Communicating the vision of an urban city development: a model

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Summary: a small group at the School of Social studies in Brno and Proverbs Corp. Prague, Czech republic, worked on a composition of a model of the Eastern European city of Brno, which is to test a communication of a vision. The basic questions were:

a) what viable vision should be based upon,
b) what are the ways of its communication and,
c) what is the influence of the vision on inhabitants´ mental models and,
d) how much the vision communicated certain way (meetings, printed media and local TV) changes mental models the desired way that ends up in the vision achievement.

The paper discloses the structure of the model as well as the process of its construction and obstacles, which the group encountered while attempting to offer its expert service.

1. Initial situation and the goal

Three years ago two of the authors presented a research proposal to the Czech academic grant agency (GACR) to study and to build a system dynamic model, by means of which user could be able to test communication policies in urban development. The proposal was accepted, resources granted and thus the GACR became our "customer" (consequences of which will be explained later). The city has a voluminous, agreed upon Strategy of its development, which was completed during previous few years. However, due to the strategy size, the highly technical jargon and also due to its mostly analytical character, it has only limited impact upon agents, which the city consists of (namely public). The Strategy contains limited section stating the goals and even briefly stated scenarios. Also, the city has a zoning plan valid since 1994, which is being presently updated. According to our opinion, both detailed documents are missing a clear vision of what the city wants to do of itself in a long range within an European zone which we do share with Vienna (Austria) and Bratislava (Slovak republic). Also, both documents are difficult (if not impossible) to communicate to the public. Thus our initially simple task grew in complexity: we had to see if there exists any clear vision at all (and who are the moving agents which might have such a long range insight) and if there is none, to write one on our own. Secondly to consider how to communicate such a vision and to see if there is any clearly stated general communication policy of the City hall. Finally, to test the impact of such a communication upon public by means of policies tested by means of a model. Since members of our team are deeply concerned about the future of the city (except for Marek Susta, he's from Prague, shame on him...) and one of them teaches human resources management (P.Senge´s "learning organizations"), we consider the role of communicating the vision well as of crucial importance.

2. Agents involved

During the process of „learning the ropes", we gradually discovered a number of agents, involved in the process of strategic development of a city. Obviously, the city of about 380 thousand inhabitants consists of 29 city districts with their own small „town halls" and some limited powers and responsibilities. Then there is a „large" City hall, responsible for the overall strategy. The City hall traditionally includes a department of the city architect since the times before WWII, responsible for the zoning plans. Also, the City hall established a position of a „strategy manager" about five years ago, whose work resulted in an edition of the above mentioned voluminous Strategy and its acceptance by the City assembly representatives about three years ago. Moreover, there are two additional bodies, which might be interested in the issue (responsible for the city Strategy) – a Council of 29 town hall „lieutenant-majors"and more importantly, a Commission on the city development reporting to the Assembly. Besides these agents involved, there is also a strong influence of the political parties, which govern small „town halls" and City hall management as well as the City assembly – these political parties compose coalitions as well as mutually compete on various issues. Even further, the city has its own influential private sector agents, employers, entrepreneurs and banks which may take sides on particular issues. Finally, there are six universities in the city (with a total exceeding 50 thousand students), which represent a considerable intellectual potential for the city, mostly unused in terms of the Strategy. It is our belief, that universities will gradually replace the industry in its historical role as a moving agent of the city's prosperity. What should not to be forgotten, though, there exists a „public" – citizens of the city. What this concept really means, however, was to be found much later...

3. The process of gaining the insight

Since the very beginning we felt that a clear vision of the city's future is missing and each of the agents at play mostly maximizes its own profit and there is little communication in between relevant sectors (the absence of common interests, trust and communication barriers). What is needed is a formulation of a strategy, which (due to a strong competition of the city of Vienna and the city of Bratislava) will secure a definition of our city's identity and (hopefully) attractiveness for future investors and inhabitants.

