

Toward functioning international cooperation for sustainable cities – Swedish experience with international city networks

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Abstract

This paper provides a retrospective analysis of the challenges and lessons learned from attempting to utilize international collaborative networks to promote urban innovation with the aim of increasing the environmental and social sustainability of the participating cities and municipalities. The paper is based on the Swedish experience with the Global Sustainable Cities Network (GSCN, 2011–2015) and the Alliance for Urban Sustainability (2015–2016).

The GSCN was an initiative adopted in 2011 under the Clean Energy Ministerial. Sweden, the United Arab Emirates (UAE) and China were founding members. The GSCN was intended to become a multilateral high-level international forum to promote policies and programs that advance clean energy technology, share lessons learned and best practices, and encourage the transition to a global clean energy economy. The aims of the GSCN were to provide an open international platform for groundbreaking sustainable city initiatives, to share knowledge that can be utilized and broadly incorporated in the work of the participating cities, and to promote trade between the countries. The countries that participated in the GSCN were: the UAE, Sweden, China, Finland, Denmark and France. Three to five cities from each country participated in the initiative.

In 2015 Sweden began to explore a more targeted bilateral collaboration with France, which was subsequently formalized as the Alliance for Urban Sustainability. The five Swedish cities that were members of the GSCN and four new cities

from France are currently active in this collaboration, which is driven by the needs and interests of the cities and coordinated by the Swedish and French governments. This network is learning focused, with the aim of sharing, exploring, improving and scaling up the application of methods for increasing the sustainability of cities.

In this paper we describe, reflect upon and draw conclusions from Sweden's experience with managing an international network that focuses on exchanging experiences amongst cities aiming to become more sustainable.¹ The aim of the paper is to elucidate what is required for successful international collaboration of this kind.

Introduction

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THE GOVERNMENT MISSION

Sweden has a long history of working to promote sustainable urban development, with many initiatives and activities organized at the municipal and national levels, and in the context of international cooperation. In particular, sustainable energy solutions in the context of sustainable urban development have been and are still considered a Swedish profile issue. Some of the higher-profile efforts at the national level include: the Delegation for Sustainable Cities²; the Swedish Energy Agency's work with Sustainable Municipalities; the Swedish National Board of Housing, Building and Planning's work on energy use in buildings and ecologically-sustainable energy in the built environment; Vinnova's³ program Challenge-driven Innovation (in which one of four target areas is sustainable and attractive cities), and; the Swedish Environmental Protection Agency's work with the national Climate Investment Program (KLIMP) which included projects related to sustainable energy solutions in cities⁴.

Since 2011 Sweden has actively pursued international networking with the aim of complementing the government's and its agencies' ongoing and completed efforts to promote sustainable urban development, Swedish green energy technologies and services, export opportunities for small- and medium-sized enterprises, and to create value for the participating Swedish cities. The first of these international networking initiatives was the Global Sustainable Cities Network (GSCN). More recently Sweden has actively pursued a bilateral network collaboration with France: The Alliance for Urban Sustainability. Both efforts have been coordinated by the Swedish Energy Agency (SEA).

RUNNING NETWORKS

The Swedish Energy Agency has a tradition of coordinating networks for learning and exchanging experiences aimed at different target groups. One example is the programme Sustainable Municipality, that began as a project involving five municipalities. The third and final programme period (2011–2014) involved a total of 38 municipalities in Sweden⁵. The national programme, ran by the Swedish Energy Agency, featured two main characteristics: firstly, it was based on distinct cooperation between local and central government levels, and secondly the support from central government took the form of expertise and network building, not project funding. The programme also offered municipalities a platform to meet and exchange experiences around various topics relating to sustainability and

energy issues. The GSCN drew a lot of experiences from running this national programme. Other networks involve SMEs, energy intensive industries and the building sector. For further reading please see references.

The Global Sustainable Cities Network

The GSCN was initiated by Sweden, the United Arab Emirates (UAE) and China after the Clean Energy Ministerial (CEM) in the United Arab Emirates in 2011. Denmark and Finland subsequently joined the network, which was launched at CEM3 in 2012. In 2015 France became a member. The network was operational until 2016, at which time the CEM agreed to pause the activity indefinitely on the request of the Swedish and UAE representatives, due to waning interest.

From the outset, the United Arab Emirates and Sweden jointly shouldered the effort to breathe life and meaning into the GSCN. The United Arab Emirates assumed responsibility for funding and hosting a Secretariat for network planning and coordination (located in Masdar City, outside Abu Dhabi). Sweden was a driving force in network development and content.

