view on (e)learning. Another goal was to stimulate and improve the use of the already available IT-services and an active involvement of our stakeholders. In our presentation we will inform you on the process of reshaping our IT through the use of future scenarios in four phases.

1.1. Background

The reshaping of our IT-Infrastructure is part of a strategic long term plan in which Avans University has set the ambition to improve their connection to the outside world and to better connect with the future developments of the new generation of learners, IT-developments, new views on teaching and learning, etcetera. The boundaries of the developments include not only our future students and developments on technology, but also the market in which they will operate. Our IT services needs to be both prepared for next generation applications as well as to be able to support the upcoming developments. In order to achieve this, we need to have a broad view on the future. The Think-tank used scenario planning as an instrument to gain more insight in what might happen to the world of tomorrow and the supporting IT.

1.2. Alternatives

To generate future scenarios that will help us to make better choices concerning the needed IT-infrastructure and the required IT investment, we need to think in alternatives. Asking ourselves 'what if?' questions, lead to generating several different possible outcomes. Using different future scenarios gave us a better understanding of the future in which we had to operate. They included a view on next generation students, the future outside world, teachers, our organizational development and finally the IT that will support it.

1.3. Conclusions

The use of future scenarios (situated in 2020) helped us to create a more short-term fitting and sustainable IT perspective (2010). This IT perspective is not only appropriate for 2010, but also has the potential to develop to an IT- perspective for 2020. The developed short-term IT perspective was a perfect starting point on which we formulated our IT policy, IT strategy, IT governance and IT project portfolio. The total costs for the realization of 7 million Euros and the 60 thousand man-hour project portfolio has been approved by our Executive Board and Board of Directors.

2. The reshaping process

The reshaping of our IT-Infrastructure is part of a strategic long term plan in which Avans University has set the ambition to improve their connection to the outside world and to relevant future developments. This demand for a 'future-proof' IT infrastructure and the necessary involvement of the relevant stakeholders resulted in a reshaping process in which the creation of future scenarios played an important role. The process, that, as intended, resulted in a renewed and 'future-proof' IT policy, IT strategy, IT governance and an Avans wide accepted and financed IT project portfolio, consisted of four phases.

- phase 1: creating the right environment;
  This phase focused on creating the right project conditions in order to be able to run a successful project.

- phase 2: creating long-term scenarios and one short term IT perspective;
  The aim in this phase was to create a short-term fitting and sustainable IT perspective (2010). To help us to formulate an IT perspective that was as realistic in 2010 as possible, four future scenarios (situated in 2020) were created. We then translated those scenarios to the timeframe of 2010, which resulted in the sought after perspective for 2010.

- phase 3: translating the IT perspective to an IT strategy and IT governance model;
  In this phase the developed short-term IT perspective was used as the starting point (and continues as checkpoint) on which we formulated the wanted future-proof IT strategy and IT governance. By doing this, we soon realized that we had to renew our IT-policy as well. The developed future scenarios and short-term IT perspective lead to a renewed set of IT-policy statements and conditions for our IT developments.

- phase 4: formulating our IT portfolio and getting it accepted.
  In this fourth phase we translated the formulated IT strategy into a concrete set of IT projects. The IT project portfolio was further translated in terms of wanted results, conditions, relations with other developments and projects, time scales, needed manpower and finances.

  At the end of the process, the IT project portfolio was accepted as a whole. In spite of the fact that the IT project portfolio involved a lot of money and manpower, we were not surprised. Part of every project phase was the acceptance of the results of that phase by the project steering committee and the responsible (IT) member of the Executive Board. At the end of every phase the results were presented and discussed in order to gain full acceptance and to make sure that improvements by the steering committee could be made in time. In this way every next phase would work only with fully accepted results and everybody knew what was to be expected as result of the next phase.

In the next paragraphs we will give you a more detailed view on how we succeeded in getting an accepted IT project portfolio 2007-2010. In the end we will give you a quick review on the results so far.