Few years ago we contacted the city „strategy manager", and some of us took a part in the composition of the city Strategy. We attended a number of workshops and presented some data and ideas. The structure of the final document, however, was given by certain routines, applied by professional regional developmental agencies and perhaps even foreign examples were used, since the document of such a nature is usually required while applying for EU funding. Subsequently, when this Strategy was completed, became an official document and, according to our opinion, was put aside to rest in peace. Then

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we asked for a presentation of our ideas at the Commission on the city development. To our surprise the Commission's agenda did not include such a long range tasks. However, we were recommended to ask for meetings with the local „town mayors", to ask if any visions might be available there. Thus we asked for an invitation to attend the meeting of the Council of 29 town hall „majors" and informed them, that our students will meet each of them for an interview. A group of students later interviewed all of them and summarized what was found to be interesting. Not only visions of some city districts, but also comments about mechanisms of governance within the city as a whole. The results were distributed back to Town majors and the city Strategy manager.
Besides that the City hall commissioned three studies, which are to be used for the zoning plan: the first of them was a demographic prognosis, the other two were concerned with changes of the lifestyle within next 30 years (one of them was written by a member of our team).

In 2004 a „time bomb exploded", in a bitter conflict: the population of a city is until now badly divided on an issue, which concerns a reconstruction and a new localization of a new main railroad station. This issue concerns inhabitants for decades and the City hall follows a policy of designing and collecting financial resources for a brand new railroad station. Over the last few years there grew a strong opposition to this intent and during last year there was even a referendum organized to see, how the citizens view this issue themselves. The referendum resulted in a low participation of citizens and those who took a part, voted "NO" to the City council idea. So far things progress as if nothing had happen, but bitter feeling persist and what we all have learned is that some sound policy of permanent communication is badly needed – at least from the point of view of a public.
Regarding the communication strategy itself, the City hall has presently just a preliminary, short time strategy, which consists of a series of public meetings concerning the new zoning plan, writing articles to local papers and the use of a few local TV stations. The long range communication strategy of the City hall will be proposed by a professional agency.

In the meantime the City mayor was replaced by a new person, also the person in a position of the Strategy manager changed and a new mayor decided to reorganize some of the relevant City hall departments and to strengthen the strategy unit. This all caused some delays in our progress.

At the present time we have organized a series of five meeting at the School and asked heads of political parties, represented in the City assembly, to present their visions of the city's future. From what was presented so far, we see, that this topic far exceeds the time horizon they use to operate within; their views are rather fragmentary and "too much" pragmatic. The areas of mutual consensus and differences regarding goals and means how to achieve them still need to be carefully analyzed. However, it can be said, that during this process we discovered that the City hall and political parties are not very much interested in our efforts and thus the real „customer" still remains just the financing GACR agency.

So far we discussed only our attempts to learn how the city administration operates. What about the other parties? The experience of one of us, who served as a chairman of the university academic senate is, that a number of publications and speeches might have changed a climate somewhat, but did not influence the policies of individual universities toward a joint planning. The few meetings with the representatives of the private sector (entrepreneurs) also did not bring apparent fruits. To contact the banking representatives was considered, but did not happen so far. The "public" consists of several small groups, which attempt to stir up a public debate on a variety of particular topics, which range from the quality of public spaces, parking and transportation issues to brown fields and depressed housing areas. And of course, there is a large "say-nothing majority".

4. The structure of the model

Even though the original research problem to be modeled was „ how to communicate the vision of an urban growth effectively", we soon realized, that

a) we have to have something "real" to communicate first;
b) we have to specify the targets of any possible communication agents, which the city itself consist of);
c) we have to have at least samples of a communication policy to be tested.

It seemed that we have to work somewhat backwards. Thus we decided to ask our colleague, Marek Susta, an experienced modeler, to work with us on the model of a city. Our role was mainly of those, who know the problem (substituting for the City hall policy makers).

As a basis the J.W. Forester's model was adopted; we identified the following basic „hard" factor accumulations: population, employment/unemployment/self-employed, housing, tourism, education/schools and banks.

Then we speculated about other „quality of life" factors (sports and free time activities, culture, education/schools, environment/public spaces), which should be included.

Finally there emerged a group of additional „soft" accumulations: citizens´ and other agents´ satisfaction with what politicians in City hall are doing (caught-up by City hall policies).

Fig. 1: The initial accumulation – flow diagram of basic components then looks as follows:

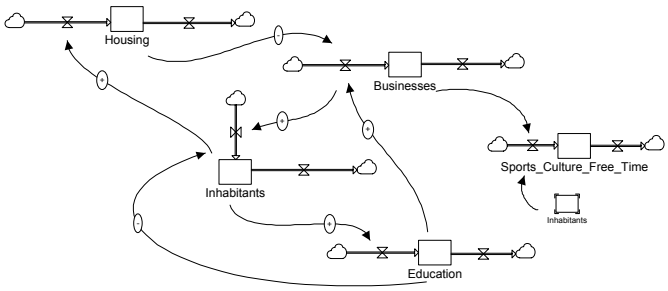


Fig.2: The initial accumulation and flow diagram. The "soft" components of the model, capturing the activities and the communication policy of the City hall upon changes of "mental models" of citizens, necessary to join a vision was the second step in our conceptualization. The change of mental models is expressed here as a chain of accumulations (ranging from satisfied citizens to policy supporters).