THE PURPOSE OF THE GSCN

The GSCN, as specified in the Swedish government mandate and the CEM-proceedings, aimed to be a global initiative engaging leaders representing the participating countries, cities, the private sector, and academia in realizing the potential for renewable energy and energy efficiency to contribute to sustainable urban development. The network was to become a platform for developing and disseminating cutting-edge initiatives and technologies. The focus was on technological development and export, as well as how the cities and their stakeholders can work to promote them. Useful knowledge and experience with methods and tools as well as technologies was to be shared between cities and countries within the framework of the cooperation. The exchange of knowledge within GSCN was intended to provide GSCN participants with: access to information; access to academic research and analysis; business opportunities; opportunities for exchanging experience, and; opportunities for relationship building for politicians and decision makers. Three goals were defined:

1. To create a platform for high-level dialogue between ministers and mayors regarding experience with promoting sustainable energy solutions in urban areas;
2. To emphasize the role of cities in accelerating the development and deployment of sustainable energy solutions in society, and;
3. To overcome obstacles to the development of new solutions and promote the market for green energy technologies.

GSCN APPROACH

The GSCN initially focused on demand-side management (DSM) and waste-to-energy (WtE) solutions, as crosscutting and integrative technology domains that were identified as areas of common interest among the participating countries. From the outset, the broad scope in the network activities was regarded as positive. Sweden expected that the national and international meetings would eventually narrow down the

2. <http://www.hallbarastader.gov.se/Bazment/hallbarastader/sv/in-english.aspx>

3. Vinnova is the Swedish agency for innovation. See: <http://www.vinnova.se/en/Our-activities/Cross-border-co-operation/Challenge-driven-Innovation/Challenge-driven-Innovation/>

4. KLIMP was a government investment program that mainly financed projects focused on reducing carbon emissions. The local projects it financed related e.g. to energy, traffic and biogas/biofuels.

5. The local government entities in Sweden are comprised of municipalities. There are currently 290 municipalities, organized into 21 counties.

scope to concrete cooperation projects. The international platform and the contacts between stakeholders was considered key. The long-term aim was to develop concrete cooperation projects.

International network meetings

At the international level, holding annual network-wide meetings was the primary mode of operation for the GSCN. These meetings were intended to stimulate and support member-to-member collaboration at the city level, leading to long-term collaborative relationships. Member countries were expected to take the lead on championing specific thematic topics as a basis for such initiatives and responsibility for organizing further (annual, semi-annual) workshops for participants interested in collaborating under the respective themes. During the meetings, the network members were expected to engage in in-depth discussions on topics of common interest and networking. Three international network-wide meetings were held:

- Meeting 1 – June 2013 in Stockholm
- Meeting 2 – January 2014 in Abu Dhabi
- Meeting 3 – April 2015 in France (wandering between different cities).

It is important to note that participation in the first two network-wide meetings was dominated by the UAE and Sweden. For undisclosed reasons, representatives from Chinese cities did not participate. Two Finnish cities and two private Finnish firms participated in the 2013 meeting, and one Finnish city participated in 2014. From Denmark, one city, two trade organizations and two private companies from Denmark participated in 2014. Government representatives from France, two cities and two private companies participated as observers in 2014. Sweden's participation was comprised of representatives of government, the five cities, and city-owned utilities, complemented by one trade organization and one industry-oriented technical research institute. Similarly, the UAE's participation was comprised of government representatives and representatives of five cities and their utilities in 2013 and 2014, complemented with a technical research institute in 2014.

The Swedish Energy Agency's coordination task

The Swedish government tasked the Swedish Energy Agency (SEA) with coordinating Swedish participation in the GSCN. The Energy Agency was expected to act on behalf of Sweden as the GSCN government contact, both nationally and internationally. Nationally, the task involved first selecting and then coordinating the participation of the Swedish cities that joined the network. The SEA was the Swedish focal point for the Secretariat in Masdar City UAE, and for the other participating countries' representatives.

Importantly, the SEA mandate to coordinate Sweden's participation in the network was accompanied by a project budget that was sufficient to cover SEA staff costs, enable the SEA to contract an external consulting team to provide support in coordinating and implementing network activities, and to finance travel to international network meetings for representatives of the participating Swedish cities.

The participation of Swedish cities

A number of Swedish cities expressed interest in participating in the network. The network offered an opportunity to publicize Sweden's experience as well as to learn from the experiences of the other countries and put them into practice in Sweden. The Swedish government's and the Swedish Energy Agency's ambition was for the network to grow over time. Five Swedish cities participated in the network: Umeå, Borås, Gothenburg, Linköping and Malmö. For the Swedish network of cities to work, the Agency established participation requirements. Cities electing to join undertook to:

- Participate actively in the various components of the initiative and, to the best of their ability, participate in all network meetings;
- Appoint a representative responsible for coordination;
- Contribute the labor and resources required for implementing their participation in the activities planned within the network;
- Follow through and coordinate with network partners on opportunities for collaboration, and;
- Regularly inform the SEA of opportunities that arose.

