BRAINPOoL
Bringing alternative indicators into policy

WP3 Action Research
Rotterdam's Sustainability Profile

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Introduction

This report describes a case study in the context of BRAINPOoL WP3 – Action research in practical cases – executed by TNO at the municipality of Rotterdam. The objective of this case study is to support the City of Rotterdam in their search for a 'Sustainability Index' or 'Sustainability Profile', while at the same time learn from this search for the BRAINPOoL project in terms of bottlenecks regarding designing/developing/implementing this new sustainability indicator.

The case study in Rotterdam took off in March 2012 after an exploratory appointment with an already existing contact from previous TNO work at Rotterdam's municipality. After this initial exploratory meeting, we were introduced to the project leader of the 'Sustainability Profile'. For him we came at the right moment with an interesting offer; his project to develop a new way of presenting and using data on sustainability issues at the local level was ready to be scaled-up and pushed to a next level. Insights from the BRAINPOoL-project could be of help, so we were invited to step in.

Together the project leader of the 'Sustainability Profile' we listed potential bottlenecks in the further development- and implementation process of this new indicator, identified the right stakeholders to test these bottlenecks with (and find out other bottlenecks not listed yet), and discussed ways how we, the BRAINPOoL-project, could support the process.

During the initial meetings in Rotterdam we learned that the 'Sustainability Profile' was in a relatively early phase of development. Up to December 2012 interest in the Sustainability Profile grew stronger within Rotterdam's municipality but also worries arose about connection to processes (both inside and outside the municipality). We came to a joint conclusion with the project leader of the Sustainability Profile that this was a good moment to do a round of interviews with stakeholders. These interviews took place in the period January-March 2013. To reflect on the interview findings and to define next steps to prepare implementation of the Sustainability Profile, we agreed to design a workshop with "key persons" within the local government services. This workshop took place on July 2nd 2013.

The next section briefly summarizes the case study set-up and process. Accordingly, in the section after the executive summary, a description of the policy context in Rotterdam will be presented; followed by sections on the stakeholder analysis undertaken and workshop. The report concludes with more generalized findings for the BRAINPOoL project.

Case study set-up and process

The issue

Given an initial bottom-up development process of the Sustainability Profile the next step should be to test the Sustainability Profile in a wider setting of the municipality's office. In this way bottlenecks for designing, developing, and implementing the Sustainability Profile should become clear.

The case study approach and methodology

As a first step, a stakeholder analysis is carried out to identify internal demand and what kind of urgent issues can be addressed by using the *Sustainability Profile.* This includes finding out what themes/questions remain unanswered and what is the potential way to go forward.

▸ The stakeholder analysis is carried out by conducting several individual or group interviews with civil servants from different departments, managers and external stakeholders. The final list of interviewees is made in accordance with the contact person – and producer of the index – at the municipality's urban planning department (part of the cluster City Development).

▸ One of the goals of the interviews was to find out who (or which department) is the 'problem owner' of the *theme* sustainability. From our first conversations in Rotterdam, it seemed there are several departments 'claiming' this theme. In effect this could be a barrier for a successful implementation of an indicator initiative such as the *Sustainability Profile*.

▸ Based on the interviews a next step was to organise a workshop on the need (or perception of this need) and potential use of this *Sustainability Profile* (or similar indicator).

The outcome for the 'client'

With this case study BRAINPOoL would like to support the City of Rotterdam in their search for a sustainability index or profile. A final outcome for Rotterdam should be an advice on (further) implementation of a Sustainability Profile (or similar indicator), including clear follow-up steps and timing.

The learning for BRAINPOoL

The learning for BRAINPOoL will be insights in the dynamics around the 'Beyond-GDP' topic at the local (city) level. This will include a wider understanding of internal institutional barriers in the production and use of a new (sustainability) indicator, but also insights in the dynamics from a bottom-up initiative towards higher management and city politics.

Executive Summary

Rotterdam's Sustainability Profile

The development of Rotterdam's Sustainability Profile started from the idea to map where the city of Rotterdam stands in terms of sustainability, as well as from the view that there is a pool of 'unused' data available. Moreover, in already existing indicators sustainability aspects were not well captured yet. The initiators of the Sustainability Profile felt a need for indices that measure progress in the field of sustainability more holistically/ integrated and at the same time make a link to every day planning practices and hands on activities.

Within the context of the EU-funded MUSIC project, a (very detailed, GIS based) quantitative information tool was being developed. This data tool started to be called '*Sustainability Profile'* (or '*Sustainability Index'* or "Quality of life"-index) and now has to find its way into policy making. It should give both urban planners and policymakers the opportunity to optimise sustainability plans in relation to the Rotterdam Programme on Sustainability and Climate Change: Investing in Sustainable Growth.
A clear advantage of the Sustainability Profile should be to show the implications of policy and planning decisions in a more explicit way, and in the end, to show/monitor the progress of local areas towards sustainability.

Stakeholder analysis

In the period January 2013 – March 2013 nine interviews with both internal and external stakeholders (including potential users) are conducted. A shortlist of key findings is listed below.

▸ Interviewees connect the Sustainability Profile to: spatial development or city development, the creation of awareness (actors are handed a tool to take action), well-balanced economic growth, the themes of the Program on Sustainability and Climate Change;

▸ The Sustainability Profile should proof its value added compared to the already existing approaches and instruments. It should really be additional to these existing indicators in order not to cause confusion;

▸ Final success of the Sustainability Profile will depend on the function it will be given. Interviewees could easily make a list of potential functions. A univocal function should be distilled and communicated;

▸ The *interpretation* of the Sustainability Profile is seen by interviewees as important issue to elaborate on. Various interviewees see a risk of misinterpretation.
Some interviewees explicitly expressed worries of misinterpretation at the political level, leading to wrong policy interventions. Politicians might give a wrong absolute meaning to indicator outcomes;

▸ Besides on functionality, there also exist different views on scale. Should the Sustainability Profile play a role on neighborhood level, municipality level, or urban agglomeration scale?

▸ In a way there is a *dilemma between generic or specific.* A certain tension between harmonizing outputs (e.g. for the purpose of benchmarking) and showing unique characteristics of local areas exists.

▶ Some interviews made us aware of a danger that the Sustainability Profile will lose its connection to policy if the focus is too much on technical aspects of the instrument itself. The Profile will have true value added when embedded in the policy context, and implemented in actual work processes. The latter preferably also in connection to spatial development plans - if possible even in cooperation with external parties and/or in participatory processes.

▶ On the operational side, efforts should go out to efficiently embed the Sustainability Profile in regular work processes of various departments of the Civil Service. Especially a more integral way of working, including cooperation between different departments is seen as important. In this context, the problem of 'different Worlds' and cooperating with 'different blood groups' is mentioned as organizational barrier by various interviewees.

Based on the stakeholder analysis we identified the following challenges to be discussed in the workshop, to further move towards a successful implementation of the Sustainability Profile in Rotterdam:

▶ Find a clear connection between the **concept of the profile** (data system management, content: the (sub)indicators to be included, explanation of its function(s)) and **work processes of the Civil Service** (here interpretation of the indicators is an important factor and, accordingly, implementation in (local area) policy interventions.

▶ However, technical aspects of the Profile and the exact content are subordinated to the function(s) and policy goals it will serve.

▶ First an answer to the following questions should be formulated:

  o **Strategic:** What goal(s) should the Sustainability Profile aim for? (or: Which functions should the profile have? And Whom should it serve?)

  o **Tactic:** How can the quality be guaranteed? What is needed to really make the Sustainability Profile interpretable in a clear way, such that correct policy interventions can be based on its results?

  o **Operational:** How can the Sustainability Profile be embedded in the organizational structure and work processes?

Workshop findings

A workshop took place the 2nd July 2013 with participants selected by the project leader of Rotterdam's Sustainability profile. The group of participants comprised of close colleagues who are needed for the operational work, people from other departments with whom cooperation is required, and some external stakeholders whose support is also needed. The goal of the workshop was to make a strategic plan for the coming two years for further design, development and implementation of the Sustainability Profile.

The workshop took off with the general acknowledgement that an important first step is to embed sustainability in regular (planning) processes at the municipality's office. In this context it should accordingly be found out what role the Sustainability Profile can play, and how it can be implemented in regular work processes. The following Top-3 of issues to be discussed in-depth was then decided upon:

1. Function(s) of the Sustainability Profile
2. What is needed to bring the Sustainability Profile into use?
3. How can (potential) users be attracted?

On #1, the function(s) of the Sustainability profile, it is concluded that the real strength of the Sustainability Profile is to supply a factual (objectively measured and undisputable) knowledgebase to feed in policy and planning processes as 'common starting ground'. Based on such a shared knowledgebase, various policy options for city development can be mapped in an objective way. In its core the Sustainability Profile should thus supply the agenda for discussions on new policy plans, in its early phase of development. The ultimate goal of these discussions should be to create broadly based support on how to embed sustainable development in concrete urban planning processes or city development projects.

Given that private parties (companies) are nowadays more involved in investments to develop local areas in Rotterdam, the city development and urban planning process must be realized more in interaction with external parties. The challenge for the local government is thus to make a connection between public tasks and market initiatives, in such a way as to optimise sustainability targets and outcomes. It is important to now apply the Sustainability Profile in such processes – the development of the profile was up till the workshop primarily focused on the rather technical aspects of the instrument itself. It will remain important, however, to present information in the right (manageable) proportions, at the right moment in the process, and to the right persons.

On #2, the question what is needed to bring the Sustainability profile into use, it was agreed by workshop participants that especially at the initial moment where high-ranked officials set more abstract policy targets at a macro-level, the Sustainability Profile can have value added in offering an instrument to define more overarching sustainability targets in a SMART way. In this initial phase of defining policy targets the Sustainability profile could define the optimal opportunity and optimal (geographical) scale to target policy interventions at as to realise maximum impact. Workshop participants therefore conclude that an important first step should always be to identify the (type of) users with whom the Sustainability Profile will be implemented in a policy process, and to identify what type of process this is. Both variables – (type of) users and process characteristics – determine the research questions the Sustainability Profile should answer. The instrument needs to be customized to the specific situation, stakeholders, etc.

On #3, the question how (potential) users can be attracted, the first important point relates to the business model behind practical implementation of the Sustainability Profile. On the operational management side, structural budget allocations are needed to update datasets and maintain data management systems. Furthermore to 'run' customized exercises with the Profile, it should be clear how time allocation of staff will be paid for. At the time of the workshop it was not yet clear to the project leader of the Sustainability Profile how structural financing can be arranged. Beyond finance, other operational questions in relation to the roles to play with the Sustainability profile (i.e. knowledge broker, advisor, and process manager) exist on the 'back office team'. Is this team complete yet? And does the team have all needed competences to fulfill all roles? It was concluded by workshop participants that competences of back office team members are an important factor to take into account.

