Social innovation is an initiative, product or process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system. Successful social innovations have durability and broad impact. While social innovation has recognizable stages and phases, achieving durability and scale is a dynamic process that requires both emergence of opportunity and deliberate agency, and a connection between the two. The capacity of any society to create a steady flow of social innovations, particularly those which re-engage vulnerable populations, is an important contributor to the overall social and ecological resilience.

1. **Social innovation is an initiative, product or process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system**

Social systems are defined as any organized assembly of resources beliefs and procedures united and regulated by interaction or interdependence to accomplish a set of specific functions. Social systems are complex, having multiple interacting elements, and to survive they must be adaptive, ever evolving to adjust to emerging needs of the subsystems (organizations or individuals). Each social system is defined by its boundary...we can “zoom in” to look at systems as small as a family, or zoom out to look at systems as broad as the globe. Each social system has its own character or identity that can be analyzed in terms of its culture (the beliefs, values, artifacts and symbols) its political and economic structure (the pattern by which power and resources are distributed) and its social interactions (the laws, procedures, routines and habits that govern social interaction and make it predictable). These three aspects of social system, in their most established and taken for granted forms (e.g. our democratic political structure, Judeo-Christian value heritage, our economic markets, our laws of public conduct) are often referred to as institutions.

Human beings are inventive. The capacity to explore new possibilities to create and to change is part of what defines our species. We are also a social species, highly dependent on each other for the creation and maintenance of the world in which we live. The rules and beliefs which make up the cultures in which we live both defines and limits us and gives us the material we need to create novelty. This has been defined as the paradox of agency, that as individuals, as social beings, we are both deeply conditioned by and dependent on the continuity and stability of the social systems we have invented and capable of altering these through both conscious and unconscious effort. When we cease to change we die; when our social systems cease to change they become brittle and
vulnerable to external shocks. However, too much change, or too rapid change is also precarious, challenging the social, political and economic stability upon which our day-to-day life depends. The challenge is to balance continuity that gives us our identity and change which is key in allowing us to adapt to broader changing circumstances.

2. **Successful social innovations have durability and broad impact.**

We are interested in those social innovations that address seemingly intractable social problems – homelessness, poverty, and mental health. In these domains, the social sector struggles often with “band aid” solutions, those that address the immediate symptoms but not the underlying causes. So, for example, social service organizations struggle to find financial support for those suffering from mental illness without addressing the economic system that excludes them from the mainstream economy. It can be argued that indeed, the taken for granted institutions are often the source of such intractable problems. Real innovation without change in these institutions is therefore unlikely.

When a social innovation has a broad or durable impact, it will be *disruptive*, i.e. it will challenge the social system and social institutions which govern our conduct, by affecting the fundamental distribution of power and resources, the basic beliefs that define the system or the laws and routines which govern it. While there are many smaller innovations continually introduced at all scales, our focus is on those with the potential to disrupt, and change the broader system. To do so, a social innovation must cross multiple social boundaries to reach more people and different people, more organizations and different organizations, organizations nested across scales (from local to regional to national to global) and linked in social networks.

3. **While social innovation has recognizable stages and phases, achieving durability and scale is a dynamic process that requires both emergence of opportunity and deliberate agency, and a connection between the two**

Innovation has been widely studied and appears to have a variety of phases and stages. This has perhaps been best described in the literature on continuously innovating firms. Innovation can be encouraged by a design that fosters competition between multiple teams all attempting to develop the best idea or model. This phase or stage has often been called the exploration phase and is characterized by numerous experiments, some successful, some not, as an individual or team attempts to move from idea to a prototype which could be tested in production. Not all such experiments are “successful” however. At some point choice favours one or several of these experiments and diverts all resources towards exploiting the possibility of these ideas in the form of new products or processes. As the product or process moves into the production or exploitation phase, the prototype is further modified and the organization gains experience at production, becoming more efficient until the product or process can be replicated with maximum efficiency and hence profitability. Its fate then rests with the market. If demand increases then more of the product is produced. Eventually, however, demand will decrease due to dynamics of the larger market, the competitive context, or changing social and economic
conditions. The firm with only one product will therefore go out of business. To be resilient over long periods of time, the firm must be able to generate new products or variations of old products in response to this shifting demand context.

This model of innovation can be represented in the four-box cycle below. Known as the “adaptive cycle” it provides a heuristic for understanding the dynamics that drive both continuity and change. It is best understood as a diagram that charts this dynamic at a single scale or in a single system. It could represent the evolution of a single innovation from idea to maturity, or the organization that designs and delivers that innovation. It is important to the idea of resilience, or that capacity to adapt to shocks and changes while maintaining sufficient coherence for identity, that the phases are not represented as linear, but as an infinity loop. Once an idea or organization reaches the maturity (conservation) stage it needs to release resources for novelty or change and reengage in exploration in order to retain its resilience. The release and reorganization phase is often termed the “back loop” where non-routine change is introduced. The exploitation and conservation phases are often termed the “front loop” where change is slow, incremental and more deliberate.