During 2013 the interests and needs of the Swedish collaborating cities – guided by the three network goals defined by the government and in line with the framework agreed to by the other network member governments – were articulated. The participating cities expected the network to deliver:

- Opportunities to individually market know-how, products and services to counterparts participating in the network from other countries;
- Support in establishing international contacts with potential importers of Swedish know-how, products and services;
- Opportunities to learn through collaboration with international network members;
- Opportunities to work with and spread knowledge regarding the so-called “triple helix” of synergies between government, industry and academia, and;
- Opportunities to develop proposals for financing of large projects from, for example, the European Union.

As described in more detail below, these expectations directly influenced the types of activities being pursued by the Swedish cities in the network as well as the delineation of the respective roles and responsibilities of the SEA and the cities.

National meetings of the Swedish cities

In addition to the annual network-wide meetings, the SEA organized semi-annual face-to-face meetings amongst the Swedish cities and virtual follow-up meetings after both the national and network-wide meetings. These meetings served to take the pulse of the Swedish cities: what was working, what wasn't, and what needed to happen next? Importantly, the national meetings also provided a platform for the representatives of the Swedish cities to get to know each other, share ideas and concerns, and generate ideas about how the network could be further developed to better meet their needs. More concretely,

during the national sessions the Swedish cities coordinated their approach to influencing the planning for, and their contributions to and participation in, the annual network-wide meetings.

How Sweden experienced participation in the GSCN

A NEEDS-DRIVEN APPROACH

From the launch of the network, the Swedish Energy Agency's approach to coordinating Sweden's participation in the GSCN was needs driven: it focused on developing the network to best serve the needs and interests of the Swedish participants. To achieve this the SEA engaged in activities aimed at ensuring that the network provided a suitable platform for addressing both national and city interests and concerns, including but not limited to:

- Coordinating a dialogue with internal and external actors at the national level as well as meetings and activities aimed at meeting national-level network goals;
- Engaging the Swedish cities in a dialogue regarding, and coordinating meetings to discuss, their needs related to network-associated activities and progress in meeting them;
- Engaging the GSCN Secretariat in ongoing discussions regarding planning network-wide activities and support services to ensure that they met Swedish expectations at the national and city levels, and;
- Providing the participating Swedish cities with information, and where appropriate support (such as funding to cover travel expenses and hosting placements of representatives from counterpart cities), to enhance the benefits of participating in the network.

The participants were municipalities and cities, and although the cities indirectly take responsibility for promoting local business interests, they are primarily concerned with how their administrations can directly influence urban sustainability, either unilaterally or as agents of change that involves other stakeholders (citizens, the private sector, and academia). As described below, this heavily influenced Sweden's participation in the network, with respect to both structure (expectations regarding and participation in network meetings) and content (substance contributed to planning of network meetings and the meetings themselves). Through a prolonged process, the perspectives of the Swedish cities evolved regarding how participation in the network could prove fruitful. The interaction amongst the Swedish cities also changed significantly: with time they melded into a cohesive group.

THE GSCN AS AN OPPORTUNITY: EVOLVING PERSPECTIVES AMONGST THE SWEDISH CITIES

The Swedish cities' perspectives on the GSCN as an opportunity were highly influenced by their participation in the international meetings of June 2013 and January 2014, and their attempts to engage other cities in the network during the same period. Because of the heavy emphasis on promoting export of technology and know-how enshrined by the participating governments at the CEM level in the early definition of the network, and the imposed focus on waste-to-energy technologies

(with which Sweden excels) and demand-side management, the cities found themselves initially searching to define their own market relevance in this context. The emphasis on export (rather than trade) of technology and know-how to meet anticipated demand from developing-country markets (the other two initial countries were the UAE and China) led to the cities wondering what they could sell. For example, Sweden is not a producer of waste-to-energy technology *per se*. While the Swedish systems approach to problem solving – such as configuring complete waste-management systems based on the three Rs (reduce, re-use, recycle) – is seen as cutting edge, it is difficult to package and sell. Further, the focus on sales created a sense of competition amongst the Swedish participants. For the Swedish cities, this was not a viable approach to networking to promote sustainable urban development.