Conclusions on the development of Rotterdam's Sustainability Profile

The development of Rotterdam's Sustainability Profile started as a bottom-up initiative on the operational level of the civil service. When we got in contact with Rotterdam's municipality, the development process of the Sustainability Profile was still in a somewhat conceptual phase. The focus at that time was on rather technical aspects of the instrument itself (dataset underlining it, way of presentation etc.), but yet arriving a level of maturity that it was opportune to brief the head of unit and other higher ranked officials on the concept.

From the start, there seemed not to be a shared conception on the functionality of the Profile within the municipal organization. It was not directly clear to people what the Sustainability Profile can do, and for what purpose. This resulted in skepticism at some places within the municipal office, including higher managers. We learned that it can take a while for higher managers to determine how useful this new indicator is, and to assess the functionality of it. We found that some more efforts are needed to promote the key strengths of the Sustainability Profile to arrive at a situation where there is broadly based support and understanding of the profile's value added. The challenge for the near future is to move away from fine-tuning technical aspects of the instrument itself, and instead to focus on the (policy) processes in which the Sustainability Profile will have to be applied.

Along the lines of BRAINPOoL's analytical framework as applied in the first two work packages, observed barriers are:

- **Context factors:**
  - *Organizational structure/work processes*
    - It is especially pointed out that more cooperation between different departments is needed, as well as a more integral way of organizing projects.
  - *Embedding in policy context*
    - Some interviews made us aware of a (perceived) danger that the Sustainability Profile might lose its connection to policy. This because of too much emphasis on technical aspects of the instrument itself or a fear that the Sustainability Profile does not capture developments at the same geographical scale as where local politicians are interested in.

- **Indicator factors:**
  - *Naming / image / way of presentation*
    - Some interviewees had a preference for other names and a "easier to interpret" way of presentation of the Sustainability's Profile data.
    - There was not yet a clear and coherent perception among interviewees of what the Sustainability Profile is, or can do.
  - *Legitimacy*
    - Some interviewees questioned how distinguished the Sustainability Profile is in relation to already existing assessment tools and other indices already available within the municipality.
    - Support from higher management seemed to be relatively moderate (especially in the early phase of development when we started the first contacts in the context of this case study).
    - Importance to make a connection to the right geographical scale and with the current policy agenda.
  - *Reliability and interpretability*
    - Various interviewees mentioned the importance for the Sustainability Profile to provide rather univocal results which can be easily understood, so that a correct meaning will be given to the outcomes.

- ▶ **Use(r) factors:**
  - o *Functionality*
    - ▪ There was not yet a clear and coherent conception among interviewees of what the Sustainability Profile is, or what it can do. Interviewees had questions on what roles the Sustainability Profile should play.
  - o *Interpretation ("use" versus "misuse")*
    - ▪ Underlined by a concrete example of misinterpretation leading to a wrong policy intervention (Safety index score versus perception of safety as explained by inhabitants of neighborhoods themselves were diverging), it became clear that the issue of *interpretation versus misinterpretation*, especially at political level, is an important user factor to take into account.

Obviously, some of these observed barriers relate to the fact that the Sustainability Profile was still in a rather conceptual phase when the BRAINPOoL case study started. The 'level of maturity' of the Sustainability Profile should therefore be taken into account while interpreting case study findings and synthesizing them in BRAINPOoL's context. For this reason, recommendations or next steps identified, are rather practical or explanatory in nature, and primarily targeted to the team working on the Sustainability Profile:

- ▶ Create clarity on the function(s) of the Sustainability Profile:
  - o Create a recognizable instrument (with a sound information- and database underlining it) which is, throughout the municipal organization, acknowledged to function as provider of objective information for discussions in policy plans and projects at their early phase of development.

- ▶ For this, it is important to present information in the right (manageable) proportions, and to the right persons:
  - o Balance the supply of data to the specific needs of the user [or city development project or urban planning process in which the Sustainability Profile will be applied].

- ▶ Make a connection to target audiences of (potential) users not reached yet:
  - o During the workshop there was agreement on the importance to show 'inspiring examples' to a group of local area managers who was not yet aware of the Sustainability Profile. Potentially, these managers determine where they see opportunities to connect the Sustainability Profile to policy measures.

- ▶ Connect public tasks to market initiatives in such a way as to optimize sustainability targets and outcomes but be open on 'desired outcomes':
  - o This requires to set-up a good process in which negotiations with external parties on sustainability targets will be arranged. In this process it remains important to base decisions on new policy plans or city development projects on objective information. The Sustainability Profile certainly has the potential to provide arguments in such an objective matter.
  - o The local government is, however, not only a 'player of the game' but to a certain extent also sets the 'rules of the game'. For this reason, for the municipality it is important not to 'exploit' its own normative stance while applying the Sustainability Profile in collaborative processes with external actors. The shared knowledge base should be truly objective.

The general objective of BRAINPOoL's work package three – to which the case study on Rotterdam's Sustainability Profile belongs – is to test the interaction between the supply of indicators (WP1) and demand for indicators (WP2) in practical case studies. We have therefore tried to map our observations on primary bottlenecks or barriers in the development process of Rotterdam's Sustainability profile along the lines of BRAINPOoL WP1's and WP2's main findings. For the purpose of synthesizing individual WP3 case study findings, five (generalized) types of barriers are identified:

1. *Natural conservatism*

During our case study between March 2012 and July 2013, the development process of Rotterdam's Sustainability Profile entered a phase in which more people at different departments and at different hierarchical levels got aware of the Profile. This also resulted in skepticism on the value added of the Sustainability Profile.
It is recognized by a high-ranked official that the Sustainability profile can have true value added if it is able to connect to visions on integrated (local)area development, point out connections to other policy domains, can connect to stakeholders, improve communications, and is able to explain the development potential of local areas (i.e. identifying problems but also chances). Without such abilities, the Sustainability Profile would not per se have value added compared to already existing indicators in the field of economics, ecology and social aspects.
However, the Sustainability Profile is in fact a good example of an initiative which is bringing together already existing data into a coherent and integral way, rather than trying to be a new, and potentially competing, measurement instrument.

We clearly noticed in the Rotterdam case that at some point in the development process internal support from heads of unit and program managers is needed to make a connection, not only to policy processes but also to operational processes. The primary bottleneck to overcome first was more to bridge a gap between the operational work on the Sustainability Profile and the reservation of heads of unit and program managers. The process flow is thus more from bottom-up to higher hierarchical levels of the organization. It is especially in the latter context that the Rotterdam case proofs WP1's finding that *Indicator initiatives take time*. It took some time to get required support from higher ranked officials. In the context of the Rotterdam case study we can better characterize high-level actors as the ones playing a crucial facilitating role, instead of being on the 'demand side'. Without their support in the end, it will be very hard to secure any form of structural embedding in municipal work processes and policy processes.

2. *Ignorance of the opportunity*

During the case study in Rotterdam we found that some work needs to be done to really promote the key strength and value added of the Sustainability Profile within the municipal organization. It appeared that there was no shared conception of the usefulness and functionality of the Profile. This links to WP1's findings on *perceived need.*
However, given as what is seen to be the Sustainability Profile's key strength, to provide objective information as shared knowledgebase at the start of new city development projects or urban development planning processes, it should be possible to convince people within the municipality that the Sustainability Profile has true value added.

In fact the Sustainability Profile has the potential to do exactly what the abovementioned (#1) high-ranked official considers to be determining factors for value added. Given that the Sustainability Profile starts 'bottom-up' with very detailed data on small geographical areas and accordingly tries to target the information to facilitate the specific needs of the city development project or urban planning process at stake, a participatory way of working is basically what the project leader of the Sustainability Profile is aiming for.

In general we found that some more efforts are needed to 'market' all assets of the Sustainability Profile in order to win broader based support and acknowledgement of its functionality.

3. *New indicators don't fit policy objectives*

During the case study we found that there were some fears that, due to a strong initial focus on technical aspects of the instrument itself, a connection to actual policies could get lost. However this must clearly be seen in the context of the 'level of maturity' of the Sustainability Profile. First practical applications of the Profile had yet to start, and some of the interviewees were, to a certain extent, unaware of all possibilities and function of the Sustainability Profile. This misperception also relates to the novel character of the Sustainability Profile.

The stakeholder analysis also pointed out to some reservation to embrace indicators. For example, a higher ranked official stated that to his opinion:

"To be useful for local politics, indicators should especially serve to monitor developments and to find out the reasons and causes behind. Indicators should not function to hold policy to account, therefore there should not be any political target connected to indicator outputs"

In a way, there seems to be a fear to be confronted with critique based on indicator outcomes.

One of BRAINPOoL WP2's findings is that "*Beyond GDP indicators face a paradox: they aim to be comparable at the international level as well as revealing local level aspirations. […] Interconnection, comparability, harmonization and international cooperation are considered to be very important characteristics. But the question of how to do it without jeopardizing contextualisation, locality, specificity remains unanswered.*"

We found elements in the context of the above in our case study on the Rotterdam Sustainability Profile. Although the Sustainability Profile is orientated on the local level of the city of Rotterdam, there still are important issues related to scales. During the round of interviews we found that there is a certain tension between 'harmonization of indicators' and showing unique characteristics of local areas with help of the Sustainability Profile. It was questioned to what extend a generic story should be told, so that benchmarking with other local areas or perhaps even other cities would be possible, and what room then is left to show the uniqueness of developments in certain neighborhoods. During the interviews this was referred to as a '*dilemma between generic or specific'.*

Furthermore, on the geographical scales in the context of functionality of the Sustainability Profile, we found during the stakeholder analysis that various interviewees were wondering on which scale the Sustainability Profile should play a role: neighborhood level, city level, or even at the level of the urban agglomeration?

Moreover, during the stakeholder analysis there seemed to be some fears by interviewees that the Sustainability Profile could lose its connection to the policy agenda, by not necessarily measuring developments at the same geographical scale as where the local politicians are focusing on. However, a unique characteristic of the Sustainability Profile is that it is flexible to provide data on developments within the city's boundaries on basically every possible geographical scale. The profile thus has the potential to target reliable and objective information, to specific needs. Again, this seems to relate to misperceptions on the functionality due to unawareness of the Sustainability Profile's full potential. This must be seen in light of the relatively early phase of development in which this case study was running.

4. *Problems with the indicators themselves and associated models*

The case study on Rotterdam's Sustainability Profile proofed that complexity of the indicator can be a real problem, especially in terms of interpretation of the outcomes. In the stakeholder analysis we found that various persons within the municipal organization saw a possible danger of misinterpretation, partly driven by a complex way of presentation, or an information overflow. Furthermore, in Rotterdam various people not so much feared that decisions will be made too late, but that the wrong policy actions will be derived from the indicator outcomes. It was stressed by a higher ranked official that, to his opinion, it would not be desirable to burden city politicians with complex technical details of the Sustainability Profile. Politicians should only be asked to deal with governance-related aspects in directions of solution as indicated by the data of the Profile.