2.1. Phase 1: creating the right environment

During this phase we focused on the organization of the project, its proposed results and the essentials to guarantee a working process and an accepted outcome. The aim, at the end, was to get proper funding and deployment of our IT-project portfolio 2007-2010 as well as an organization in which the project could be realized. To achieve this goal it was important to setup a project organization that would give all of our stakeholders a stake in the process. The amount of influence depended on the position of the stakeholder in the organization. For example a manager (strategy decision maker) has a different position than a student.

The used project organization form consists of several building blocks:
- Executive board: They made the final decisions
- The provider of the results consists of two units:
  o Board of directors as steering committee: they made strategic decisions and helped in steering the process (not the results!).
  Managing directors of the supporting departments (IT & building facilities, commerce, student administration, finance, HRM, Learning and Innovation centre) together were the members of the steering committee.
  o Think-tank: the workforce that produced the project results
  The think-tank was also formed from the different disciplines within Avans University (it consisted of IT specialists, administrative employees, faculty members and eLearning and pedagogical staff).
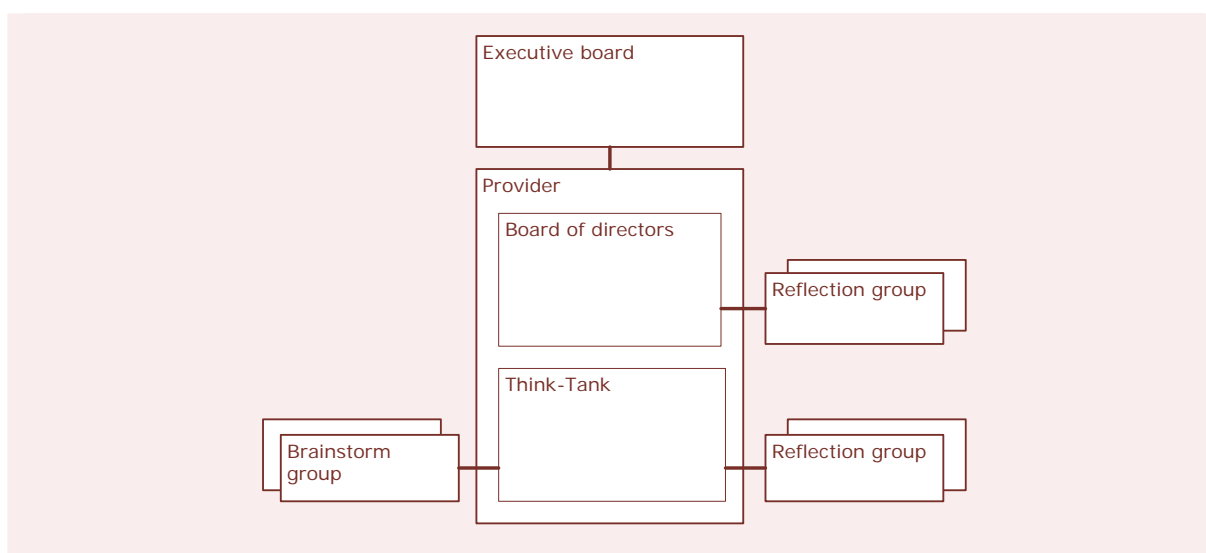

Figure 1: 'used project organization to create the right environment'

To widen the view of the Think-tank we used brainstorm groups (students, colleges and business) to help us to achieve better results. A reflection group was asked to reflect on these results and to make sure the Think-tank had interpreted the brainstorm results correctly. Final results of each phase were then presented to the board of directors and the executive board. If needed they could call in a reflection group of their own to help them in making better decisions. After the Think-tank presented their results, the stakeholders of both boards would negotiate. Finally the Think-tank would receive feedback on the results and get a Go/No-go decision to move to the next phase. Luckily every time the Think-tank presented a result they got a Go!