There was very little contact between the Swedish cities and their international GSCN counterparts in between the 2013 and 2014 network-wide meetings. Exploratory visits between one of the Swedish and one of the Finnish cities took place, but did not bear fruit. Neither had attempts to engage with participants in the UAE yielded responses. In the lead-up to the spring 2014 annual meeting, the Swedish cities opted to take a hands-on approach comprised of three components. The first component involved preparing a joint sales pitch under which the Swedish cities would individually attempt to market their know-how in designing and implementing municipal waste-to-energy systems. The second component involved preparing a shared booth at the World Future Energy Summit (which was taking place in parallel and adjacent to the GSCN meeting) with opportunities for all five Swedish cities to present. The third component was to contribute to the development of the meeting agenda. This was the most important aspect of the Swedish approach, as it was intended to influence the direction of the development of the network in such a way that would make it more relevant to the Swedish cities. In addition to individual city presentations in parallel sessions, the Swedish cities designed and implemented a plenary break-out session with the intention of identifying topics of common interest to network participants as a starting point for further discussion on how to work together. The three prongs together were an orchestrated attempt to foster matchmaking within the network: to further the search for like-minded partners abroad and attempt to find opportunities for international collaboration.

As a result of the 2014 meeting, the Swedish cities identified conflicting needs and interests between the city-oriented and business-oriented aspirations of the GSCN. They felt an urgent need to come to an agreement within the network regarding its purpose and mode of operation. Should the network focus on knowledge transfer or be a platform for business marketing, or both? There was consensus in Sweden that – if the answer was both – separate platforms for the two purposes were needed and rules of engagement were needed for the business-oriented platform.

Attempts to initiate partnerships with cities in Finland and the United Arab Emirates had not led to the desired results. Further, based on the failed attempts to initiate city-to-city collaboration, it was concluded that the needs and interests of UAE and Swedish members differed considerably (with respect to the desired structure and content of network meetings as well as the promotion of collaborative activities amongst

network members between meetings). Thus, the outlook for finding opportunities for collaboration between these network members appeared limited. Lack of progress in finding suitable collaborative partners led to a Swedish consensus that the network needed to recruit more countries and more cities. Assembling a critical mass of countries/cities that would participate actively was seen as a prerequisite to the success of the network. Hence, in dialogue with the Secretariat, Sweden initiated efforts to take a lead role in recruiting new members.

Finally, there was a common interest amongst the Swedish cities to influence the format for network-wide meetings. They wanted future international meeting agendas to emphasize discussion (rather than presentations) in well-planned workshops. Time devoted to commercial presentations and site visits should be curtailed. For this to succeed, an effort to provide focus to the topics to be discussed was considered critical.

An important result of the process of planning for and participating in the 2014 GSCN meeting, and reflecting upon it afterward with an eye to the future, was the development of a common understanding and point of view amongst the Swedish cities. The Swedish participants started to focus on commonalities in approach, skills and purpose, and began to work together as a team rather than individually as competitors. This was an important process that led to finding common ground: the relationships amongst the Swedish cities evolved into a coherent and functioning sub-network. This proved important as the group collaborated to promote the development of networking for sustainable urban development under the auspices of the GSCN for the remainder of 2014 and gradually in a new form in 2015 and 2016.

The emergence of the Alliance for Urban Sustainability

AN EVOLVING NETWORKING MODEL

The planning for the 2015 network-wide meeting proved a turning point for Sweden's participation in the GSCN. Bolstered by the Swedish cities' belief that workshopping to share experience was the way to go, Sweden threw itself into contributing to preparations. Based on a perception coming out of the 2014 meeting that the Secretariat needed help, Sweden planned and offered support for furthering the development and expansion of the network. Proposals for structure and content for the annual meeting were put forward by the cities and the SEA attempted to coordinate a dialogue on the future of the network at the international level. The Secretariat's response was hesitant. In the meantime, one of the Swedish cities attempted to create a research collaboration with a counterpart in the UAE. A visit to Masdar City was carried out but all attempts at follow-up failed. Clearly Sweden and the UAE were not on the same page. But the UAE and its emerging partners in France appeared to be. A workshop program was prepared and disseminated, comprised primarily of commercial site visits and presentations, located in three cities over a span of four days. The Swedish cities saw this program as irrelevant to their interests and needs, and opted therefore not to attend.

In the meantime, however, the Swedish government's needs-driven networking approach was realized at the city level. The Swedish cities' view of what they had in common, their challenges in tackling sustainable development, and what they

wanted from participation in an international network had become much clearer. A systems perspective was a common thread in how the Swedish cities tackled problems: they were not focused on discrete components but rather holistic solutions where energy, environment and social issues are woven together to find integrated solutions to sustainable urban development. Remarkably, the process of exploration through dialogue amongst the participating Swedish cities led to a shift away from exports and hard technology solutions toward the softer issues, related to their own work and involving a range of actors, with processes of innovation and change. Social aspects of both problem formulation and ways to develop solutions were of greater interest to the Swedish cities than technical solutions and export. The original focus on WtE and DSM was perceived as less relevant and somewhat difficult to reconcile with their priorities and work structure.⁶ This also led to an evolving model of how the Swedish cities wanted to network internationally.