5. *New ways of working are required*

Some further elaboration within Rotterdam's municipal organisation on operational processes is needed. During the case study we learned from various interviewees that cooperation with other departments or other local governmental services are not always considered to be optimal. At the beginning of the case study we learned that there might exist some tension between different departments or governmental services who 'claim' to be the 'problem owner' of the theme sustainability.
To conclude, internal cooperation need to be optimised somewhat so that the Sustainability Profile can be really applied in concrete projects and processes, also in cooperation with external parties. As soon as both internal processes and cooperation processes are better targeted to implement the Sustainability profile in, there should certainly be potential to *reach multiple audiences*.

Conclusions

▶ Although Rotterdam case study is unique by nature, our observations can be related to some of WP1 and WP2 key findings. We can actually confirm most BRAINPOoL WP1 and WP2 findings which match to some extend with our observations in the Rotterdam case.

▶ We cannot so much add new generalized findings on success factors of indicators or the characterization of demand - they are probably too case study specific.

▶ An interesting observation from the Rotterdam case study in the context of BRAINPOoL is the discovered barrier related to the process flow from a proactive bottom-up initiative to higher hierarchical levels within a, in this case local, government organization. In fact the level of middle management could create a 'hold-up'.

▶ Another, perhaps more general, finding is that even within a local level 'beyond-GDP' initiative their can still exist a dilemma between multiple scales, e.g. a dilemma between 'generic or specific', also related to harmonization.

Context of Rotterdam's Sustainability Profile

Policy context

The city of Rotterdam, the Netherlands' second largest city with about 600 thousand inhabitants, has some challenging ambitions to become a sustainable city. Rotterdam aims to balance social (people), ecological (planet) and economic (profit) interests when making decisions and carrying out activities, both now and in the future. In this way, the city of Rotterdam wants to transform the city into a more pleasant, safe and healthy place for future generations to live, and where the economy can continue to flourish. This is the city's understanding of a high quality of life.

In 2007, Rotterdam has started the Rotterdam Climate Initiative[1], a partnership between the city, the Port of Rotterdam, Deltalinqs (organization for companies in the port), and the regional Environmental Protection Agency [DCMR] in order to respond to climate change and make way for sustainable economic development in the region. The main target of the Rotterdam Climate Initiative was to have 50% reduction of CO_2 emissions in 2025 compared to 1990, and to make Rotterdam 100% climate-proof. However, the Rotterdam Climate Initiative has recently been incorporated into the Rotterdam Programme on Sustainability and Climate Change: *Investing in Sustainable Growth*[2]. This is a wide-ranging programme that runs from 2011-2014 and links-in with many policies of the City of Rotterdam.

Given its characteristic of a delta and port city with large parts situated below sea level, Rotterdam is vulnerable to flooding as an effect of increased rainfall and a rising sea level. This makes sustainability even more a high priority for the city. Besides water protection, policy measures aim to: reduce the use of fossil-derived energy; reduce CO_2 emissions; reduce noise and air pollution; have higher energy and resource efficient buildings, industry, traffic and transport; make better use of waste heat; increase the use of renewable energy; and facilitate carbon capture and storage.

Furthermore, as reflected in Rotterdam's 2007 City Vision on spatial planning, the quality of life of Rotterdam's inhabitants should be improved by concentration and condensing, i.e. bringing places to work, live, and leisure closer together. This choice for a 'compact city' offers many advantages such as less traffic and more support for urban facilities. However, it then needs to be accompanied with additional policy efforts to achieve a better quality of the living environment in terms of public green, clean air, less noise pollution, and efficient use of energy.

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[1] http://www.rotterdamclimateinitiative.nl/en

[2] http://www.rotterdam.nl/DSV/Document/Rotterdam%20Sustainability%20Programme_vs5_3_cover.pdf

Operational management

The Programme Office on Sustainability and Climate Change, with a staff of 23 FTE, is responsible for the practical implementation of the programme and for writing progress reports. Through incorporation of the commissioning role towards DCMR – the regional environmental protection agency, Rotterdam's Sustainability and Climate Change Office is also responsible for coordinating the regular environmental tasks of the city such as external safety, water quality and sewage treatment. However, implementation of individual activities is and remains the responsibility of the 'regular' municipal civil service. This means that there are several departments formally involved in the realisation of sustainability goals.

Towards a Sustainability Profile / measuring progress towards a sustainable city

The statistics of Rotterdam's local government services are quite well organized in the Centre for Research and Statistics. Several indices are being produced in Rotterdam to measure progress in different thematic fields: a safety index, physical index, health atlas, and a social index. These indices are all used in policy making. However, there is a need for indices that measure progress in the field of sustainability more holistically/ integrated and at the same time make a link to every day planning practices and hands on activities.

Both the Architecture Biennale, held in Rotterdam every two years (latest edition April 2012) and the European Interreg IVB project MUSIC[3], which focuses on the transition towards sustainable cities, were reason for Rotterdam's Spatial Planning department to commission a study on the impact on sustainability of densification of Rotterdam's inner city. For the purpose of this research project a (GIS based) quantitative information tool at a very detailed geographical scale (street level) is being developed, not only for application at inner city level but for the whole of Rotterdam. This data tool is being developed into a '*Sustainability Profile'* (or '*Sustainability Index'* or "Quality of life"-index) and now has to find its way into policy making.

In this search for indices that capture sustainable development or progress more holistically/integrated, the municipality of Rotterdam meets several bottlenecks:

1. The producers and the users of the index are not the same people or departments. The interests of the departments are different and boundaries between the departments seem to hamper the use of the indicators;
2. The continuity of data gathering for the indicators is not guaranteed as Rotterdam has a tradition to organize work in unique projects that last until a certain date;
3. The political and managerial level did not articulate an initial need (and herewith legitimacy) to develop this new set of indicators for more general policy purposes.
The development started bottom-up within the urban planning department, in the context of the above mentioned study on impacts of densification of Rotterdam's inner city. Wider implementation and application in regular work processes of the municipality was at that point perhaps not yet foreseen by the higher management.

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[3] **www.themusicproject.eu** (Rotterdam is a lead partner). The aim of cooperating cities is to make CO2 reduction an integral part of urban planning processes. In this project Rotterdam wants to develop new cooperation models between the public and private sector to make public buildings less energy consuming.

The process

In the course of development of the Sustainability Profile at the urban planning department within the Cluster City Development, awareness on the indicator is gradually picked up by several other departments. The political or managerial level of the City slowly started to take the idea and possibilities of wider implementation of this Sustainability Profile aboard. However, an articulation of the need and opportunities of the Sustainability Profile was not (yet) always clear on this level. The next step should therefore be to test applicability of the Sustainability Profile in a wider setting of the civil service, such as in urban development plans, neighbourhood development plans, hands on projects, and visions.

Only then, the process of development can be directed more towards implementation, and finally repetition, for example in future periodic monitoring studies like 'State of Rotterdam' or 'Rotterdam Economic outlook'. Furthermore, the Sustainability Profile could potentially be connected to the obligation the city has installed to attach a sustainability paragraph to every new city development plan of Rotterdam's municipality.

Figure 1: Sustainability Profile Rotterdam (version of July 2013)
A comparison of neighbourhood 'Feijenoord' with scores of the City average
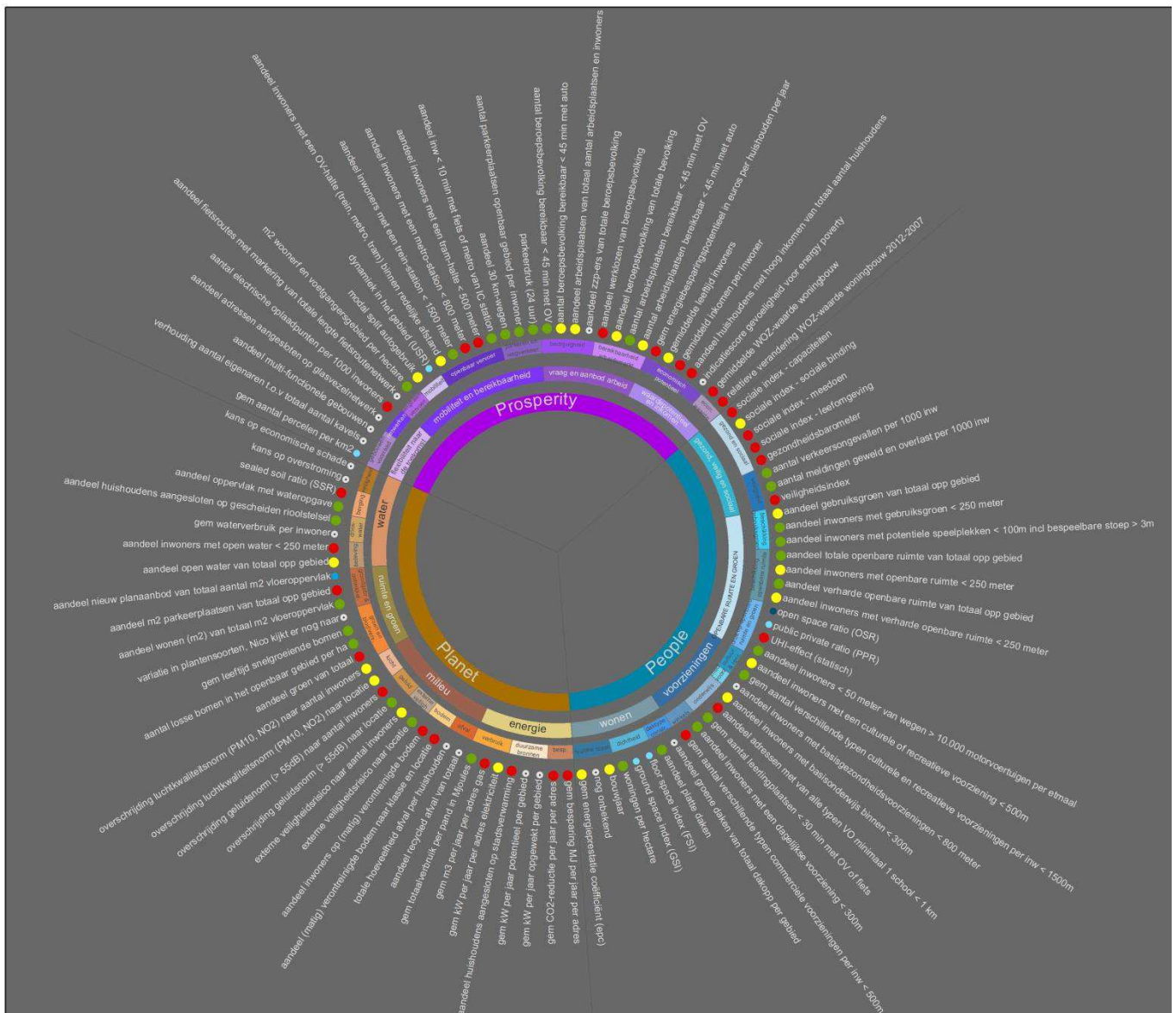
Source: Municipality of Rotterdam (2013), Cluster City Development, department for Urban planning and living environment, Roland van der Heijden

As there are already many existing local area assessment tools which result in an quantitative outcome based on a large number of criteria (like *Leed neighborhood development*, *Breeam communities*, *Casbee Urban planning*, etc.), Rotterdam's spatial planning department recognises that there is no need for just another assessment tool. The Sustainability Profile should therefore be seen as a more targeted addition, instead of a new and competing assessment tool. It is actually a link between an assessment (which results in numbers and percentages) and what the spatial planning department calls 'asset based development'.