2.2. Phase 2: creating long-term scenarios and one short-term IT-perspective

What does the future of IT looks like in 2010? This question was the key element of phase 2. By using different long term scenarios we created an in-depth view of one short-term IT-perspective. The first step was the development of future scenarios for 2020. Using the different brainstorm groups to create viewpoints on the world as a whole and the IT support needed, we translated these long term scenarios back into different perspectives for 2010. These perspectives were then condensed into one 'Avans in 2010' perspective, which formed a stable basis for our IT-perspective.
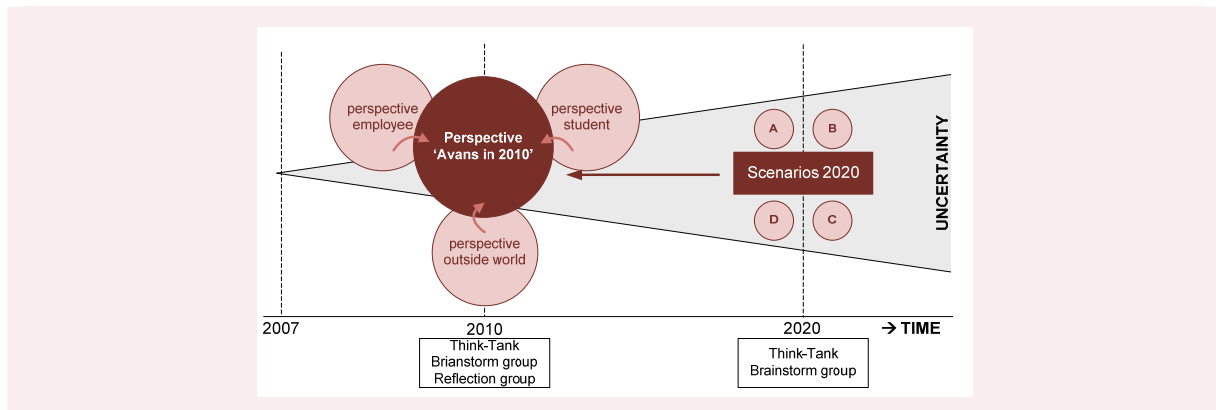

Figure 2: 'development long term scenarios to one short term perspective (not only IT)'

In order to be able to condense the different perspectives for 2010 into the one perspective 'Avans in 2010', we not only translated the different perspectives from 2020 into 2010, we also combined the results with a strategy from now to 2010. For this we used the Avans views and policies on the several relevant fields. It was this combined approach that resulted in the sought after perspective 'Avans in 2010'.

The future scenarios 2020 were based upon a scenario matrix with two axes, that resulted in four scenarios.
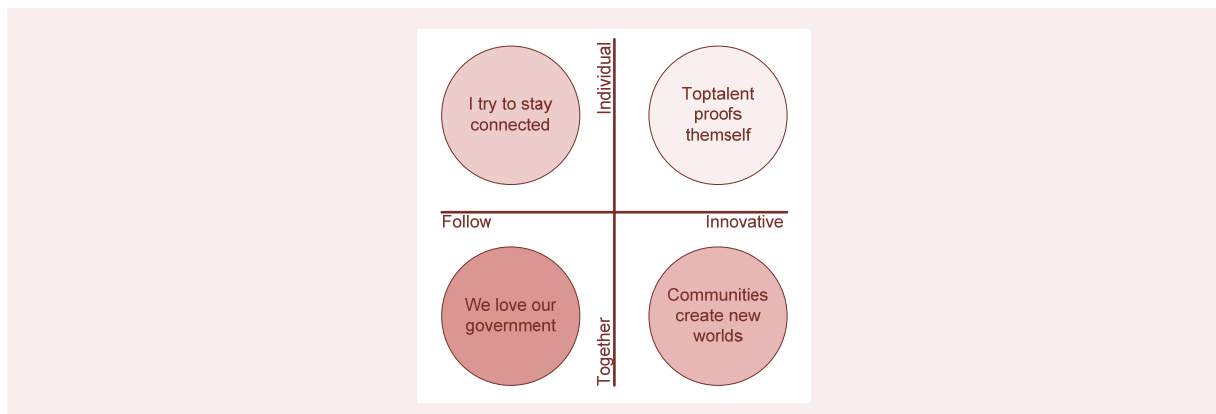

Figure 3: 'used scenario matrix for 2020 scenarios'

During the development of the scenarios and perspectives we focused on different aspects to make sure the results would be interesting for our organization and the business case (a future-proof IT infrastructure). To achieve this we used the following aspects in our storyline:
- student behavior;
- market behavior;
- employee behavior;
- organizational processes;
- supporting IT;
- supporting building facilities.