The common interest was to focus on exchanging knowledge and experience on models and tools for promoting sustainable decision-making and behavior with like-minded cities (i.e., cities facing similar challenges, with similar goals and with similar interests regarding opportunities for collaboration). "Optimal" characteristics of international network partners were discussed, and there was consensus that what they were looking for was engaged cities that were: attempting to be amongst the leading cities in the world in the area of sustainable urban development; interested and prepared to work actively with network partners to share knowledge and experience; and interested in experimenting with adapting and applying each other's solutions in an effort to scale up the quantity and pace of change. Logistical considerations were not addressed, apart from one requirement: network participants must have the capacity and willingness to communicate in English as a common language. What was needed was a platform where this sharing with the aim of improving could take place, and in which partners tackling similar challenges and goals saw the network as envisioned by the Swedes as a worthwhile approach. At the same time, there was an interest in the network resulting in concrete collaborative projects as the long-term goal with respect to the mode of operation. The network was to produce results, not just annual presentations and discussions. This also meant that project meetings between annual network meetings (virtual and face-to-face) were expected to become the main point of contact between network members, complemented by annual network-wide meetings.

Another important result of this process of developing the networking model was an effort to provide focus on topics that the Swedish cities wanted to explore through the network. The cities agreed on four main themes that they were interested in exploring and worked in teams to develop Concept Notes (i.e. for each theme brief descriptions of the challenges to be addressed, suggested approaches to exploring them through international collaboration, and experience in addressing them

6. Sweden is not a significant producer or exporter of waste-to-energy and demand-side management technologies, and those technological solutions that are produced in Sweden are not under the purview of the network-member cities. Hence, these design aspects of the GSCN were never seen as having relevance for the Swedish cities.

in the cities to date). The work on the Concept Notes enabled the dialogue within the Swedish contingent of the network to move from the general to the specific. Attempting to describe the themes together enabled the cities to identify shared interests and to discuss what they perceived lay at the core of each challenge. The Concept Notes also provided starting points for discussing areas of interest for collaboration with potential international partners.

NEW BILATERAL COLLABORATION WITH FRANCE

In conjunction with the announcement of the program for the 2015 GSCN meeting, the idea of looking elsewhere for what the Swedish cities were seeking by networking began to germinate and take form. At the national level, a clear shift in strategy took place. This was due in part to a political shift in Sweden and partly to questions regarding the strategic direction of the GSCN. In 2014, the focus had been on being a driving force in further developing the international network and its strategic focus while also working to strengthen the national network and clarify its focus and approach. In 2015, a strategy of working opportunistically and targeting efforts toward activities that promote the Swedish cities' own efforts to promote sustainable urban development was adopted. The ambition to excel in sustainable urban development, the perception that cities can play a vital role in accelerating the development and deployment of sustainable energy solutions, and the idea of international networking to achieve that aim retained support. The networking efforts providing value to the participating cities was emphasized by the government as the primary aim, and decisions were not made at the ministerial level regarding the approach to collaboration.

The Swedish cities began to reach out to their broader set of contacts to test their networking vision and invite collaboration. Initially this was done as a way to further develop the existing network, not starting from scratch. It was assumed that, should these efforts succeed, the new partners could be invited to join the GSCN. The work in general proceeded, coordinated by the SEA, with the same Swedish cities, same general structure and participation requirements, same mandate and budget, and same staffing (within the SEA and the cities) and external support. Swedish cities' contacts with France and historical collaboration in the context of the EU *Reference Framework for Sustainable Cities* appeared to offer a new opportunity. Rather quickly the dialogue resulted in France's ministry in charge of housing and sustainable urban issues inviting the Swedish cities to come to Paris to discuss collaboration ideas. In preparation for a May 2015 meeting in Paris, two general topics were used to structure discussion: Monitoring and Evaluating City Development Projects (new and existing), and; Human-technology Interaction related to Demand-side Energy Measures – how do you make it work? These topics were offshoots of the GSCN focus areas, but with a shift in attention toward institutional, organizational and human-interaction aspects. The Swedish Concept Notes were further refined, translated to English and shared with the French cities in advance of the meeting, as suggested networking themes within these two broad topics. The cities were invited to prepare short presentations of their areas of interest and the remainder of the meeting was devoted to discussions regarding areas future collaboration.