In short, the Sustainability Profile shows what assets will be gained (in money and sustainability terms) while planning in a specific way. For example, it intends to go beyond numbers and percentages on, say, needed amounts of public green (parks) in the city to reach policy goals related to the living environment. At the same time, the Sustainability Profile also incorporates questions like: *where to plan more green, why there, what is the advantage of place A over B?* It is important to understand that the Sustainability Profile makes this connection as it bridges the gap between mapping and calculating. It gives both urban planners and policymakers the opportunity to optimise sustainability plans in relation to the Rotterdam Programme on Sustainability and Climate Change: *Investing in Sustainable Growth*.

The already existing assessment tools are seen to be less useful to make this link with the Rotterdam policy context on sustainable development. Furthermore, these existing assessment tools are more 'black-boxes' with their weighting schemes and translation into outcomes of single numbers and percentages. A clear advantage of the more 'customized' Sustainability Profile should thus be to show the implications of policy and planning decisions in a more explicit way, and to better target the instrument to the local policy context.

Next to matching the Sustainability Profile of Rotterdam to on-going work processes, projects, policymaking and this 'asset based planning', there should be an internal discussion on the desired content of the indicator base. In the study on the impact on sustainability of densification of Rotterdam's inner city, the Sustainability Profile comprised of 35 indicators. This indicator framework includes themes such as "water system and climate change", "accessibility", "energy", and "health". A research question is if this current set of indicators suits all purposes of Rotterdam's municipality, or if there should be an extension to other themes as well. Within the municipal office there are indicators on even more themes available. For this reason, experts on each theme will be questioned to fine-tune the indicator selection.

Both on the city level as well as a wider regional level there are internationally harmonized indicator initiatives in which Rotterdam participates. These form a potential pool of data to be implemented in a Sustainability Profile of Rotterdam. For example, the World Bank has established the Global City Indicators Program (www.cityindicators.org) to provide cities with a standardized system for data collection in order to monitor performance and quality of life in a consistent and international comparative way. The Global City Indicators Facility [GCIF], the actual database of this World Bank program, allows for more transparent and accountable evidence-based policy making. This program uses two broad thematic indicator categories: City Services (with topics like government budget, housing, healthcare, and transportation) and Quality of Life (with topics like civic engagement, culture, social equity, and technology and innovation). Since Rotterdam already is committed to collect and publish data for this GCIF, the indicators can be taken into consideration to further fill the dataset of the Sustainability Profile.

Stakeholder analysis (interview round)

As stakeholder analysis, 9 interviews are conducted in the period January – March 2013. We interviewed civil servants from various departments within the municipality of Rotterdam, who can support further development of the Sustainability Profile on a more operational level. Furthermore, we interviewed some higher managers and heads of unit who are needed for support, as well as two external stakeholders. Next to people needed for support in operational work or for more formal support to secure for example time and budget allocations, we interviewed some stakeholders who are (potential) users of the Sustainability Profile. All interviewees were suggested by our case study contact at the Municipality of Rotterdam – and developer / project leader of the Sustainability Profile.
A full list of interviewees can be found in the Annex.

Main findings from the interviews

▸ Indicators on sustainability / Sustainability Profiles are sufficiently known by the interviewees. Some even know the special publication related to the International Architecture Biennale in which a chapter is devoted to the 'Sustainability Profile'.

▸ Interviewees connect the Sustainability Profile to: spatial development or city development, the creation of awareness (actors are handed a tool to take action), well-balanced economic growth, the themes of the Programme on Sustainability and Climate Change.
There are thus multiple interpretations of sustainability, which at least goes well beyond the classical and narrow approach of environmental aspects only.

▸ Within Rotterdam's municipality there exist various indices next to each other: for example a Safety index, Social index (recently also integrated into 'Neighborhood profiles').
The Sustainability Profile should proof its value added compared to the already existing approaches and instruments. It should really be additional to these existing indicators in order not to cause confusion.
To a certain extent, there might be competition between already existing approaches and instruments, and the Sustainability Profile which is still under development.

▸ Final success of the Sustainability Profile will depend on the function it will be given. Interviewees could easily make a list of potential functions. From this long list an univocal function should be distilled:

  o Information tool in bottom-up spatial planning / city development early stage policy planning

  o Economic: trigger for local area investments, calculation of business cases

  o Monitoring of neighborhoods, identifying local 'shortcomings' and points of attention

  o Making a connection to spatial planning visions (master plans), building an integral approach, mobilize stakeholders, list the development potential of local areas

  o Communication instrument

  o Benchmarking tool

  o Policy impact assessment tool

▶ A lot of interviewees pointed towards the *interpretation* of the Sustainability Profile as important issue to elaborate on. Various interviewees see a risk of misinterpretation. Therefore, the profile should produce rather univocal results. But is this possible?

▶ Related to this worry, it is stressed that the Sustainability Profile should especially focus on the Civil Service, not on local politicians. Some interviewees explicitly expressed worries of misinterpretation at the political level, leading to wrong policy interventions. In one of the interviews a concrete example of misinterpretation (of the Safety index) leading to wrong policy interventions was mentioned.

▶ To work with indicators such as the Sustainability Profile (the making of it, clear way of presentation, and to work out how it should be interpreted) work processes are preferably organized in an integral way. This requires cooperation between different departments. Some interviewees pointed out that work processes within Rotterdam's municipality tend to be less integral, without strong cooperation between different departments or sectors. A lot of attention will be needed to efficiently embed the Sustainability Profile in work processes of various departments of the Civil Service.

▶ More in general, the problem of 'different Worlds' and cooperating with 'different blood groups' is mentioned as organizational barrier by various interviewees.

▶ There is a certain tension between 'harmonization of indicators' and showing unique characteristics of local areas in the Sustainability Profile. This gives rise to the question to what extend a generic story should be told (for the purpose of benchmarking, perhaps even with other cities) and what room is left to show the uniqueness of an area.
We can refer to this as a *dilemma between generic or specific.*

▶ Besides on functionality, there also exist different views on scale. Should the Sustainability Profile play a role on neighborhood level, municipality level, or urban agglomeration scale?
It is important to list the possibilities for these different perspectives such that a decision on scale can be made in a conscious way.

Some interviews made us aware of a danger that the Sustainability Profile will lose its connection to policy. It is therefore very important to embed the instrument in internal work processes but, where possible, also to connect it to (external) spatial development plans. Ideally, in the future, the Sustainability Profile plays a role in participatory spatial development processes. The data system (content of the profile), its meaning, and finally, its interpretation and related policy interventions then get really connected.

Based on the above observations and conclusions, taken from the interviews, we can define the following challenges for a successful implementation of the Sustainability Profile:

- ▶ Find a clear connection between the **concept of the profile** (data system management, content: the (sub)indicators to be included, explanation of its function(s)) and **work processes of the Civil Service** (here interpretation of the indicators is an important factor and, accordingly, implementation in (local area) policy interventions.

- ▶ However, technical aspects of the Profile and the exact content are subordinated to the function(s) and policy goals it will serve.

- ▶ First an answer to the following questions should be formulated:
  - o **Strategic:** What goal(s) should the Sustainability Profile aim for? (or: Which functions should the profile have? And Whom should it serve?)
  - o **Tactic:** How can the quality be guaranteed? What is needed to really make the Sustainability Profile interpretable in a clear way, such that correct policy interventions can be based on its results?
  - o **Operational:** How can the Sustainability Profile be embedded in the organizational structure and work processes?

These topics were presented at the start of the workshop with key stakeholders who need to be taken aboard. Participants of this workshop were selected by the project leader of the Sustainability Profile. This workshop took place in Rotterdam on the 2nd of July 2013. The next section will summarize the content of the workshop.

Workshop (July 2nd 2013, Rotterdam)

Workshop design

The goal of the workshop was to make a strategic plan for the coming two years for further design, development and implementation of the Sustainability Profile. This in a joint effort of the Sustainability profile's project leader, close colleagues needed for the operational work, people from other departments with whom cooperation is required (Programme on Sustainability and Climate Change), and some external stakeholders (at DCMR – the environmental protection agency and MUSIC project) whose support is also needed.
This workshop took place the 2nd of July 2013, a few months after the round of interviews with internal and external stakeholders.
A full list of workshop participants can be found in the Annex.

Workshop programme

12:00 – 12:30	Getting acquainted, time to have lunch	
12:30 – 12:45	Sustainability Profile Rotterdam: state of the art, function/ what should it do?	Presentation by Nico Tillie (project leader of the Sustainability Profile)
12:45 – 13:00	Findings from the interviews	Presentation by Thijmen van Bree (TNO, BRAINPOoL)
13:00 – 13:30	Questions? (10 min) Articulation of biggest challenges /bottlenecks	Group of participants
13:30 – 14:00	Prioritizing: which problems/ challenges should be addressed and solved first? Top 3 of issues to discuss in-depth.	Group of participants
14:00 – 14:15	Coffee break	
14:15 – 15:35	Every group works out one point (from the Top 3) and defines concrete actions for the short-term	Group of participants
15:30 – 16:00	Appointments, BRAINPOoL WP6 questionnaire	Group of participants

Workshop Summary

The final programme of the workshop (2 July 2013, Rotterdam (NL)) is decided upon by mutual agreement with all participants. Initially we intended to make three subgroups to discuss the Top-3 of issues in parallel and conclude the workshop with plenary presentations of action plans per topic. However, due to the relatively small group of attendees, all issues were plenary addressed. The Top-3 of issues to be discussed during the workshop were chosen after two presentations:

6. Presentation on state of the art of Rotterdam's Sustainability Profile (by Nico Tillie, Municipality Rotterdam - Project leader Sustainability Profile)

7. Findings from the interview round (stakeholder analysis) by Thijmen van Bree (TNO; BRAINPOoL project)

The presentation on the state of the art of Rotterdam's Sustainability Profile concluded with remarks on next steps to be taken. According to the project leader of Rotterdam's Sustainability Profile, an important first step is to embed sustainability in regular (planning) processes at the municipality's office. For this it is important to find out how the Sustainability Profile can be implemented, both internally within the local government services, and with external partners. An important question to be answered in the near future is: What is needed to make a successful implementation happen?
In essence, the Sustainability Profile should bring in factual (objective) information (in the right way, and at the right moment) in (planning) processes or city development projects, in such a way that there will be a sound (and shared) knowledgebase.

After both presentations it became clear to all workshop participants that within the municipality's office there is no shared conception of what the Sustainability Profile exactly is, or what it can do. Even workshop participants themselves discussed if the Profile is just the 'spider diagram' (graphical representation of scores on various (sub)indicators) or actually the whole process behind it.

