



Navigating System Transition in a Volatile Century

By Michael T. Lewis

There is a blessed unrest roiling across the planet; millions of creative, innovative, indignant, dedicated, hopeful individuals are cogitating, communicating, animating, educating, innovating, agitating, and advocating for change. Banding together in diverse groups, organizations and movements, they are trying to figure out how to navigate the unprecedented economic, social, ecological and cultural challenges of the twenty-first century.



Unprecedented is the key word. Never in human history have we been challenged with the conditions we face today.

Key Trends Defining our Time

Four crosscutting and interrelated trends frame and justify the claim that we are living in unprecedented times:

1. Climate Change. The climate crisis is the **preeminent** threat to the survival of all living creatures. On November 23, 2015, the United Nations estimated that weather-related events in the past two decades have killed more than 600,000 people and inflicted economic losses in the trillions of dollars.¹ We either grasp the nettle and get on with the difficult political, economic, and social changes necessary or, further down the line, face exponentially greater consequences. Reality dictates we cannot negotiate with the laws of chemistry and physics.

2. Degraded and Threatened Ecosystems. We currently extract resources 60 percent more rapidly than nature's capacity to replenish them, meaning that we would need 1.6 earths to sustain our current annual consumption rates.² If we don't change we will be gobbling up the equivalent of two earths annually by 2030. Ten years ago, 50 percent of the planet's ecosystems were deemed threatened.³ Once ecosystems are degraded beyond their "tipping points," their resilience is lost—they can no longer maintain their essential structure and functions. Their services in support of life—including the sequestration of carbon—are lost.

3. The Third Industrial Revolution: The Zero Marginal Cost Society. In the eighteenth and nineteenth centuries, coal, steam power, and the telegraph radically shrunk distance and increased connectivity. The discovery of oil, the telephone, and the automobile ushered in a second industrial revolution; time and space shrunk further. The scope, scale, and connectivity of everything exploded. The gargantuan investment in colossal power generation and distribution networks gave rise to large, vertically integrated corporations. Centralized capital and power, combined with the concentrated power within one barrel of oil, created heretofore unimaginable economies of scale. Mass production drove down



the marginal cost of each unit of goods produced. The impacts were enormous. Profits skyrocketed. Costs plummeted. Cheap goods multiplied and consumption exploded, fed by technical innovations and, most important, rising wages won by workers.

The third industrial revolution is radically shrinking space and time once again. The joining up of the internet juggernaut with the accelerating transition to renewable energy is revolutionary indeed. The internet alone has devastated the music and publishing industries, where the marginal cost of production and distribution fell to near zero and left the postal industry reeling as electronic delivery began to outpace traditional delivery. Hundreds of occupations are in the process of being jettisoned. An Oxford University study of over 700 occupations found that 47 percent (over sixty million jobs in the US) are susceptible to automation within twenty years.⁴ The precariousness of workers, already a major problem, will increase.

The peril of this revolution also holds promise. Renewables will fuel the transition to a low-carbon energy. A more balanced relationship among human beings and the biosphere appears possible. Given the distributed nature of wind, sun, and tides, decentralized, distributed, autonomous energy flows could enable diverse, democratic, dematerialized, equitable, and sustainable ways of living together on the planet. Realizing this positive shift, however, is far from certain.

4. Money, Debt, and Finance: Major Obstacles to Navigating the Transition.

Massive investment in renewables and other sectors fueling the transition is central to addressing our climate and ecological crises and the accelerating precariousness of livelihoods. But how to finance those investments is a real conundrum. The communications revolution, coupled with deregulation of the financial sector, has given rise to a worldwide casino of speculative finance ten times the value of global gross domestic product (GDP) and almost completely dissociated from the real economy or the transition challenges we face.

Adding to this conundrum is the fact that **governments have given over their sovereignty to create debt free money.** Private banks issue 95 to 97 percent of



the money supply. Governments issue only coins and notes. Money is digital, created every time a bank issues a loan. And we the borrowers, private and public, pay the bank compound interest for the privilege, at huge cost. German researchers have estimated that 35 percent of the costs of goods and services are the embedded cost of compound interest working its way across the multitude of supply chains in the economy.⁵ Moreover, they estimated \$600 million *per day* in interest payments flows from the bottom 80 percent of the population (wealth-wise) to the top 10 percent.

Put all this together with stagnant wages, cost of living increases, tax revenue decreases, soaring debt, elites hiding out in tax havens, and intensifying austerity measures and the circle becomes vicious. Economic demand declines, business risk increases, and access to credit shrinks. Even so, the systemic, debt-driven compulsion to grow regardless of the limits of natural systems remains, propelling us down a MAD (mutually assured destruction) path.

Navigating our Way to the Next System: The Scope of this Exploration

Can the forces of “blessed unrest” secure fairness on a livable planet? Are the diverse innovations that we see developing and spreading merely tentative steps in the right direction, or are they vital strides towards the next system? What thwarts the scaling of their impact? What system changes could expand their contribution to a just transition to a low carbon future? These are among the questions the story we are just beginning to write must address.