This first bilateral meeting with France, which was organized by the Swedish and French national coordinators and engaged representatives responsible for sustainable-development efforts in cities from both countries, was a success in several respects. The French cities were impressed with the cohesiveness of the Swedish sub-network and were inspired to attempt to replicate the model in France. The advance preparations of content for the meeting and the ample space for discussion enabled the French and Swedish cities to quickly agree on a networking model and identify where their interests overlapped and where their experience was complementary. Six potential collaboration areas were identified. For each area, specific cities were connected (based on their interests and priorities) and roles and responsibilities for taking the discussion further – both at home for each city and in discussion across the group – were agreed upon. And the Swedish cities were re-energized and ready to take action.

Sweden and France invested in 2015 and 2016 on building relationships and project-based cooperation. The interest in cooperation is shared by both the countries and their member cities. Since the first meeting, national- (on the part of the coordinating entities) and city-level efforts to bring the networking collaboration between France and Sweden to fruition have been ongoing but gradual. Five Swedish (Borås, Gothenburg, Linköping, Malmö and Umeå) and four French (Grenoble, La Rochelle, Paris and St. Briec) cities have participated. The network also promotes exchange between universities in the network cities. Researchers collaborate to address specific challenges of concern to the cities. A second network-wide meeting was held in Sweden in April of 2016, at which the collaboration themes were further defined and steps for moving forward with each were agreed upon. Several promising joint collaboration themes have emerged in the dialogue between the Swedish and French cities.⁷ A third network-wide meeting is planned for March 2017 and the possibility of intensifying contact by meeting again in the fall of 2017 has been proposed. France's Ministry has worked actively to Commission regarding appropriate project financing opportunities. Sweden's cities meet routinely and have taken a clear leadership role in driving forward and further developing project ideas. At the seventh Clean Energy Ministerial in June 2016, the member countries officially put the GSCN on hold, and in the fall of 2016 Sweden and France re-framed their collaboration under a new name: the Alliance for Urban Sustainability.

EASIER SAID THAN DONE

While there has been strong interest in and commitment to working together at the national and city levels in both France and Sweden, getting to where this network wants to be has posed challenges. Because the shared long-term vision of all parties has been to devise concrete collaborative projects, a great deal of focus in the second half of 2015 and during 2016 went into identifying and attempting to harness opportunities to attract project funding. Most of this effort targeted EU

7. Topics include: how to stimulate various stakeholders to engage in promoting energy-efficiency improvements in apartment buildings; how city governments can work more systematically to promote innovation; how cities' climate-change mitigation efforts can be designed to encompass attention to social justice, and; how cities can engage citizens in designing programs and infrastructure intended to promote sustainable behaviour (energy and resource use).

funding, which proved difficult. The EU funding opportunities identified as relevant for the network: overlapped with but were not good matches for the network themes; were in some cases not prioritized (compared to other EU calls for proposals) in the administrations of some of the cities, which posed a barrier to joint proposals; often require inter-European collaboration with the participation of more than two countries, and; involve resource-consuming application processes.

In the autumn of 2016 it became evident that searching for funding had become an end rather than a means toward an end, causing the advancement of actual collaboration to suffer. Therefore, the partners agreed to focus on documenting and sharing experiences as a first step toward their longer-term goals. Although these efforts can move network projects forward, access to external financing will eventually be required for most of the topics being discussed. Therefore, a parallel effort is now underway to expand the collaboration between Sweden and France to include Austria and Germany. The intention is to achieve a critical mass of like-minded cities to collaborate on specific themes while in the longer-term better positioning the network to apply for EU funding for joint projects.

It has also proved challenging to replicate the Swedish cities' model for working together in France. While there is interest within the French Ministry, the network activities are not specifically mandated (their mandate includes topics related to the network but there is no specific mandate to coordinate the network on behalf of France, or budget to support the facilitation of a national platform or the envisioned bilateral collaborative activities). Hence, the Ministry cannot convene the cities for national or international meetings as the SEA can for the Swedish cities, and obtaining travel funds for French participation in network meetings has been problematic. Further, as known from the Swedish experience, it takes time for a group of diverse cities within a country to find commonalities and meld. The French cities are still in the midst of this process, while the Swedish cities are now ready to move forward. Swedish cities have been successful in attracting national project funding for some of their work that is directly relevant for the network as well as some EU funding in the context of other networks. While similar national project funding opportunities have not yet been found within France, there has been some success in attracting relevant EU project funding. These differences have led to some difficulties with respect to managing the short-term expectations of the participating cities. Importantly, while the French cities are still "gearing up" their participation in the network, the Swedish cities are under pressure for their investment in the network to begin to show tangible results.