Based on these findings and discussion after the two presentations, the Top-3 of topics to discuss in-depth during the workshop was derived:

8. Function(s) of the Sustainability Profile

9. What is needed to bring the Sustainability Profile into use?

10. How can (potential) users be attracted?

The next paragraphs will summarize workshop discussions per each of these topics.

Topic 1: Function(s) of the Sustainability Profile

Related questions:

- What is the purpose / function of the Sustainability Profile?
- Is it already possible to do these things?

In other words:

- **Is everything in place to meet the objectives of the Sustainability Profile?**

Functionality

A more in-depth discussion on functionality (including its purpose) of the Sustainability Profile appeared to be necessary, given the fact that both the interviews and first discussions during the workshop pointed out that within the municipal organization there is in fact no shared conception of what the Sustainability Profile is and what it can or should do.
A first point addressed during the workshop is that even the name of the Profile itself can be misleading. A danger of naming it *Sustainability Profile* is that every discussion will almost automatically evolve towards a (rather technical) discussion on the instrument, while in fact the Sustainability Profile is an assessment or appraisal tool meant to serve policy or planning processes. One should remember that concrete city development projects, and even more the final outcome of these projects, is the ultimate goal; not the instrument as such.

Given this statement, all workshop participants agree that the real strength of the Sustainability Profile is to supply a factual (objectively measured and undisputable) knowledgebase to feed in policy and planning processes as 'common starting ground'. Based on such a shared knowledgebase, various policy options for city development can be mapped in an objective way. In this way, even at the smallest local level of neighbourhoods, a policy agenda for sustainable development can be prioritized based on objective information.

In its core the Sustainability Profile should thus supply the agenda for discussions on new policy plans, in its early phase of development. The ultimate goal of these discussions should be to create broadly based support (because of a shared and accepted knowledgebase) on how to embed sustainable development in concrete urban planning processes or city development projects. It is stated that a certain level of flexibility is required in order to customize the Sustainability Profile on different processes at different geographical levels. Two concrete processes are defined by the workshop participants:

- Setting the agenda (policy agendas within the municipal organization but potentially also externally)
- To support and work-out questions and projects initiated by external parties (city development projects started by private companies or organisations)

For both processes it is of great importance to balance the supply of data to the specific needs of the development process or project. Discussions between data providers and development project executives might thus be needed in early stages of policy plans.

Possibilities

By stating the ultimate goal of the Sustainability Profile as to embed sustainable development in urban planning process and city development projects, both by providing objective information to set internal policy agendas, and to facilitate projects of external parties, a related question to the latter is how these external parties can be 'persuaded' to take sustainable development on board in their own plans. For internally commissioned planning processes or new city development projects, the municipality can steer to a certain extend towards the uptake of sustainability issues in the plans. Such steering is much more difficult to realize in cooperative projects with external parties, who have autonomy over their own project plans. Especially since the municipal organization of Rotterdam tries to move away from the 'blueprint' way of working and wants to play a more facilitating role – partly to realize operational costs savings such cooperation with external partners will be started more often. City planning in Rotterdam used to be more top-down, coordinated by the municipal civil service. Now the planning process must be realized in interaction. Private parties (companies) are nowadays more involved in investments to develop local areas. For the city planners of the municipality, this requires to acculturate work processes to a certain extend.

Cooperation with external parties also means that the municipality cannot always fulfil its own sustainability 'wishes' to the maximum. In fact there is a trade-off in the execution of public tasks between municipal frameworks (regulations) and market initiatives. Especially in projects which are externally financed there is only limited room for steering by the municipality. The challenge for the local government is thus to make a connection between public tasks and market initiatives, in such a way as to optimise sustainability targets and outcomes. The workshop participants referred to this trade-off and challenge to cooperate with external parties as "The Game". In fact this "game" is a negotiation process where there are opportunities for the municipality to realise ("win") some of their own sustainability goals. Applying the Sustainability Profile in this process would thus be a good opportunity for the municipality to convince external parties with well-founded arguments. Up till now, development of the Sustainability Profile was primarily focussed on the instrument (to remain in the metaphor of gaming: "The Toy") itself, not on larger processes in which the Sustainability Profile should be applied.

Despite the shared conception among workshop participants that the Sustainability Profile's primary function is to supply objective and indisputable information to policy processes, it is stated that the municipality sometimes, implicitly and subtly, wishes to serve more goals. In other words, the municipality sometimes has its strong preferences for certain outcomes and tries to steer processes (also in cooperation with external parties) in such a way to reach a desirable outcome or desirable actions. When the Sustainability Profile would now be introduced as instrument to provide a shared knowledgebase at the start of a process or project, this discussion would not be completely free of normative aspects. In fact, since the municipality is executing the Sustainability Profile, it can strategically choose which information to present (and what to hide). This is then conflicting with what is considered to be the key strength and, most probably, the best function of the instrument: provider of objective and indisputable information to feed into discussion at early phases of new policy plans and city development projects in order to embed sustainable development. This would also imply to provide **complete** information, hence to be open and honest at all stages.

To conclude workshop discussions on the first point of the Top-3 of issues, function(s) of the Sustainability Profile, a sequence of next steps to be worked on in the near future were identified:

1. Create a recognizable instrument (with a sound information and database underlining it) which is, throughout the municipal organization, acknowledged to function as provider of objective information for discussions in policy plans and projects at their early phase of development.
   For this, it is important to present information in the right (manageable) proportions, and to the right persons.

2. Only when #1 is fully completed "The Game", i.e. the challenge for the local government to make a connection between public tasks and market initiatives in such a way as to optimise sustainability targets and outcomes, can be further developed.
   As first step the question: Who should play "This Game"? (and are they capable to play "This Game"?) should then be answered first.

Topic 2: How can use of the Sustainability Profile be enhanced?

Related questions:
▶ Who should use the Sustainability Profile?
▶ On which scale (geographical) should the Sustainability Profile be used?

(Potential) users to engage with

During the first round of discussions on how to enhance the use of the Sustainability Profile some workshop participants identified a group of local area managers who could be of help for promotion of the Profile. Workshop participants agreed that it is important to show some 'inspiring examples' of what the Sustainability Profile can do in practice. The right target audience would then be this group of local area managers within Rotterdam's municipal office (these managers are now not yet aware of the Sustainability Profile). They could for example be provided with a set of information from the Sustainability Profile on 'the state of the neighbourhood'. Accordingly, these managers could then determine where they see potential to connect with policy measures.

Field of force in the municipal organization

Another important issue related to the potential use of the Sustainability Profile was identified as 'the field of force' or 'field of actors' within the municipal organization.
Workshop participants recognized a problem in an apparent level of abstraction between actual projects run by civil servants, and the initial (macro) goals to serve. It are these initial goals for which projects are being initiated. It seems that the overall – and often much more abstract – goals and targets are defined by high-ranked local government officials. As second step, concrete projects are being defined in which such abstract goals and targets are

operationalized in much more practical project milestones and deliverables. Now there can arise a problem around accountability. In fact, project leaders and people responsible for the operational work in projects are only hold responsible for meeting such practical project outcomes as defined (in a SMART[4] way) by milestones and deliverables in the project plan or description of work. The relation with the initial, macro - and often more abstract - sustainability goals can get lost to a certain extend.

Workshop participants agreed that especially at this initial moment where high-ranked officials set policy targets at a macro-level, the Sustainability Profile can have high value added in offering an instrument to define targets at this more macro-level, in a SMART way. Yet another function of the Sustainability Profile in this initial phase of defining policy targets is to define the optimal opportunity and optimal (geographical) scale to target policy interventions at as to realise maximum impact. Such an *ex ante* assessment or appraisal function is especially important given the substantial budget cuts the municipality Rotterdam has to implement. Given a tight budget constraint, choosing the right policy interventions becomes thus even more important for Rotterdam.

Towards practical implementation

The workshop discussion on how to enhance use of the Sustainability Profile was concluded with some short comments on more practical determinants for usage of this instrument. Immediately, "The Game" (see # Topic 1) was mentioned again.
It is acknowledged that the starting point or point of reference will always be a public task for the local government. Such tasks ask for a certain degree of governmental steering and orchestrating. This makes that the local government is not only a 'player' of "The Game"; it also sets the rules of "The Game". This comes back to the challenge for the local government to make a connection between public tasks and market initiatives in such a way as to optimise sustainability targets and outcomes, without emphasising too much on its own normative stance (see # Topic 1). Workshop participants therefore conclude that an important first step should always be to identify the (type of) users with whom the Sustainability Profile will be implemented in a policy process, and to identify what type of process this is. Both variables – (type of) users and process characteristics – determine the research questions the Sustainability Profile should answer. The instrument needs to be customized to the specific situation, stakeholders, etc.

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[4] **Specific, Measurable, Attainable, Relevant, and Time-bound)**

**Topic 3: How can (potential) users be attracted?**

> **Subtopics:**
> ▸ Image (there now are various conceptions on what the Sustainability Profile is / What it can do. **Communication!**
> ▸ Marketing

A first and important issue addressed during workshop discussions on how to attract (potential) users is the business model behind the Sustainability Profile and its practical application. Regular updating of datasets and data management systems require a structural allocation of budget. Furthermore, arrangements are needed to allocate time (fte's) to run customized exercises with the Sustainability Profile according to the specificities of city development projects. At this point in time it is not clear to the project leader of the Sustainability Profile yet how structural financing can be arranged.

It is thus very important to demonstrate/communicate to managers of budgets the value added of the Sustainability Profile. Especially to show which type of information can be provided by the Sustainability Profile and how this information can be used as shared knowledgebase (of objective information) at the early phases of new urban planning processes or city development projects. It is also important to emphasize on the characteristic of the Sustainability Profile to be able to balance the amount of information, time of presentation and complexity of information to specific project needs.

This flexibility to customize the instrument to specific needs of users is a strength to market according to workshop participants. However, they also acknowledge that this flexibility could be a potential threat at the same time. The Sustainability Profile, after all, starts with very detailed information while normal processes and projects 'funnel' from abstract ideas (macro-level) towards specific targets. This stresses the importance of timing when to introduce the Sustainability Profile in projects and processes, and which information to present then. The term 'middle-out' was introduced in this context to balance between an overflow of information and too little information provided by the Sustainability Profile. Figure 2 shows the process of information provision by the Sustainability Profile in relation to the information needs during the policy making process.

