

## **Sustainability by Design 2.0: 2007 to 2010**

### **Project Brief**

#### **Who We Are**

The Design Centre for Sustainability is a research centre within the UBC School of Architecture and Landscape Architecture. The Design Centre for Sustainability (DCS) was created to promote, support and encourage collaborative research in the broad area of *inhabited landscape* with a special emphasis on research as it applies to local and global communities. The DCS develops knowledge related to design process, green infrastructure and sustainable design practices; processes related to visioning, designing and implementing sustainability; and tools related to visualization and decision support for the design and implementation of sustainable communities. A major research priority of the DCS is the continuing development of an integrated process for the design, evaluation and implementation of sustainable community visions.

#### **The issue**

The Greater Vancouver region has earned a reputation as one of the world's most livable places. That achievement is the direct result of our region's natural assets as well as the visionary long term planning of previous generations. This reputation continues to attract new residents and, by 2025, Greater Vancouver's current population of two million will increase by fifty percent – to three million. It will double to almost four million by 2050. How can we manage demographic and population change in the decades ahead? How will the region accommodate future growth sustainably? How will housing, jobs and transportation be designed, delivered and distributed? How do we ensure continued livability in the region, and do even better? Our challenge, in this generation, is to transform our livable region into a sustainable one. But how are Greater Vancouver communities able to address questions of such broad scope and time frame in a stakeholder-driven, effective and implementable way?

#### **Our response**

The **Sustainability by Design** project is led by the DCS with Patrick Condon, the James Taylor Chair in Landscape and Liveable Environments as principal investigator. SXD is a collaborative effort to produce a compelling representation of what the Greater Vancouver region might look like in 2050 at the neighbourhood, district, and region-wide scales. It is the only initiative of its kind. The Greater Vancouver Regional District (GVRD), while active in planning the future of our region, has a planning horizon that extends only 20 years and is not designed to produce any physical visions for what the region might look like at either the 20 year or 50 year horizon.

Drawing from the significant expertise in sustainable development amassed by the DCS, and incorporating demographic research made available through collaboration with Urban Futures, SXD developed and published a set of six Guiding Principles and sustainable development targets (see [http://www.sxd.sala.ubc.ca/10\\_publications.htm](http://www.sxd.sala.ubc.ca/10_publications.htm)). These principles were tested through application in a series of six Workshops and three Municipal Case Study Charrettes that generated sustainable development visions for edge, node and corridor sites. The findings of the year's research were then applied to the regional scale on 17 June 2006, as part of the City Building Planners Group's *Super Saturday*, where over 120 participants – including delegates from AIBC/RAIC; PIBC/CIP; and BCSLA/CSLA, plus Vancouver area stakeholders and urbanists – worked all day to detail a practical vision for a sustainable region – a vision that accommodated a doubling of our present population, with

particular attention to accommodating the age 60 and over demographic, which will increase by 400,000 people in this period . The resulting 50 square metre map was displayed at the UN World Urban Forum.

The response to SxD's kick-off year has been overwhelmingly positive. The project has garnered regional, national and international attention and has generated requests from other municipalities who wish to participate in future work. In the first year, SxD has generated implementable sustainable development plans for three Greater Vancouver municipalities, and has produced practical and useful research products, including:

- The Sustainability by Design website (<http://www.sxd.sala.ubc.ca/>);
- Sustainability by Design: Guiding Principles ([http://www.sxd.sala.ubc.ca/10\\_publications.htm](http://www.sxd.sala.ubc.ca/10_publications.htm));
- Research Bulletins; and,
- Two explicit and detailed visions for a region of 4 million ([http://www.sxd.sala.ubc.ca/7\\_studio.htm](http://www.sxd.sala.ubc.ca/7_studio.htm) and [http://www.sxd.sala.ubc.ca/16\\_reg\\_charrette.htm](http://www.sxd.sala.ubc.ca/16_reg_charrette.htm) ).

This research has greatly impacted the collective discussion about regional development, particularly with respect to recognizing the untapped potentials for redevelopment along the regions 1,000 km of underutilized surface arterials, and the need to respond to the demographic tidal wave of a preponderantly grey future resident. These products – all available online – also provide a permanent communications infrastructure between SxD and participating stakeholders, as well as a web-based database for citizens and stakeholders to use as they develop the sustainable development vision into official sustainable community planning documents. The key outcomes of the year's work are currently being worked into a major publication, which will be sent to press as part of the proposed funding cycle.