ANCILLARY RESULTS

In addition to the results described above, Sweden's relationship with France on the topic of sustainable cities has strengthened since the Alliance started. The Swedish Energy Agency has developed a close relationship with the French ministry charge of housing and sustainable urban issues. The participating cities have also found commonalities of interest and concern. They have identified promising areas for cooperation, which in the long run are expected to have positive effects on their ability to tackle and engage stakeholders from the private sector, academia and civil society when developing and implementing innovative methods of addressing urban development challenges.

Another, broader, positive result of the collaboration is strengthened diplomatic relationships between the countries: there is a tangible effect at the national level. A successful partnership creates an arena for successful high-level (policy) dialogue. Successes in this area have already been seen in the context of ministerial visits, involvement of the respective embassies in Alliance meetings, and information sharing about the Alliance at other bilateral events. Provided that the work of the cities generates new knowledge and increases experience as anticipated, there is significant potential for this collaboration to create a platform to support international high-level dialogue between the participating countries regarding sustainable urban development (particularly with respect to social and technical aspects of urban development that influence energy use and greenhouse-gas emissions), as was originally envisioned for the GSCN.

Toward successful international collaboration between cities

CHALLENGES AND OPPORTUNITIES OF THE COLLABORATION

It is difficult to successfully implement an initiative conceived at the national level if the intended target audience is not consulted early on. For the GSCN, this was the case in Sweden. What seemed like a good idea at the ministry level proved difficult to implement, largely because the program was designed, agreed to and launched before the participating cities were chosen and engaged. If the cities had been engaged at the idea stage, their interests could have been addressed in the program design. It is also likely that key differences in Swedish and UAE perspectives regarding the purpose, aims, and structure of the network would have been identified, discussed and resolved before activities started. The UAE seems to have been more successful in addressing the needs and interests of its participating cities than Sweden was: it was Swedish needs that "changed" along the way, not those of the UAE. Promoting trade was envisioned as important in the beginning. This idea was mainly promoted by the UAE but Sweden agreed to it at the national level. Sweden agreed to focus on export and on WtE and DSM. But once underway it proved difficult to marry the interest of promoting sustainable urban development (much of the responsibility for which lies in municipalities and cities) and trade (for which private companies, branch organizations, and trade-focused organizations and agencies are the key stakeholders). For a network of Swedish cities, trade proved untenable as a primary focus. Narrowing in on two technology-driven solutions was not of sufficient interest either.

So why didn't the Swedish effort to pursue international networking as a tool for promoting sustainable cities simply collapse? Commitment to sustainable urban development was strong at the national level in Sweden, has remained so, and is of great interest to the Swedish participants, as is collaborating internationally to achieve that goal. Further, the process through which the Swedish cities were selected for participation in the network worked well: The Swedish cities are highly qualified, are pursuing related activities outside the network (to which they link network activities), and have remained interested and actively engaged in the international networking efforts. Additionally, there has been a great deal of flexibility at

both the national and municipal levels with respect to analyzing the situation and making course adjustments in an effort to succeed. The commitment has remained focused on the goal rather than the formalities *per se*. Importantly, the fact that both the central government and the cities have been able to devote resources to the effort has been critical. Lack of funding for projects and multiple face-to-face meetings (that will be needed for projects to get underway), has been a challenge. However, the cities have allocated resources for participation of their staff and the national government has supported coordination and facilitation as well as travel for city representatives to network-wide meetings. These investments have been a determining factor in continuing to move forward over some rough terrain rather than coming to a halt.

WILL THE ALLIANCE FOR URBAN SUSTAINABILITY SUCCEED?

The bilateral collaboration between Sweden and France is well on its way. As described above, there is no lack of enthusiasm or ideas, but it remains to be seen if this will produce the desired results. If meeting once a year to present individual cities' accomplishments had been the goal of the network, this would not have been difficult to achieve. But the Swedish and French cities want to move beyond traditional conferencing, to work together to find new and innovative solutions. Funding remains the largest barrier to the kind of project-level collaboration envisioned by the Swedish and French cities involved in the network. Seeking funding, as experienced in 2015 and 2016, can also become more of a problem than a solution as it affects the cities' ability to collaborate, which is necessary for their continued commitment and support. Therefore, we conclude that the funding challenge, if left unresolved, could put an end to the network.

