Sweden, the Green Giant

A place where ‘sustainability’ means collaboration. By Walker Wells, AICP

Sweden is recognized internationally as a leader in sustainable urban development, largely due to two projects: Western Harbor in Malmö and Hammarby Sjöstad in Stockholm. Both are large-scale, multiyear developments that feature an impressive array of environmental technologies and thoughtful city planning strategies: remediated brownfields, open stormwater collection channels, district heating and cooling, trash-suction systems, bike sharing, car pools, and the conscious extension of the 17th century urban pattern of small blocks framed by five- to seven-story buildings.

These leading-edge projects sparked innovations that are now becoming manifest in plans and commitments for the next wave of Sweden’s sustainable developments. Norra Älvstranden in Gothenburg and the Stockholm Royal Seaport are setting new standards for integrated sustainable design. But the real innovation is in how these projects are refining and applying a uniquely Swedish planning and development model, based on collaboration and trust.

In the U.S., contemporary documents are full of green concepts: net-zero-energy buildings, rooftop urban farms, building-integrated wind turbines, bike boulevards, living machines, prefab affordable housing, organic waste composting, and infrastructure that links urban systems and ecological processes. In practice, few American developments match the scale and sophistication of the Swedish examples.

Most green projects here are modest and incremental—a LEED-certified building, a bike lane extension, LED streetlight upgrades, parklets, a new bin for organics or recyclables—not large-scale and transformative.

So how does Sweden, a country with just nine million people located on the northern edge of Europe, accomplish consistently what the U.S., with its vast financial resources and history of innovative risk taking, continues to struggle with?

Lots to learn
I spent the three months last year exploring this question at the Swedish Royal Institute of Technology, through fellowships from the Fulbright Commission and the American Scandinavian Foundation. I wanted to identify what aspects of Swedish urban planning and development, or at least the approach taken for the leading-edge projects, could be applied to the process, structure, and procedures of urban planning and development back home.

An informal predeparture poll of friends and colleagues about what’s different there led to a range of answers: It’s because Swedes pay a lot of taxes; because they have a social democratic government; because the cities play a stronger, more proactive role in planning; and finally, because things are just different in Europe.

I also wondered whether the principles of innovation—particularly the need for a project champion from concept to completion—typical of U.S. projects would also hold true for the Swedish examples. The components of innovation are described in a 2003 book, Diffusion of Innovations, by Everett Rogers. The underlying view is that exemplary projects succeed only when led by an extraordinarily dynamic and committed individual. The case study findings from
the 2007 book *Sustainable Urbanism: Urban Design with Nature*, by Doug Farr and others, affirm this perspective in the context of planning and development.

This concept did not hold true, however, for the 10 projects I visited in Sweden, from a five-acre, 44-dwelling-unit eco-village to the 500-acre, 13,000-unit Hammarby Sjöstad. Discussions about the genesis, design, and implementation of the projects revolved around task forces, committees, working groups, dialogue, and consensus-based decision making.

It became clear that the Swedish approach is built on shared interests, shaping the visions and expectations for implementation through dialogue and collaboration, establishing a culture of trust among the various actors, and formalizing expectations in binding agreements.

**What’s required**

Swedish law requires each city to prepare a long-range plan (översiktplan) that identifies how and where the city is expected to grow in order to meet projected needs for housing and workplaces. For the past 25 years, the trend has been to build densely, often with a focus on the revitalization of former industrial and harbor areas.

This is in contrast to the postwar suburban form of mid-rise buildings surrounded by landscape. It’s different, too, from the single-family neighborhoods that sprung up in the 1980s as tax incentives led Swedish families to move en masse to the urban fringe.

The need to build densely also reflects demographic trends. As in the U.S. over the past quarter-century, many Swedish children who grew up in the suburbs are now choosing central city neighborhoods. Nearly all projects currently under way in the major cities are an extension of the historic city form (bygga stad) with short blocks, buildings pulled up to the street edge, and closed or semi-closed courtyards.

The urban pattern of development is also designed to connect with existing bicycle and transit networks. By building inward, Stockholm, Malmö, and Gothenburg are meeting the projected needs for new development while largely avoiding sprawl.