Following on the success of the first phase of the SxD project, the DCS proposes a multi-year, iterative design-research-implementation process that will build on this success. This second phase of SxD includes seven key components:

1. **Case Study Charrettes** – the Case Study Charrettes develop and test sustainable design principles by examining actual issues and conditions with stakeholder groups (community leaders, citizens, city officials, etc.) in participating communities. Each case study is selected to focus on and give insight into a particular urban design type, resulting in type-specific sustainable design principles that can be applied throughout the region. A fifty year time horizon and an average increase in population of 100% would afford an opportunity to think more holistically and sustainably about community change, loosening ties to present status quo assumptions while staying grounded in the realities of real places. The three Case Study Charrettes undertaken in year one focused on urban/rural edge, corridor and node conditions. Future sites could include industrial/residential edge, waterfront, hillside, residential or industrial infill, office park, etc. Taken together these case study sites would provide a comprehensive kit of parts applicable to similar sites around the region.

*Outputs include* – evolving sustainable design principles; a sustainable, stakeholder-driven development vision for the area of the community under study; a book series with yearly publications summarizing charrette findings; and, robust yet achievable 50 year visions for sustainable communities.

2. **Measured Evaluation** – the DCS will partner with local leading scholars in areas such as water resources, housing affordability and accessibility, transportation and global warming to develop scientifically-based targets to direct charrette processes and to test the sustainable design principles resulting from Case Study Charrettes. Existing research developed by our partners will be applied to Municipal Case Study Charrettes. Each case study thus becomes an applied research laboratory. Charrette results either verify or disprove the research hypotheses thereby using SxD to improve the quality of academic research and its relationship to real world community design problems. This research group will be formally constituted as the **Research Partnership for a Sustainable Tomorrow**, with its own charter, membership, and information portal.

*Outputs include* – tested sustainable design principles; Research Bulletins and Academic Papers for publication; durable and lasting interdisciplinary vehicle for synthesis, synergy, and practical applications of research to crucial regional issues.

3. **Sustainable Design Vision Implementation** – the DCS will work with Greater Vancouver communities – particularly those participating in case study charrettes – and their consultants to develop their sustainable design visions into an implementable plans. The DCS role will include participation in advisory committees, review of consultant prepared plans, and convening of round-table workshops to resolve specific design issues that arise in the process from vision to implementation.

*Outputs include* – enhanced decision-making processes and outcomes; and, optimized social, economic, environmental and cultural impacts of community development.

4. **2008 Interdisciplinary Conference** – the DCS will coordinate and host an academic, issue focused conference with local and international scholars, regional political leaders and local implementers.. Papers and case studies presented will examine sustainable community design, research and implementation issues.

*Outputs include* – development of a common interdisciplinary understanding of sustainable design issues that connects academic and applied work to real world problems; a *Regional Pact* (a set of principles for regional design that can be used by citizens and stakeholders to guide the decisions of decision-makers as they develop sustainable community plans); and, publication of quantitative and rigorous research to provide a factual basis for action.

5. **2010 Regional Charrette** – a bookend charrette to close this cycle of the project. This is similar to the Super Saturday regional charrette, but much more extensive and stakeholder focused. This event will see hundreds of stakeholder participants working with key “expert” design facilitators design the region to accommodate a doubling and aging population with the sustainable design principles evolved from the case study charrettes, measured evaluation, and conference results.

*Outputs include* – a revised 100 square metre sustainable vision plan for the region in 2050; a “Big Book” for publication compiling the outcomes of case study charrettes, research, implementation strategies, conference and regional charrette outcomes.

6. **Media Communications** – outreach through website, television and other media to expand community awareness and access to the DCS in general and SXD project in particular.

*Outputs include* – evolving website, public service announcements, spots on public access television; and increased participation between the SXD project and Greater Vancouver communities.

7. **Friends Alliance for a Sustainable Tomorrow (FAST)** – A key component and lasting legacy will be the FAST Alliance. This group will be comprised of established leaders in the region whose opinions are widely respected. These women and men will first guide, then endorse the **Principles for Action**, the more explicit **Regional Pact**, and endorse the specific applications of those principles and strategies to real problems. With the creation of FAST we hope to repeat in this generation what was achieved in a previous generation by people like Walter Hardwick and his associates – civic minded citizens and leaders who first promulgated the Livable Region vision in the mid 1970s.