Figure 2: interaction between Sustainability Profile and the policy process
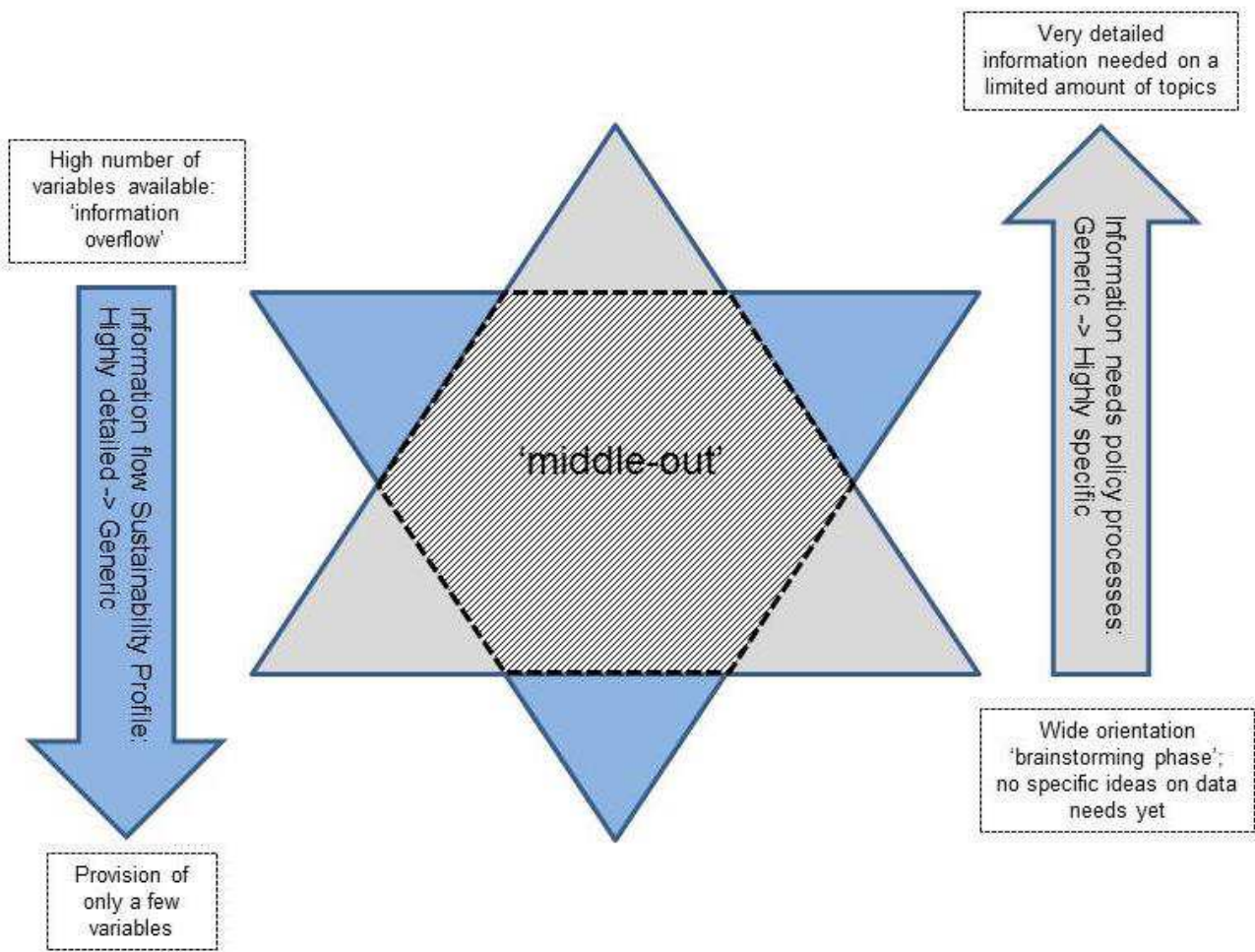
Source: TNO, based on BRAINPOoL WP3 workshop Rotterdam (2 July 2013)

Roles to play by Rotterdam's municipality and operational management

The workshop ended with a discussion on the roles Rotterdam's municipality can or should play with the Sustainability Profile. A few roles were identified:

1. Knowledge broker
2. Advisor
3. Process manager

Besides these three roles, also the (more 'classic') official role to set rules and regulation was mentioned but not as a role directly to be executed with help of the Sustainability Profile. Workshop participants mentioned that it would be wise to keep a close eye on which people to involve or ask for specific roles. Competences of people are an important factor to take into account.
A last point mentioned was the 'back office team' of the Sustainability Profile: is this team complete yet? Who might be good to have in the team as well?

To end, all workshop participants concluded that for them the key lesson of the workshop was that the ultimate goal of the Sustainability Profile is to share knowledge, i.e. objective information, which can be the basis of constructive discussions on new policy plans for city development.

Observations and reflection in BRAINPOoL's context

As stated in the case study set-up and process in the beginning of this report
"The learning for BRAINPOoL will be insights in the dynamics around the 'Beyond-GDP' topic at the local (city) level. This will include a wider understanding of internal institutional barriers in the production and use of a new (sustainability) indicator, but also insights in the dynamics from a bottom-up initiative towards higher management and city politics."

To reflect on our observations in the case study on Rotterdam's Sustainability Profile we will use the analytical framework of BRAINPOoL's first two work packages to the best extend possible. BRAINPOoL's analytical framework is summarized in the two figures below. The left-side of this figure primarily focusses on the interactions between the first two work packages of BRAINPOoL, while the right-hand side of the figure gives an operationalization of this analytical framework from the perspective of: "What makes indicators successful?" (the title of Work package one's summary presentation).

The general objective of BRAINPOoL's work package three – to which the case study on Rotterdam's Sustainability Profile belongs – is to test the interaction between the supply of indicators (WP1) and demand for indicators (WP2) in practical case studies. In this section we will therefore try to map our observations on primary bottlenecks or barriers in the development process of Rotterdam's Sustainability profile along the lines of BRAINPOoL WP1's and WP2's main findings. In this way we can check to what extend the more general findings of BRAINPOoL's previous work packages can be confirmed by the case study in Rotterdam, and if there are any new findings to add.

Figure 3: BRAINPOoL's analytical framework
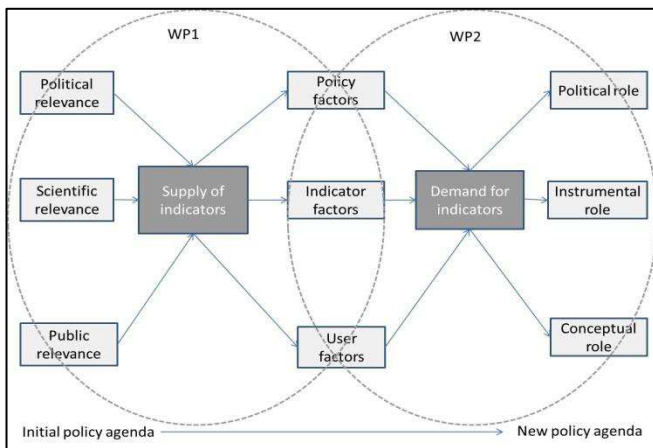
Source: Léa Sebastien (Toulouse University) - BRAINPOoL WP2
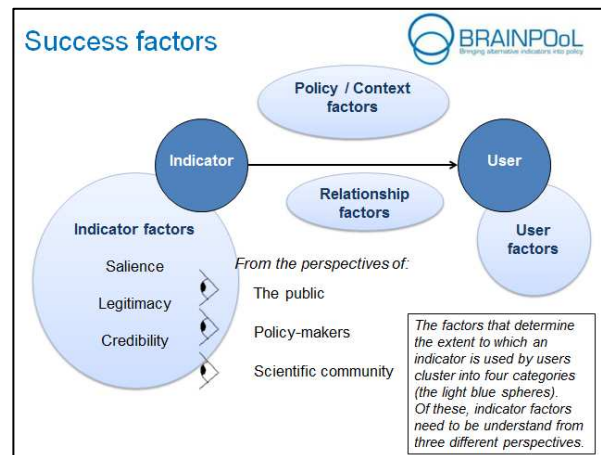
Source: BRAINPOoL WP1 summary presentation

Observed bottlenecks or barriers in the Rotterdam case

The main findings from the stakeholder analysis within the case study on Rotterdam's Sustainability Profile – the interviews (as summarized on pages 17-19 of this report) – can be classified along the lines of BRAINPOoL's analytical framework in the following way:

▸ **Context factors:**

  o *Organizational structure/work processes*

    ▪ It is especially pointed out that more cooperation between different departments is needed, as well as a more integral way of organizing projects.

  o *Embedding in policy context*

    ▪ Some interviews made us aware of a danger that the Sustainability Profile will lose its connection to policy. This is either due to a fear of too much emphasis on technical aspects of the instrument itself or a fear that the Sustainability Profile will not capture developments at the same geographical scale as where local politicians are focusing on.

▸ **Indicator factors:**

  o *Naming / image / way of presentation*

    ▪ Some interviewees had a preference for other names and a "easier to interpret" way of presentation of the Sustainability's Profile data.

    ▪ There was not yet a clear and coherent perception among interviewees of what the Sustainability Profile is, or can do.

  o *Legitimacy*

    ▪ Some interviewees questioned how distinguished the Sustainability Profile is in relation to already existing assessment tools and other indices already available within the municipality.

    ▪ Support from higher management seemed to be relatively moderate (especially in the early phase of development when we started the first contacts in the context of this case study).

    ▪ Importance to make a connection to the right geographical scale and with the current policy agenda.

  o *Reliability and interpretability*

    ▪ Various interviewees mentioned the importance for the Sustainability Profile to provide rather univocal results which can be easily understood, so that a correct meaning will be given to the outcomes.

- **Use(r) factors:**
  - *Functionality*
    - There was not yet a clear and coherent conception among interviewees of what the Sustainability Profile is, or what it can do. Interviewees had questions on what roles the Sustainability Profile should play.
  - *Interpretation ("use" versus "misuse")*
    - Underlined by a concrete example of misinterpretation leading to a wrong policy intervention (Safety index score versus perception of safety as explained by inhabitants of neighborhoods themselves were diverging), it became clear that the issue of *interpretation versus misinterpretation*, especially at political level, is an important user factor to take into account.

Based on the state of the art of Rotterdam's Sustainability Profile at the End of June 2013 and the context factors, indicator factors, and use(r) factors as described above, the Top-3 of topics or issues to solve was identified to be:

1. Function(s) of the Sustainability Profile
2. What is needed to bring the Sustainability Profile into use, or enhance use?
3. How can (potential) users be attracted?

In-depth discussions on these topics during the workshop of July 2nd 2013 unravelled some challenges and next steps to be taken:

- Create clarity on the function(s) of the Sustainability Profile:
  - Create a recognizable instrument (with a sound information- and database underlining it) which is, throughout the municipal organization, acknowledged to function as provider of objective information for discussions in policy plans and projects at their early phase of development.
- For this, it is important to present information in the right (manageable) proportions, and to the right persons:
  - Balance the supply of data to the specific needs of the user [or city development project or urban planning process in which the Sustainability Profile will be applied]: "middle-out".
- However, are all the right target audiences of (potential) users reached yet?
  - There was agreement on the importance to show 'inspiring examples' to a group of local area managers who was not yet aware of the Sustainability Profile. Potentially, these managers determine where they see opportunities to connect the Sustainability Profile to policy measures.
- Connect public tasks to market initiatives in such a way as to optimize sustainability targets and outcomes.
  - This requires to set-up a good process in which negotiations with external parties on sustainability targets will be arranged. In this process it remains important to be completely open and honest on all 'desired outcomes' so that, based on the application of the Sustainability Profile, decisions on new policy plans or city development projects are well-founded with truly objective information. (# "The Game")

- The local government is not only a 'player of the game' but to a certain extent also sets the 'rules of the game'.