Incorporating Germany and Austria may help to alleviate the problem in the medium-term by making the network members more competitive in seeking opportunities to attract project funding from the EU. However, as seen from the experience of initiating the bilateral collaboration with France, the gestation period for new members is long and can easily slow progress. Establishing a fluid and functioning network takes time. It is important that the participating cities are aware of this, and of the fact that long-term successful collaboration requires effort and often poses challenges at the beginning. Addressing the funding problem will require support at the national level in participating countries, at least over the medium-term. In the longer-term, efforts to acquire external funding should be ramped up, and project-related funding from the participating governments phased out or continued competitively through parallel programs (as is the case for the Swedish contribution to one of the network projects currently underway).

IF WE WERE TO DO IT ALL AGAIN FROM SCRATCH, WHAT THEN?

Sweden's endeavors to utilize international networking as a tool to stimulate and improve its cities' efforts to achieve sustainable urban development has been a learning experience about networking as a tool. This learning is broadly applicable and should influence future international networking efforts in other areas. The following are suggestions as to how to approach international collaboration of this kind. They are based on the key lessons learned from the experience described above, reflecting our after-the-fact understanding about what Sweden

could previously have done differently – and is currently doing – to promote international collaboration to promote urban sustainability.

Be prepared

Top down support for international networking can be powerful in terms of making things happen. However, a network should be designed with the needs of its intended members in mind and its intended members should be involved in its design. Urban sustainability networks could conceivably involve municipalities/cities, public service providers, actors from the private sector, and/or the academic community, or some combination of these as members. A basic understanding of the intended member base – including where anticipated members cooperate and where they compete – is critical and should be ensured before inviting parties to the table for discussion. In the case of networks of cities, the initiative should be designed to be city-driven and city-defined from the start, with the government acting in a facilitative role. This requires preparation. Each participating country should engage the cities in in-depth discussion at the national level during the design and preparation phase, and prior to agreeing internationally on form and content. Doing so will enable national-level discussions with potential networking partners to reflect the realities, interests and concerns of the cities intended to participate, and can thereby help to avoid partnering with others who have different expectations, priorities and goals.

Once national priorities and interests are clear, the international partners should enter into discussions with the aim of testing how good a match their interests are. Assuming that the network is intended to be needs-based and involve more than two countries, an international match-making process should be implemented for recruiting members with similar needs, expectations, capabilities, and intention to devote resources (particularly staff time). A strategic approach to recruiting should be taken that addresses both the quantity and qualities of participating members that are required to achieve overarching network goals. If joint applications for external funding are anticipated, creating potentially-successful constellations of applicants for known relevant funding sources should be considered from the outset. The goal should be to bring together a collection of peers (with respect to national and city-level participation), with similar interests and ambitions and equivalent capacities to contribute. Once a set of partners has been agreed upon, a joint project plan for the entire initiative, with clear goals, methods and procedures, should be developed. The process of developing such a plan should serve to ensure common understanding and expectations and provide room for discussing and resolving differences.

Allocate resources and give it time

A network will not run on intention and international city networks are not self-supporting. These types of initiatives require effective coordination, which in turn requires sufficient budget and staff. National coordination is a must. And efforts should be made to ensure that network members from each participating country have access to sufficient resources to participate fully (particularly with respect to a budget to finance travel to network meetings). International coordination of collaborative efforts such as networks takes various

forms, including centralized secretariats (as was the case for the GSCN) and, as an alternative, groups of national project leaders and their support teams with rotating responsibilities for joint activities (as is the case for the Alliance). The important thing is to ensure that the cities are supported in the logistics of network collaboration, involved in determining what happens next and designing network meetings, and that there is a “pulse” of activities between meetings, i.e., network-wide meetings should *serve a purpose* rather than *becoming the purpose* of the network.

Finally, what does long-term mean in a networking context, and how long should an international network of cities take to bring about change? Networking endeavors that address major long-term challenges such as sustainable urban development, require time to take hold. But how long? Based on our experience with the GSCN and the Alliance for Urban Sustainability we estimate that with care given to advance planning – a process which in itself could easily take at least a year – and with a carefully coordinated and goal-oriented launch, the network plan should dedicate approximately three years to the members finding common ground and learning to work together (preferably in a learning-by-doing process). That means that it is likely to take up to five years before such a network can start to produce concrete results. Shifts in network membership will cause delays as will lack of sufficient financing for the collaborative initiatives envisioned by the members.

It is therefore important that the networking partners see their collaboration as a long-term effort. Plans for the network should be forward looking, with an appropriate time horizon. Dedication and commitment are among the most important components for a network to be successful. There will be time and cost implications, but hopefully these investments will generate positive results for a more sustainable future. It is important that each participating city feels that they get as much in return as they put in. Our hope is that the Alliance for Ur-

ban Sustainability members will make significant progress in sharing experience, will find opportunities to experiment together by adapting each other's approaches and creating new approaches, and will have exciting results to share with the world by 2020!

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