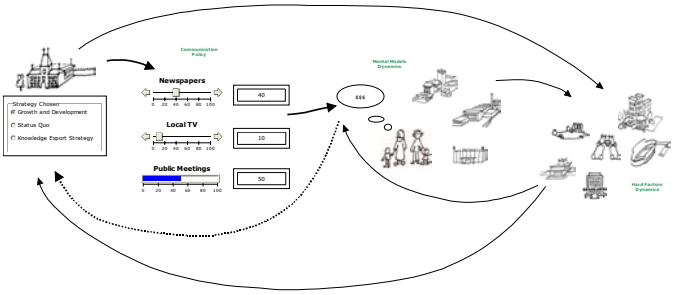
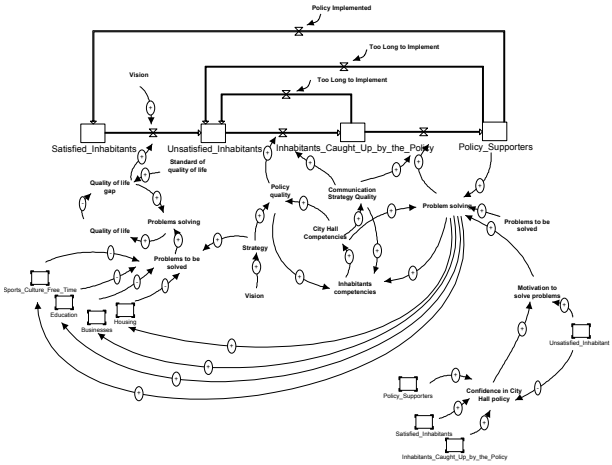


Fig.3: The change of "mental models" of the city agents



The change of "mental models" of other agents (schools, banks and all forms of employment/jobs) remained unspecified so far and at the present time we consider it included in the above presented general form.

How the further components are structured?
Population (see App.1, 2), housing (App.6) and schools/education (App.5) follow the logic of aging (except for the migration problem, App.4). Moreover, housing is tied together with requirements of social stratification (lower, middle and upper class population App 7). Employment and entrepreneurship structure (App. 3) is connected with age groups and environmental quality.
The quality of the life (App. 9) is given by a set of 10 variables, expressing peoples´ needs (App. 8): both by their real existing values, as well as the way, how the public perceives them (safety, the health quality of environment, choice and availability of housing, schools, public and other transportation, jobs, other city infrastructure, the quality of public places, culture, sports and free time).

The citizens´ trust in politicians (satisfaction with how the City hall behaves) is partially a result of citizens´ satisfaction of the perceived set of their needs (what is really done). Partially, it is influenced by the attributes of the City hall communication policies (how well are things within immediate reach explained; why they are done to reach a long time vision). These structures follow the generic logic of a goal seeking behavior.

Moreover, trust of a public (as well as other agents) in politicians (Fig.3) is also a result of changes in metal models of important actors in terms of their willingness to join a common synergetic strategy (to participate in a generating the vision).

This is expressed as a closed loop of accumulations including those, who are dissatisfied, satisfied, interested in public policies, supporting of public policies (App.11), realization of actual city projects and finally the number of (local) community projects. This chain is also influenced by the efficiency of a communication policy.

5. Preliminary policies and testing of the model

So far the only real input to test the behavior of the model we obtained, was the short time, preliminary communication policy, provided by the City hall:

- they consider an unspecified mix of public meetings,
- newspaper article publications and
- interviews on a local private TV stations (App.10 a, b).

Now we got the data for all constants and accumulations (population, housing, employment, schools etc.).

In order to run the model we wrote a set of three policies, developed from alternative visions (for this purpose we used visions, which one of us wrote a couple of years ago).