**Developer dialogue**

There are roughly a dozen major development firms (byggherrar) in Sweden, several of which are also contractors, with the expertise and financial capacity to engage in a major project. Typically, the city’s urban planning office issues a notification that detailed planning is about to be initiated for a particular area and requests that firms express their interest.

Once the pool of qualified firms is identified, a key component in the collaborative process is the “developer dialogue” that is used to discuss the basic financial, urban design, construction, and other logistical issues of a project. This approach was used in these major projects, among others: Mas- thusen, the newest development in Malmö’s Western Harbor; the Stockholm Royal Sea- port; and Kviblebäcken, a key development in Gothenburg on the north side of the Älv River.

Through the developer dialogue process, a development vision is crafted that is consistent with the city’s long-term planning strategy, the specific needs and opportunities of the neighborhood, and the market and financial realities of the development community. What results is a plan with a solid foundation in physical and market realities, combined with well-articulated expectations about outcomes. A consortium structure fosters a spirit of shared interest in the project, enables the partners to build trust, and creates the cohesion required for project implementation over several years.

Each of the participating developers signs a “consortium agreement.” Then the consortium establishes a board and several working groups. Those working groups articulate specific objectives, strategies, and performance targets for items such as total dwelling units, office space, and retail; pedestrian, bicycle, and transit facilities; open space type and quality; stormwater capture and management; soil remediation; and energy use and generation. These targets become parcel-level requirements that are attached to the land sale (markanvisning), planning entitlements, or building permits.

The next step is to reach an agreement on the land price and other conditions of the transaction. Swedish cities are often major landowners, so they can negotiate for developer investments or community amenities as part of the land sale agreement, rather than solely through regulation. It is common for the final land price to be determined by the developers’ level of commitment to public investments. A project with fewer amenities would bear a higher land price, while a project with a full suite of amenities would likely fetch a lower land price.

This approach is roughly analogous to how U.S. redevelopment agencies can influence development in specific areas. In Sweden, the city may own, or have acquired, hundreds of acres, rather than just a collection of key parcels.

**Consortium members participate in the land price discussions, so the project benefits from multiple perspectives on the economic realities of land clean-up, providing infrastructure, construction, financing, etc. These open conversations help create trust, as the parties recognize that cities need developers to provide housing units and office space, and developers need cities to make new land available. Thus both parties are encouraged to reach a mutually beneficial agreement that helps move the project forward.**

**Setting standards**

Once the terms of land sale are finalized, the formal planning and building process begins. Swedish cities prepare a highly detailed set of standards for each neighborhood called a detail plan (detaljplan). This is what’s factored in: building height, setback, volume, massing, and orientation; relationship to the sidewalk and street; location of entrances, placement of open spaces, walkways and landscaping; street cross sections; bike lanes; and accepted facade colors and materials.

Often this work is completed by in-house architecture and urban design staff. On other occasions—usually for high-profile projects—a group of architecture firms is selected to prepare alternate detailed planning proposals for the same district, with the most successful solutions selected as the basis of the standards. Either way, the detailed planning stage allows for various program, spatial, aesthetic, and environmental concepts to be clarified and articulated.

Sustainability requirements may cover a range of items, including the width of ecological corridors, area of permeable surfaces, maximum annual building energy use, or location and type of waste management infrastructure. In a meeting at the Stockholm City Planning Office, the planner for the Stockholm Royal Seaport, Jonas Claeson, explained that “investing the time to complete the detailed planning
Developer dialogue
For major projects, this city-led process creates clarity and collective buy-in on sustainability, urban design, financial, and implementation issues.

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On the ground
This collaborative, multistage approach has been used during the nearly 20-year effort to redevelop the shipyard on the northern side of the Ålv River in Gothenburg. For the newest project, called Kvillebäcken, Ålvstranden Utveckling AB, a corporation owned by the city of Gothenburg to oversee the transformation of the shipyard into a new urban district, established a consortium agreement with seven development firms. The goal: to "transform the area into a socially, economically, and ecologically sustainable urban district."

Next, an environmental working group (a subcommittee of the consortium) prepared a sustainable development program to set a series of initial performance standards—and to monitor global innovations so the standards could be updated or strengthened during implementation.