▶ Not only should then an answer be found to the question who should play "The Game" but also to the question if these people are already capable to do so, both in terms of competences and practicalities around the organizational structure.

▶ Practical barriers might exist in the 'field of actors' or 'field of force' within the organizational structure. There is an apparent level of abstraction between overall (macro) – and often much more abstract – sustainability targets and concrete (SMART) project milestones and deliverables for which lower-ranked employees are hold responsible. The relation between initial overarching sustainability goals, as set by high-ranked officials or politicians, can get lost in the process.

▶ A practical barrier to overcome, is to secure sustainable funding of the Sustainability Profile's 'back-office' as well as to make a good business model to operate runs with the Profile in municipal projects.

Conclusions on the development of Rotterdam's Sustainability Profile

The development of Rotterdam's Sustainability Profile started as a bottom-up initiative on the operational level of the civil service. When we got in contact with Rotterdam's municipality the development process of the Sustainability Profile was still in a somewhat conceptual phase. The focus at that time was on rather technical aspects of the instrument itself (dataset underlining it, way of presentation etc.), but yet arriving a level of maturity that it was opportune to brief the head of unit and other higher ranked officials on the concept.

From the start, there seemed not to be a shared conception on the functionality of the Profile within the municipal organization. It was not directly clear to people what the Sustainability Profile can do, and for what purpose. This resulted in skepticism at some places within the municipal office, including higher managers. We learned that it can take a while for higher managers to determine how useful this new indicator is, and to assess the functionality of it. We found that some more efforts were, and still are, needed to promote the key strengths of the Sustainability Profile to arrive at a situation where there is broadly based support and understanding of the profile's value added.

The challenge for the near future is to move away from fine-tuning technical aspects of the instrument to instead focus on the (policy) processes in which the Sustainability Profile will have to be applied. In this context the municipality will have to think further on what roles it can or should play with the Sustainability Profile, also in cooperation with external parties. Internally, operational processes including a well-equipped back-office team and a 'business model' should be set in place to secure a sustainable future for the Sustainability Profile. This will require final approval of higher managers on budgets and the like. On the cooperation with external parties the municipality should elaborate on how to make good connections to projects initiated and financed by others, and serve public tasks at the same time. This would also mean to practice with the Sustainability Profile as provider of objective information to be used in negotiations on sustainability goals and targets with external parties.

Synthesis with WP1 findings: 'what makes indicators successful?'

Key findings of BRAINPOoL's first work package are presented in the summary presentation "*What makes indicators Successful. Lessons from practitioners*" of January 2013 (available at www.brainpoolproject.eu). In this section we will reflect upon our observations in the case study on Rotterdam's Sustainability Profile in the context of the main findings from BRAINPOoL WP1.

Some clear links with WP1's findings on ***Indicator Factors*** *–* ***salience*** *for* ***policy makers*** arise from the Rotterdam case study*:*

- Fit with a vision or organisational strategy – this is particularly relevant for those initiatives promoting new indicators so as to shift priorities or assess progress differently.

- Reaching multiple audiences – this can ensure indicators do not sit within particular silos and can achieve cross-cutting outcomes.

- *Perceived* need – this is particularly important where initiatives are bringing together data rather than creating new measures.

Source: BRAINPOoL WP1 summary presentation (sheets 8 and 9)

During our case study between March 2012 and July 2013, the development process of Rotterdam's Sustainability Profile entered a phase in which more people at different departments and at different hierarchical levels got aware of the Profile. However, there were some fears that, with a strong initial focus on technical aspects of the instrument itself, a connection to actual policies could get lost. This also resulted in scepticism on the value added of the Sustainability Profile. But in fact – to connect to # *fit with a vision or organisational strategy* – Rotterdam's overarching policy program on Sustainability and Climate Change offers ample opportunities to embed the Sustainability Profile in a clear policy context.

We obviously found support for the last finding on # *perceived need*. Given, as what is seen to be the Sustainability Profile's key strength, to provide objective information as shared knowledgebase at the start of new city development projects or urban development planning processes, it should be possible to convince people within the municipality that the Sustainability Profile has true value added. The Sustainability Profile is a good example of an initiative which is bringing together already existing data into a coherent and integral way, rather than trying to be a new, and potentially competing, measurement instrument. However, there is still some work to be done to really promote the key strength and value added of the Profile within the municipal organisation, so that a shared conception of the usefulness and functionality, i.e. *perceived need*, will be reached.

Internal cooperation need to be optimised somewhat so that the Sustainability Profile can be really applied in concrete projects and processes, also in cooperation with external parties. As soon as both internal processes and cooperation processes are better targeted to implement the Sustainability profile in, there should certainly be potential to *reach multiple audiences*.

Yet another key strength of the Sustainability Profile is that it is very flexible in customizing the information to specific needs of users (as well as city development projects, urban planning processes). Although some further elaboration within Rotterdam's municipal organisation on operational processes are needed, we can conclude that along the line of WP1's findings on *successful indicator factors – salience for policy makers*, there are elements for a successful implementation of the Sustainability Profile within reach.

On *Indicator Factors – salience for public/broad audience* we can confirm the importance of:

- Simplicity – initiatives are effective when they allow one to produce a simple and attractive message.

- Ease of understanding – while what they measure may be complicated, successful indicators manage to illustrate a complex reality using understandable concepts.

- Engagement with communications experts – close collaboration, rather than simply handing over data, can ensure that both communicability and accuracy are maintained.

Source: BRAINPOoL WP1 summary presentation (sheet 11)

The case study on Rotterdam's Sustainability Profile proofed that complexity of the indicator can be a real problem, especially in terms of interpretation of the outcomes. In the stakeholder analysis we found that various persons within the municipal organization saw a possible danger of misinterpretation, partly driven by a complex way of presentation, or an information overflow. It was stressed by a higher ranked official that, to his opinion, it would not be desirable to burden city politicians with complex technical details of the Sustainability Profile. Politicians should only be asked to deal with governance-related aspects in directions of solution as indicated by the data of the Profile. Moreover, it was stressed that technical aspects of the Sustainability Profile are of less importance than the goal and functions it (should) serve.

With regard to *Indicator Factors – Legitimacy* we found a hundred percent match with:

- Being (or appearing) neutral – some indicator initiatives work within a framework of simply providing 'neutral' information, while others are clearly connected to political agendas, such as social cohesion or respecting environmental limits. Mechanisms used to ensure neutrality included monitoring funding mix and barring staff involvement in political parties.

Source: BRAINPOoL WP1 summary presentation (sheet 15)

During the workshop on the 2nd of July 2013 it was agreed by all participants that the Sustainability profile's key strength is to provide undisputable objective information as shared and acknowledged knowledgebase. Also the importance of neutrality is confirmed in the case of Rotterdam. Here it is especially in the context of setting goals and targets in negotiation/cooperation with external parties and carrying out regulative governmental tasks at the same time. When assessing the impacts of various options and giving approval for projects to external parties, the local government can use an objective line of reasoning based on the Sustainability Profile. This can help to avoid any arbitrary rulings.

To conclude our synthesis of case study observations with BRAINPOoL WP1 findings, we found some linkages with key findings on *Relationship and process factors*:

- Engage one's audience from the start – fundamental to the success of local initiatives, it was also seen in terms of getting policy-makers involved in large-scale initiatives.

- Direct contact with audiences – while not all initiatives can or want to engage their audience from the beginning, all the most successful initiatives had direct contact with the people they were trying to influence.

- Small is beautiful – to date, local initiatives have been able to achieve more impact than larger/national ones, with local bodies tending to be more 'flexible' and responsive.

Source: BRAINPOoL WP1 summary presentation (sheet 17)

As well as on *Policy and context factors*:

- Public pressure – support for the idea of alternative indicators required from the bottom up.

- Indicator initiatives take time – a last sobering lesson is that it can take generations for an indicator to become sufficiently embedded in the system to maximise its impact.

Source: BRAINPOoL WP1 summary presentation (sheet 23)

Given that the Sustainability Profile still need to find its way to a first concrete application in a city development project or urban planning process, it is too early to tell if this specific indicator initiative can confirm the conclusion that local initiatives tend to achieve more impact. However, this notion might give the project leader in Rotterdam some confidence.

More interesting to address here are the findings on the support, either from internal target audiences or outside public support. We clearly noticed in the Rotterdam case that at some point in the development process internal support from heads of unit and program managers is needed to make a connection, not only to policy processes but also to operational processes. The difficulty in Rotterdam was that the indicator initiative itself started as a bottom-up process. There clearly was bottom-up support at the department where the work on the Sustainability Profile started. They themselves felt a need to make a connection to various data sources available within the municipality and work with these sources more integrated or holistically. In the case of Rotterdam, the primary bottleneck to overcome first was more to bridge a gap between the operational work on the Sustainability Profile and the reservation of heads of unit and program managers. The process flow is thus more from bottom-up to higher hierarchical levels of the organization. It is especially in the latter context that the Rotterdam case proofs that # *Indicator initiatives take time*. It took some time to get required support from higher ranked officials. Yet, there are still challenges ahead for the future to secure a sustainable embedding in organizational process. Getting support from outside audiences is even the next step thereafter.

Synthesis with WP2 findings: 'where is the demand for beyond-GDP indicators?'

In the same way as the previous section, we will now synthesize our case study observations with BRAINPOoL's WP2 findings on the demand for alternative or beyond-GDP indicators. Since the development of Rotterdam's Sustainability Profile was primarily an internal process during our case study work at the municipality between March 2012 and July 2013, we will not emphasize on WP2's findings related to societal demand. However, the general idea that:
"the general public does not think in terms of indicators, but in terms of human dimensions"
(sheet 10 WP2 summary presentation) seems to be supported in the Rotterdam case if 'societal demand' is translated into general demand for the Sustainability Profile within the municipal organization. Besides that the project leader of the Sustainability Profile intends to go beyond just producing numbers and percentages (see page 16 of this report), also most stakeholders we have interviewed, and people participating in the workshop of July 2nd 2013, are mostly interested in results of concrete city development projects – not so much in the Sustainability Profile as such. After all, the Sustainability Profile is a tool which should be helpful in such projects or processes. It is more interesting to put case study observations in the context of BRAINPOoL's WP2 findings on other types of demand, including *political demand* and user factors, including *political will.*

Who is formulating demand and what kinds of demand are observed?

- High-level actors – Our studies have revealed that high-level actors cannot be exclusively considered as on the 'demand' side of the equation. They are often producers as much as consumers of indicators. […]

- Democratisation – All the discourses we analysed argue for a general democratisation of the construction and development phases of indicators and for greater access to statistical data. These demands, however, contrast strongly with the current technical nature of the agenda.