![Figure 1]

Figure 1
Social innovation can be illuminated in part by this diagram, in those new ideas for social programs, processes, products or initiatives also require development from idea to mature product and also require organizations to deliver them. However, those social innovations that have broad impact and durability demand that we also consider cross scale (Figure 2) or cross system (Figure 3) dynamics. These dynamics have been described as panarchical by resilience theorists, and have not been as well described in the private sector literature. How do they happen?
Agency clearly plays a role. Social innovation requires a variety of actors, working in concert or separately, if it is to have the kind of impact suggested above. Among these are the inventors, sometimes called social entrepreneurs, individuals who initiate or create innovative programs, products or processes and seek to build an initial organization that can bring that innovation to market. However equally key to social innovations that have the broad impact we describe above are the institutional entrepreneurs, those individuals or network of individuals who actively seek to change the broader social system through changing the political, economic, legal or cultural institutions, in order that the social innovation can flourish. Occasionally individuals have skills of both the social and institutional entrepreneurs, but generally it is wiser to think of actor nets, or groups behind successful social innovation.

But in complex systems, no change can be accounted for by agency alone. Agency must coincide with opportunity that is a feature of the broader social and institutional context. Social innovation can be aided by market demand, which is one form of such opportunity. It can equally be aided by political demand, another form of opportunity, by cultural demand in the form of a breakdown in sense making or meaning. These dynamics are complex and difficult if not impossible to manipulate directly. Some of what has been written about social innovation suggests a one to many model of innovation growth which depends on stimulating market demand (Young Foundation) or at least on utilizing market mechanisms, as in social enterprise, with the notion that if many adopt the social innovation the impact will be larger. However, if the focus is on disrupting the larger institutional context, it appears that this can occur connecting the innovation to political, cultural or economic opportunities that exist irrespective of the volume of adoption. Sudden tipping points or cascades of change that are discontinuous, i.e. not the result of an incremental model of adoption or diffusion of innovation can then occur.

Strategies for connecting innovation to these other opportunity contexts is best understood for looking more closely at agency, particularly institutional entrepreneurship. This involves a set of skills of pattern recognition, resource mobilization, sense making, and connecting. It involves a deliberate focus on “up-down” strategies of reflecting on and connecting to decision makers and opinion leaders in policy, economic and cultural arenas, engaging and questioning the strategic context of their decisions. It also involves recognizing local and “front line” innovations that promise institutional disruption and selling these to the decision makers/opinion leaders when windows of opportunity open. Institutional entrepreneurs therefore need to master a complex set of cultural/social skills (cognitive, knowledge management, sense making, convening), political skills (coalition formation, networking, advocacy, lobbying) and resource mobilization skills (financial, social, intellectual, cultural and political capital). Building capacity for social innovation in part involves increasing the representation of these skills among those interested in fostering broad based change.
4. The capacity of any society to create a steady flow of social innovations, particularly those which re-engage vulnerable populations, is an important contributor to the overall social and ecological resilience.

In the broadest sense, social innovation is urgently needed to solve the complex social-ecological problems facing Canada and the world. In recent weeks, with the world financial markets in crisis, commentators have spoken of the “perfect storm”, the intersection of rapid climate change, fossil fuel supplies, food shortages and economic collapse. All commentators mention the difficulty of really understanding the dynamics of these problems, due to their complexity. Disciplinary science has only partial answers, as do politicians and analysts. Only a few commentators have in fact connected these “disparate” trajectories, suggesting they are connected in their origin as well as their current interactions. Resilience and complex system thinkers have for several decades however, been describing just such interconnecting systems and just such possibilities. Two decades ago, the Brundtland Commission suggested that the real ecological crisis was not only the pollution of the industrial countries but the over-utilization in and export of ecological resources in the developing world. Both were connected to an economic system in the western industrialized nations that demanded high “profitability” and huge resources to keep afloat. Subsequent profits became loans to the developing world, which intensified the poverty of the dispossessed resulting in the failure of growth in the infrastructures of health, education and social benefits. Structural adjustments in order to service loans (and qualify for more) undermined local resilience in the form of cultural and social practices. Nonetheless, defaulting on government loans represented a real threat to the northern economies, as did the environmental violence that was the result of the diminished ecological services available to people in the developing nations. Social injustice and equity were shown in this model not only to be moral issues, but also to be deeply implicated in the erosion of both environmental resources and economic markets. (Figure 4).
Since 1989 when the Brundtland commission was published our understanding of these connections and the vicious cycle they engendered, has been deepened, but not fundamentally changed. The exclusion of large parts of the world’s population from basic economic and ecological services increases the vulnerability of the whole to “perfect storms” and hard losses of resilience.

Re-engaging vulnerable populations in our mainstream economic, social and cultural institutions, not just as recipients of services or “transfer entitlements” but as active participants and contributors is therefore intimately tied to socio-ecological resilience. It is not accidental that most social innovation is addressed at this kind of re-engagement: re-integrating the poor, the homeless, the mentally ill, and the lonely into community. But from another point of view we can see that if the generation of novelty is largely dependent on the recombination of elements (bricolage), than as we exclude these groups from contribution we also lose their viewpoints, their diversity, and the particular elements they have to offer the whole. So social innovation not only serves vulnerable populations, it is served by it. And, since resilience of linked social-ecological systems is depended on the introduction of novelty in the back loop, resilience is also increased by that re-engagement. (See Figure 5)
Social innovation is needed to build social and ecological resilience in the face of mounting complex challenges to our economic, social, political and cultural institutions. Intractable problems are not new, but their interconnection in the context of global systems is presenting a new level of urgency and uncertainty. Building capacity at local, regional, national and international levels for not only new inventions and creativity in the social arena but also for system transformation can build resilience in the face of this uncertainty. In particular, the re-engagement of vulnerable populations can have a positive impact on our capacity for innovation and can add to the resilience of the whole.