As you can see the aspects form a cascade. Supporting IT & supporting building facilities can only be determined by looking from the outside first. With the IT elements embedded in the perspective 'Avans in 2010' we could make an extraction exclusive for IT only. After this the Think-tank deepened the results by brainstorming, resulting in a single IT perspective 2010.

2.3. Phase 3: translating the IT perspective to an IT strategy and IT governance

Our next step focused on the question of 'how to get there'? We translated our 'IT perspective 2010' and its underlying driving forces into our IT-policy statements. With the renewed IT-policy as a baseline and a view of the IT perspective 2010 on the other end we were able to fill the gap and create our IT strategy. Part of this strategy was setting up IT governance in order to answer questions such as: 'How do we manage the IT development in relation to IT-services and -support?' and 'How to align with new developments?'.
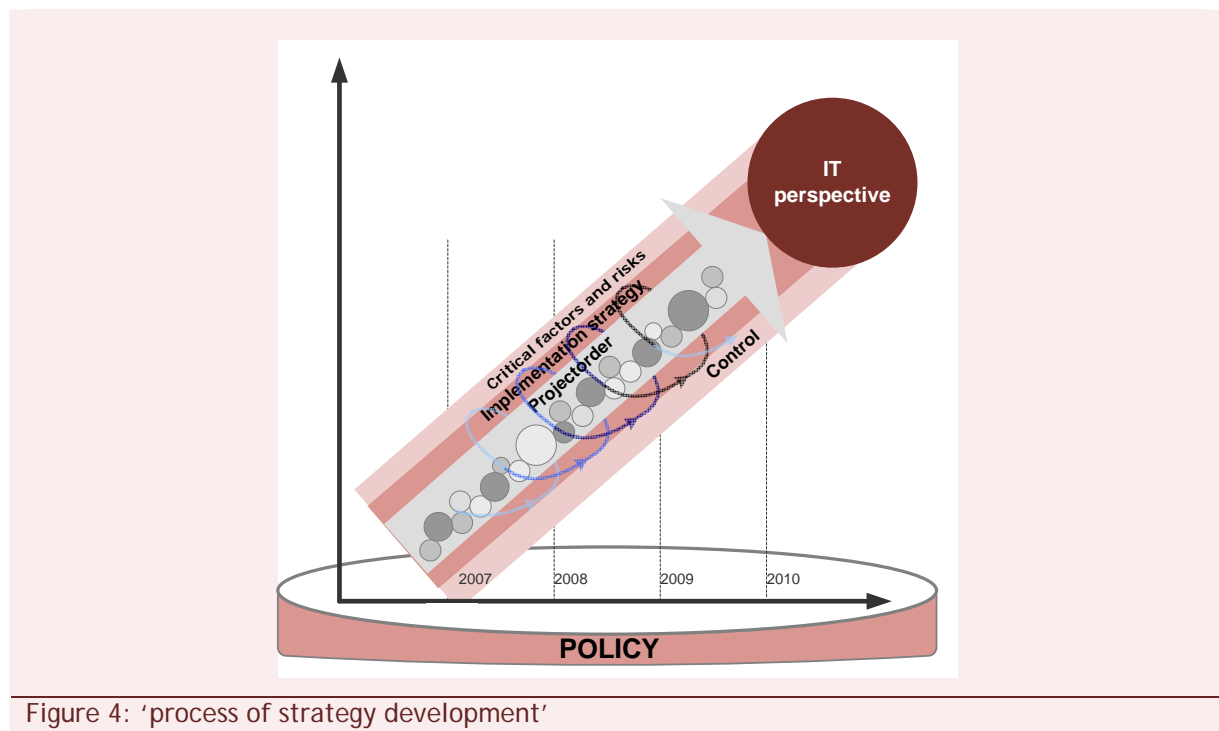

Figure 4: 'process of strategy development'

Formulating the obtained IT-strategy we used an intensive risk analyses. For instance, we researched the project influence of other projects and organization policy. By categorizing the projects into a strategy 'planned' or 'emergent' we were able to develop a roadmap for the upcoming years.