1. The first policy described the optimistic vision of a blooming city (within some well-considered restraints) called **Growth and development**. We assume, that the first policy will result in a change of metal models of all agents involved and will produce a coordinated behavior led by a vision (for instance, the role of banking sector is specified by availability of their services to the young population – either they may prefer immediate profits or they may choose to support the young population to settle down and generate a long time profits).
2. The second one led the city down to mediocrity with only very regional significance. The second policy seems to extend the present state, where individual agents in the city do not perceive strong need to unite and think about their future activities in a wider framework of a given Euro region that´s why we call it the **Status Quo strategy**.
3. The third, which showed to be most difficult, was the one of a sustainable growth of the whole region. These fictive policies explained behavior of particular accumulations. The third policy might lead to an understanding of what economic (educational, ecological, population geared) activities are viable in a long term so, as not to support only the unsustainable development (the first policy) so we called it the **Knowledge export strategy**.
   We assume, that both the first and namely the third policies are rather communication demanding and well-chosen, continuous communication strategy is necessary. Right after we set up initial conditions according the information we have and run number of simulations to find out really interesting results we didn´t want to see. Both "development" one strategies are **not likely to bring results expected**. Basic idea is that you need a huge public support to implement your strategy and you´re not going to gain it with a long-term stratagy. People in the city are affected by communistic way of thinking that can be expressed as "today matters" or by Latin saying "Carpe Diem" – enjoy the day together with excessive positive belief in future, because "the government" is going to care for out needs if necessary. When trying to execute a long-term strategy you have to come out with citizen education that will likely to be time, money and energy consumpting. For that reason, we need to add a learning structure into our model and discuss these issues with city representatives, because simple communication strategy of "what you´re going to get if you vote for us" can be of short-term only to take effect on number of policy (and strategy) supporters.

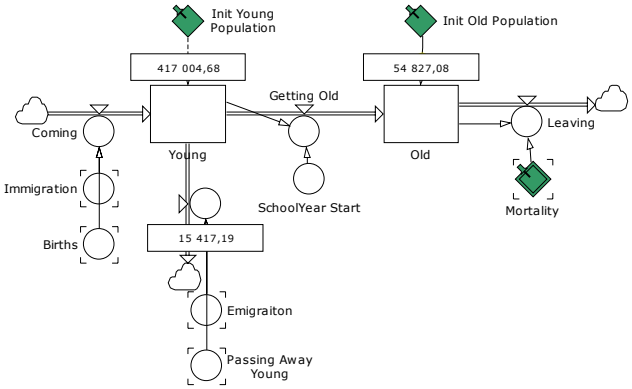
6. The future – what still needs to be done

Before the end of this year, we need to get the "strategy manager" of the City hall interested and involved in correction of our own suggested three policies. We assume that no agent, whom the city consists of, invested enough intellectual effort in a formulation of a complex strategy, comparable to ours. Thus, we hope to get agents involved to be interested in our work so, that they might use the model for their own purposes. To assure the model's acceptance, we plan to hold a seminar to present and explain it to a wider public and that is **why we have created such pictorial user interface to make the processes more understandable even to clerks**. Also, we plan to meet with local political leaders and to offer them consultations in the future. We also plan to disseminate the model in a printed form. Last, but not least, the model should serve as a material for teaching courses in SD modeling and hopefully it will generate some further academic work.

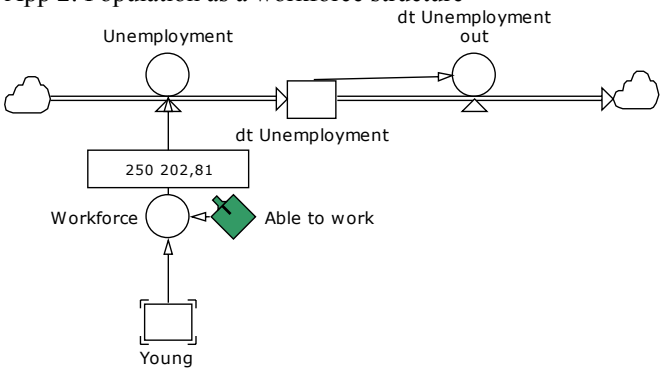
July 12, 2005

Appendix:

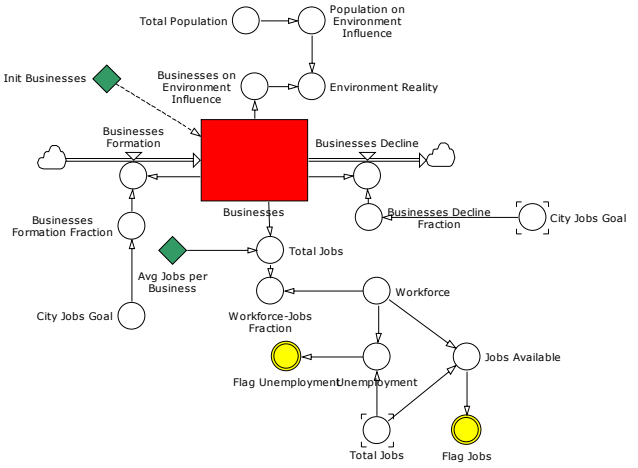
App1: Population migration and aging chain