Source: BRAINPOoL WP2 report, p7; and WP2 summary presentation (sheet 25)

On the first bullet, the Rotterdam case clearly showed that high-level actors within the municipality were not on the 'demand' side. First of all, the development of the Sustainability Profile started proactively (yet another driver to formulate demand as identified in WP2) at the operational level of the civil service, hence bottom-up. Secondly, higher ranked officials initially showed scepticism on the need and usefulness of the Sustainability Profile. In the context of the Rotterdam case study we can better characterize high-level actors as the ones playing a crucial facilitating role. Without their support in the end, it will be very hard to secure any form of structural embedding in municipal work processes and policy processes.

On the kinds of demand observed in BRAINPOoL's WP2, democratisation as described above, connects to our observations in the case study on Rotterdam's Sustainability Profile. The whole development process was started from the idea that there is a need for indices that measure progress in the field of sustainability more holistically/ integrated and at the same time make a link to every day planning practices and hands on activities. The project leader of the Sustainability Profile and his colleagues wanted to make use of various data sources - which are separately available within the municipal organization - to support urban planning processes and city development process. This fits well to the observation as to enhance greater access to statistical data. Moreover, the democratisation of the Sustainability Profile can be traced back in its ability to customize the type and amount of information to the specific needs of the project or process at stake. This flexibility will be an asset of the Profile. However, we found that some more efforts are needed to 'market' this asset in order to win broader based support and acknowledgement of the Profiles functionality.

WP2's finding on **Political demand** is confirmed in the Rotterdam case:

- Beyond GDP indicators are currently more likely to serve a conceptual or an assessment/communication role rather than a role in decision-making (where they are often applied too late).

Source: BRAINPOoL WP2 summary presentation (sheet 13)

Especially the assessment/communication role is observed in the case study. Not only because of the key strength of the Sustainability Profile workshop participants acknowledged to be: provider of objective information to be used as shared knowledge base in early phases of new city development projects or planning processes. But also because during the stakeholder analysis a higher ranked official stated that to his opinion:

"To be useful for local politics, indicators should especially serve to monitor developments and to find out the reasons and causes behind. Indicators should not function to hold policy to account, therefore there should not be any political target connected to indicator outputs"

Furthermore, in Rotterdam various people not so much feared that decisions will be made too late, but that the wrong policy actions will be derived from the indicator outcomes. This is driven by the concrete example of misinterpretation of the Safety Index where the numbers of the index were pointing to a worsening of the safety situation in a neighbourhood whereas the local inhabitants felt changes in the opposite direction: improvement of safety.

On user factors, it is stated in WP2's report (p9) that:
"It has been observed that one of the major factors, if not the primary one, hindering the uptake of indicators is the lack of political will confronting most actors who are working proactively in the field."

In the WP2 report this observation is placed in the context of a conflict between the short-term agenda of winning elections versus longer term sustainability goals, together with acceptance of a status quo towards GDP and some normative and/or political assumptions leading to distrust towards new and innovative indicator methodologies.
This generalized WP2 finding cannot really be confirmed by the case study on Rotterdam's sustainability Profile. In the proactively started development process, it was the level of heads of unit and programme managers who were mostly holding-up the process. At this level a reluctant position towards the Sustainability Profile arose, primarily driven by their (mis)conception of the usefulness and functionality of the Profile, as well as fears for a too complex instrument to bother 'their' local politicians with (e.g. the politicians holding the portfolio of their department's field of expertise). This comes back to the workshop observation that it is very important to create a shared conception within the municipal organization of the value added of Sustainability Profile, what it can do, and what function(s) it should have.

More on the positive side of things, the WP2 report also state **Opportunities and hope**:

At the political level…
- Institutionalisation – The existence of political programmes such as national sustainable development strategies in which indicators have a specific role to play has rendered indicators less dependent on the vagaries of policy cycles.

- Pro-active approach – Statisticians and decision-makers are making increasingly proactive moves towards the production and use of alternative indicators.

Source: BRAINPOoL WP2 summary presentation (sheet 28)

In this context it can be considered a positive element that Rotterdam has its Programme on Sustainability and Climate Change which can clearly serve as the institutional and policy context in which the Sustainability Profile can mature and find its practical implementation opportunities.

The last chapter of WP2's report discusses 'demand' for indicators at the level of some 'meta questions'. Given the characteristic of the development process of Rotterdam's Sustainability Profile it is interesting to relate our case study observations to WP2 findings on:

The framing of demand for 'bottom-up' indicators (p81 of the report).
In the report it is stated that:

"it is agreed to be efficient and useful if indicators are elaborated on according to a bottom-up approach, which is most often translated in a call for participatory processes during the construction of indicators." And, *"Societies' belief systems and values should be transferred into the production process of indicators, in order to improve the way that indicators reflect a society's reality"*.

In fact we can relate Rotterdam's Sustainability Profile to a large extend to these two statements. Given that the Sustainability Profile starts 'bottom-up' with very detailed data on small geographical areas and accordingly tries to target the information to facilitate the specific needs of the city development project or urban planning process at stake, a participatory way of working is basically what the project leader of the Sustainability Profile is aiming for (see also # 'middle-out' in the summary of the workshop of July 2nd 2013). The ultimate goal is to provide 'real life' city development projects with objective information as to get an optimum result in terms of sustainability. This optimum is very much connected to solving 'real' problems in the city.

Another interesting topic as discussed in the last chapter of WP2's report is the observation that ***Indicators are 'multi-scale'*** (p82 of the report):

Here it is stated that:
"the production of 'beyond-GDP' indicators generally reveals a sharing of knowledge and methodologies allowed by the permeability of geographic scales. Initiatives developed at specific scales are all based upon the background knowledge of initiatives practiced at every scale, but in most cases, some fundamental adaptions need to be carried-out. These adaptions are necessary to satisfy both the particular needs of the scale and the availability of data. This is important because the ideal objective of the Beyond GDP perspective is to provide reliable indicators for coherent monitoring of a geographical entity. In this sense, the diversity of scales and territories restricts the opportunity of implementing a common indicator relevant for each entity." […]
"Beyond GDP indicators face a paradox: they aim to be comparable at the international level as well as revealing local level aspirations. The importance of the connection between indicators at different geographical scales is an issue expounded by practically all the reports we analysed and was mentioned in the majority of interviews. Interconnection, comparability, harmonization and international cooperation are considered to be very important characteristics. But the question of how to do it without jeopardizing contextualisation, locality, specificity remains unanswered."

We found elements in the context of the above in our case study on the Rotterdam Sustainability Profile. Although the Sustainability Profile is orientated on the local level of the city of Rotterdam, there still are important issues related to scales.
A unique characteristic of the Sustainability Profile is that it is flexible to provide data on developments within the city's boundaries on basically every possible geographical scale.
The profile thus has the potential to target reliable and objective information, for the purpose of knowledge sharing, to specific needs.

During the stakeholder analysis we were picking-up discussions on more or less the same paradox as described in the WP2 report, but now instead on the comparability between the international and national level, the focus is on comparability and harmonization of various local areas. During the round of interviews we found that there is a certain tension between 'harmonization of indicators' and showing unique characteristics of local areas with help of the Sustainability profile. It was questioned to what extend a generic story should be told, so that benchmarking with other local areas or perhaps even other cities would be possible, and what room then is left to show the uniqueness of developments in certain neighborhoods. During the interviews this was referred to as a '*dilemma between generic or specific'.*

Furthermore, on the geographical scales in the context of functionality of the Sustainability Profile, we found during the stakeholder analysis that various interviewees were wondering on which scale the Sustainability Profile should play a role: neighborhood level, city level, or even at the level of the urban agglomeration? Interviewees stressed the importance of listing the possibilities at these different geographical scales such that a decision on the best scale to target the Sustainability Profile on could be made in a conscious way. Moreover, during the stakeholder analysis there seemed to be some fears by interviewees that the Sustainability Profile could lose its connection to the policy agenda, by not necessarily measuring developments at the same geographical scale as where the local politicians are focusing on. It is for this reason that during the workshop on the 2nd of July 2013, the topic of geographical scales was addressed again as an important sub-question to deal with while discussing the function(s) of the Sustainability Profile (Topic 1 discussed during the workshop). Depending on the functionality, for instance benchmarking, immediately discussions on scales, harmonization, and a *dilemma between generic or specific* pop-up, even related to an indicator initiative already oriented on the local level.
The thesis of WP2 that indicators are 'multi scale' thus still holds for local level initiatives.

Conclusions

▶ Although Rotterdam case study is unique by nature, our observations can be related to some of WP1 and WP2 key findings. We can actually confirm most BRAINPOoL WP1 and WP2 findings which match to some extend with our observations in the Rotterdam case.

▶ We cannot so much add new generalized findings on success factors of indicators or the characterization of demand - they are probably too case study specific.

▶ An interesting observation from the Rotterdam case study in the context of BRAINPOoL is the discovered barrier related to the process flow from a proactive bottom-up initiative to higher hierarchical levels within a, in this case local, government organization. In fact the level of middle management could create a 'hold-up'.

▶ Another, perhaps more general, finding is that even within a local level 'beyond-GDP' initiative their can still exist a dilemma between multiple scales, e.g. a dilemma between 'generic or specific', also related to harmonization.

Annex – List of participants

Stakeholder analysis' list of interviewees

▸ Derk Loorbach (director of Dutch institute for Transitions (Drift), Erasmus University Rotterdam

▸ Robbert Bastiaan Schuijff (permanent staff member of the Sustainability and Climate Change Programme Office)

▸ Hans Beekman (Director of department Spatial and Economic Development, Cluster City Development)

▸ Lennert Middelkoop (Head of unit Policy, Advice and Urban Planning programmes, Cluster City Development)

▸ Paula Verhoeven (Director of the Programme on Sustainability and Climate Change)

▸ Wim van der Zanden (City of Rotterdam's Centre for Research and Statistics)

▸ Ron Voskuilen (Director General of Cluster City Development)

▸ Tom Boot (Director of department Spatial Planning, Cluster City Development)

▸ Caroline Lemmen (Social Housing cooperation 'Woonstad Rotterdam')

Workshop participants

▸ Nico Tillie (Municipality Rotterdam; project leader Sustainability Profile)

▸ Roland van der Heijden (Municipality Rotterdam, Cluster City Development – Urban planning)

▸ Iris Dudok (Municipality Rotterdam, Cluster City Development – Urban planning)

▸ Robbert Schuijff (Municipality Rotterdam, Programme Office on Sustainability and Climate Change)

▸ Aad Loendersloot (DCMR - Regional Environmental Protection Agency)

▸ Derk Loorbach (Director of the Dutch Institute for Transitions of the Erasmus University Rotterdam. He is cooperating with the municipality Rotterdam in the MUSIC project (Mitigation in Urban areas: Solutions for Innovative Cities)

▸ Adriaan Slob (TNO; BRAINPOoL project): Workshop facilitator

▸ Thijmen van Bree (TNO; BRAINPOoL project)

▸ Jurian Edelenbos (Erasmus University Rotterdam; BRAINPOoL project): WP6 Monitoring