The organizational aspect of the governance model that has been proposed and accepted is displayed in the figure 5.
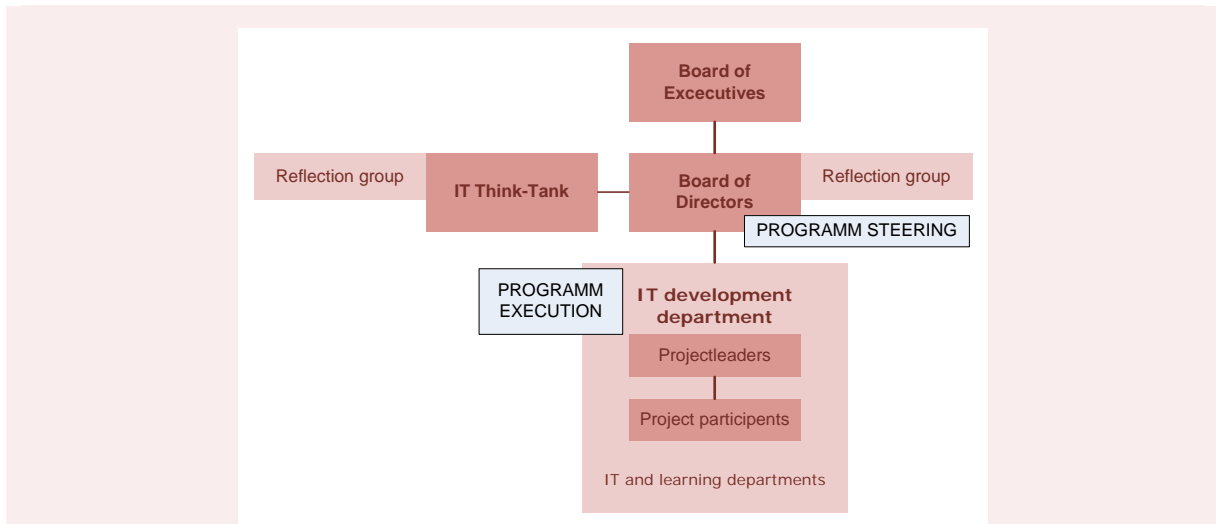
Figure 5: 'IT governance model (organization)'

2.4. Phase 4: formulating our IT project portfolio and get it accepted

With all the achieved results we now could develop our IT project portfolio. In this portfolio we positioned the projects with goals, obtained output and outcome, scope, stakeholders and a time scale. We developed IT investment prognoses for the upcoming years. This resulted in 60000 man-hours and 7 million Euros of investments in hardware, software and training. We setup an additional investment prognoses to foresee the overhead costs to execute the program which will come close to half a million Euros. The main question being 'what is the focus of our new IT-infrastructure?'. It's a simple one-liner: you can work anywhere, anytime, anyhow! Other keywords are Mobility and openness.

After the results were produced by the Think-tank, all has been audited externally. The outcome of this external audit was positive and the IT project portfolio has been accepted. In January 2008 the budget for the upcoming year has become available.

2.5. Status June 2008

The current status of the project is as follows:
- January 2008, our IT organization has been reorganized. There is now one department IT management, service and support and IT development. Vacancies in the development department are also being filled with people outside the IT department.
- The first projects have been started: IT architecture, Identity and access management, up-to-date basic services.
- The 2007-2010 project portfolio has been titled 2008-2011.