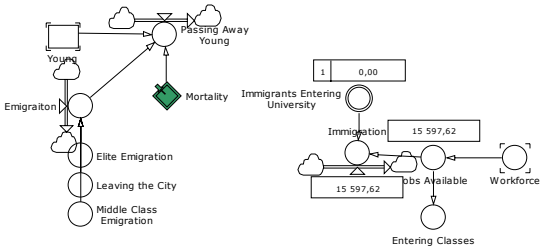
App 2: Population as a workforce structure



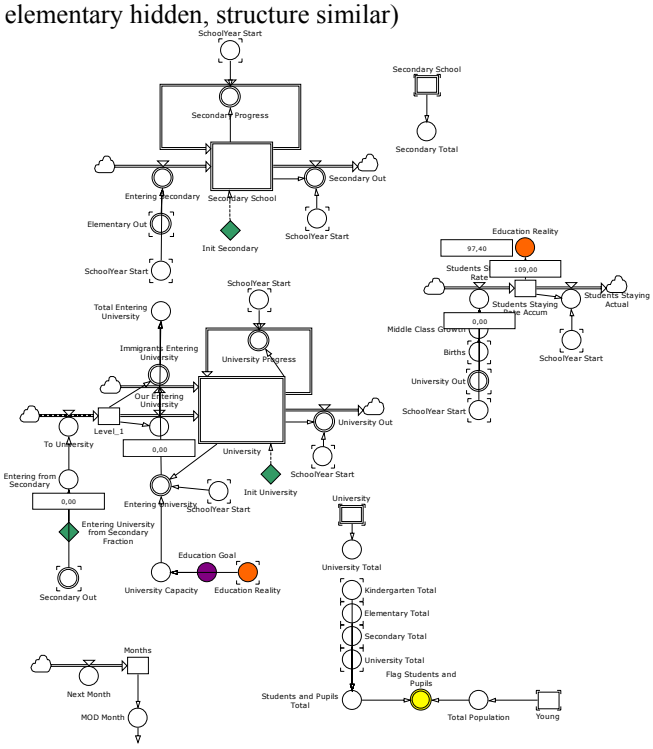
App.3: Entrepreneurial structure



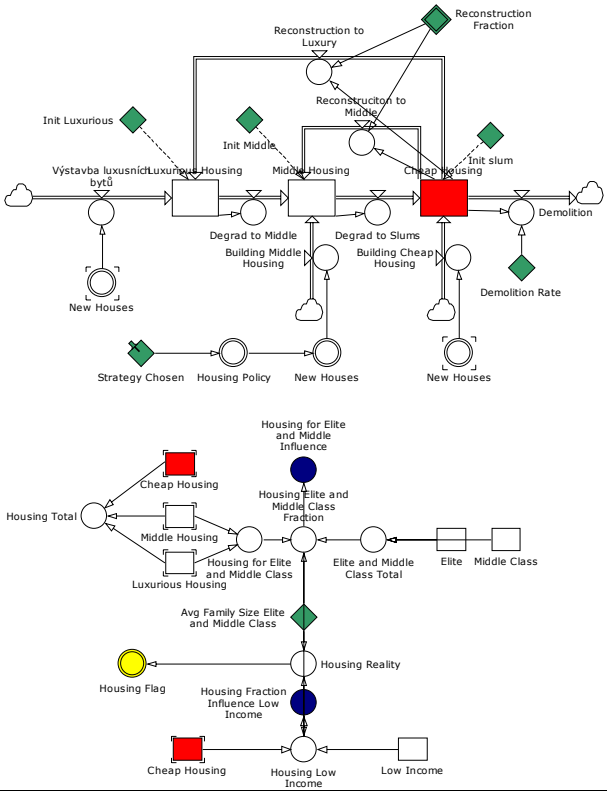
App 4: Population migration



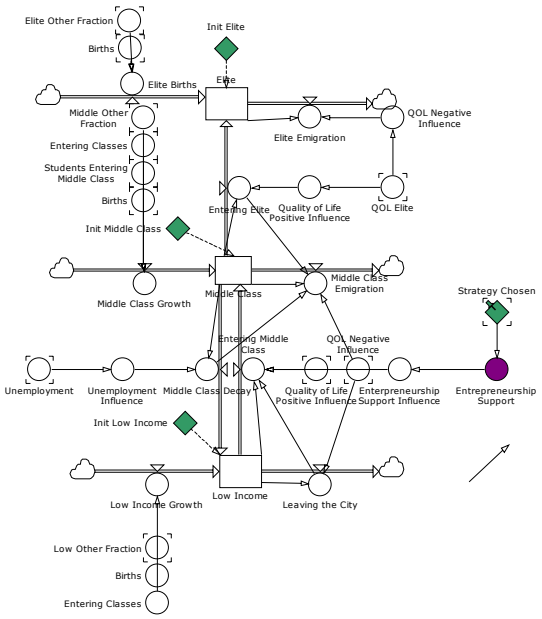
App.5: Structure of an educational chain (kindergarten, elementary hidden, structure similar)



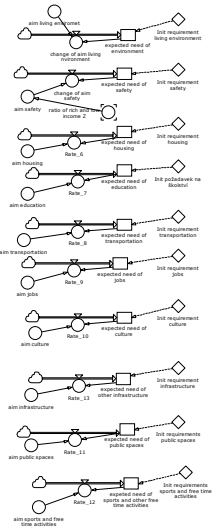
App 6: The structure of housing



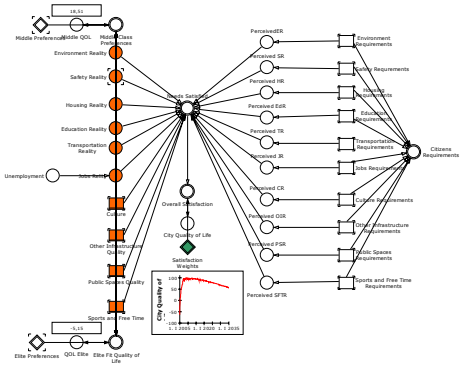