Staffan Bolminger, environmental director for Ålvstranden Utveckling AB, says, "We use the developer dialogue process to create a collective vision for the overall project and to get the level of buy-in by the various parties—the builders, designers, city, and other public agencies—that is essential to achieving a high level of sustainable development in the completed projects."

The goal of the Kvillebäcken is to build "mixed urbanism" that combines 2,000 new apartments with 250,000 square feet of office, retail, restaurants, and child care. The plan is structured around a series of partially enclosed blocks, with narrow streets, pocket parks, squares, and green spaces located between the buildings.
Construction started in 2010 and is expected to be completed in 2018. Several of the buildings in the first phase are certified at the silver level, per the Swedish Environmental Building standard. The program includes requirements for energy efficiency, indoor air quality, healthy materials, protection from moisture, mitigation of traffic noise, stormwater management, and biodiversity.

The area includes numerous walking, cycling, and transit amenities. This enables a parking standard of 0.5 car spaces and 2.5 bicycle spaces per apartment. These strategies are part of the goal to reduce 2020 greenhouse gas emissions in the Norra Ålvstrand area by 80 percent of 2005 levels.

Why it works

Sweden's well-structured collaborative approach appears to be working just fine. However, there is still much to be learned from the Rogers theory even if the Swedish example flies in the face of his call for project champions. Rogers stated that innovation will be widespread only if several critical factors are in place: channels of communication, social structures, and time. The Swedish developer dialogue model certainly makes use of all three.

Instead of focusing on mavericks, as is often the case in the U.S., the Swedes have created a method to diffuse and embrace innovation. Instead of focusing on mavericks, as is often the case in the U.S., the Swedes have created a method to diffuse and embrace innovation. Rogers stated that innovation will be widespread only if several critical factors are in place: channels of communication, social structures, and time. The Swedish developer dialogue model certainly makes use of all three.

Some argue that the pursuit of a middle ground leads to mediocre developments whose architectural style, housing options, and construction techniques are increasingly homogeneous. Defenders say the consortium approach is a way to control costs, but others point out that it may also lead to a gradual shift toward an economic and political median that does a good, but not great, job of meeting the needs of society.

In addition, to a non-Swede the dialogues and consortium approach may lack inclusion and transparency. Clearly it is efficient to have a small number of qualified developers sit down with a public agency to hammer out a viable plan, but that begs the question of who gets left out of the conversation and what never gets explored.

Still, U.S. practitioners can learn some lessons from the Swedish approach.

Two views

In the U.S., local governments and the development community are often opposed, if not combative. Developers propose projects that cities react to, critique, and review for compliance, while cities prepare visionary plans that developers often have little interest in building.

Instead of working together to clarify what type of development is wanted, developers commonly put forward outlandish proposals, knowing that the cities will whittle away in an effort to reduce height, building area, or number of dwelling units. For their part, cities rarely encourage specific types of development and instead wait for proposals to be put forward for review.

When I explained this approach to Swedish planners, this was a common reaction: "How would you ever get the development that meets the city's needs—the type of development you want?" They seemed aghast that planners would leave the future of the city up to chance or circumstance.

The main lesson U.S. planners might take from the Swedish approach is that they can work with the development community to reach a more predictable, mutually beneficial outcome. However, someone needs to take the first step in shifting the status quo.

This means seeing the development community as a participant in shaping the city; using the powers of redevelopment to obtain critical parcels and then negotiating wisely in determining the conditions of the ground lease or sale; and looking for opportunities to encourage long-term investment in exchange for more predictable returns.

Most importantly, it means cultivating a culture that fosters and rewards trust and collaboration instead of skepticism and confrontation. Combining the levelheaded Swedish approach with the dynamic chaos of U.S. planning just might lead to new plans and neighborhoods that are the most sustainable on the planet.

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RESOURCES

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- Simbiocity: www.symbiocity.org
- Eco Districts: http://ecodistricts.org
- 2030 Districts: www.2030district.org
- LEED for Neighborhood Development: www.usgbc.org/neighborhoods
- Global Green USA: www.globalgreen.org
- EPA Building Blocks for Sustainable Communities: www.epa.gov/dced/buildingblocks.htm
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