App 7: social stratification structure



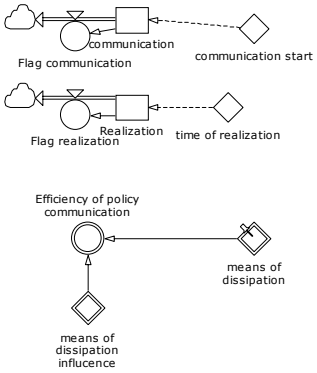
App 8: Requirements of a population



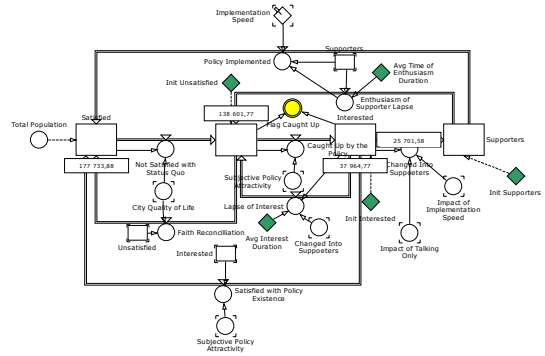
App 9: The quality of life structure



App 10a: Policy dissipation

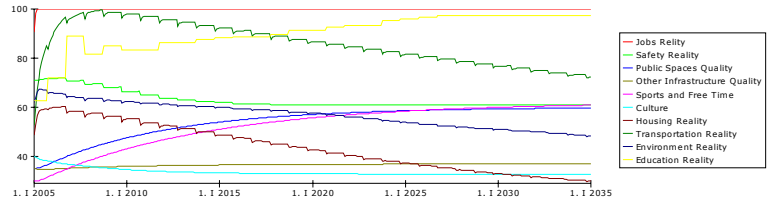
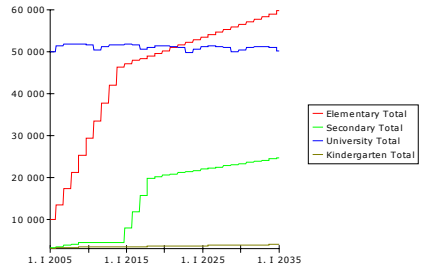


App10b: Attributes and means of a policy dissipation



App.11: City hall policies

App 12 City hall Growth and development strategy impact



App 13 City hall G&D impact on education