It is a rich and promising story. It is also a sobering one. The contours of the next system are being revealed. But gains are hard fought. They take time, energy, talent, and resources—requirements vividly revealed in the examples shared in the following sections of this paper.

Conceptually and practically, all the examples which follow can be situated under the banner of “cooperative economic democracy.” They cut across all kinds of territories, from the neighborhood to entire regions and even across borders.



Likewise, they apply to diverse sectors of vital importance to human well-being—food, energy, social care, land stewardship, and finance, to name a few. What is revealed is a rich landscape of initiatives that represent both means and ends. Their ultimate influence in ushering in the next system, however, will depend on binding these diverse actors into powerful, federated strategies to effectively press for broader system change. It is to this exploration I now turn. The broader but equally vital political and policy actions needed to accelerate transition are illustrated in the final section of this paper.

Cooperative Economic Democracy and the Solidarity Economy

Cooperative economic democracy (CED)* is a framework of concepts, values, practices, and models that elevates:

- a) resilience over growth;
- b) cooperation over competition;
- c) sufficiency over efficiency;
- d) well-being over the right to possess;
- e) fairness and equity over the freedom of markets, trade, and capital;
- f) decentralized and democratic ownership over concentrated private ownership;
- g) the commons over the inalienable rights of private property; and,
- h) our dependence on nature over our right to dominate it.

These are not theoretical propositions. They are choices about what is most important as we co-construct a collective capacity to address the challenges before us.

It is fascinating to me how many of these features of cooperative economic democracy mirror the ecological principles, processes, and relationships that render healthy ecosystems resilient. The next system must mimic, or, put another way, be guided by the resilience embedded in healthy ecosystems—diversity, modularity, innovation, overlap and redundancy, tight feedback loops,



and accounting for ecosystem services. (See The Seven Principles of Resilience below for a fuller explanation.)

Before illustrating models of cooperative economic democracy at work, and for further conceptual clarification, I want to introduce an emerging movement known as the Solidarity Economy. It encompasses a host of organizations and strategies targeting unmet human needs, and serves to orient our understanding of those with whom we seek to build alliances and federate action.

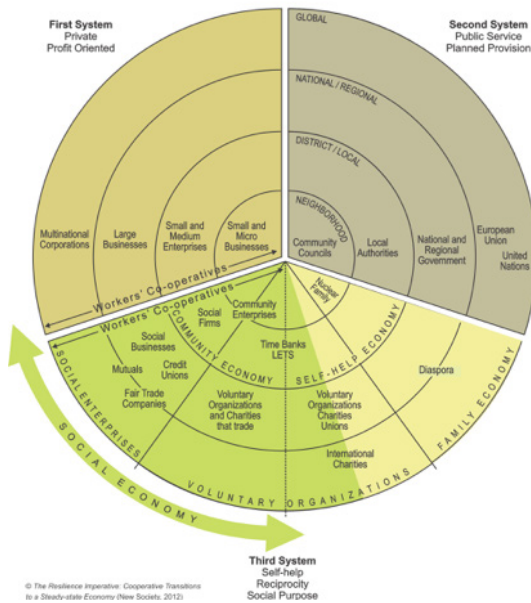
The Solidarity Economy can trace at least part of its evolution from a categorization of human activity into three broad systems: the private, the public, and civil society. (See Figure 1, Three Systems of the Economy.) Each system is distinguished by values, priorities, and by its core animating logic. Distinguishing the First System are private ownership and the profit motive. Its actors range all the way from microbusinesses to multinational corporations. Public service and the planned provision of goods and services, usually through some kind of

The 7 Principles of Resilience

It is conceptually useful to note how CED aligns with the features of healthy, **resilient** ecosystems, unlike those generated by centralized power structures, profit maximization, and debt-fueled growth. The restoring and strengthening of resilience is a central necessity of the next system. Seven features distinguish a resilient world from the one which has emerged over the last 250 years:

- *Diversity: A resilient world would promote and sustain diversity in all forms (biological, landscape, social, and economic).* Diversity is a major source of future options and thus of a system's capacity to respond to change and disturbance in different ways. Resilient systems would celebrate and encourage diversity, instead of homogenization.
- *Modularity: A resilient world would be made up of components that can operate and be modified independently of the rest.* In resilient systems, everything is not necessarily connected to everything else. Overly connected systems are susceptible to shocks that are rapidly transmitted throughout the system: witness the recent global finan-

Figure 1: Three Systems of the Economy



government authority, distinguish the Second System. Self-help, mutual aid, and reciprocity distinguish the Third System. Its actors infuse their economic activities with social purpose.

These hard and fast distinctions are simplistic; in reality the boundaries between the three are blurred and interactive. But it is significant how much creativity within the Third System originates in failures or inaction on the part of the other two. This is particularly the case for what is commonly called the “social

cial crisis. The modularity of a resilient system enables it to mitigate or absorb the repercussions of disaster.

- *Social Capital: A resilient world would promote trust, well-developed social networks, and leadership.* The resilience of social-ecological systems is rooted in the capacity of people to respond effectively to challenges together, not separately. In other words, trust, strong networks, and leadership are critically important.
- *Innovation: A resilient world would place an emphasis on learning, experimentation, locally developed rules, and embracing change.* Resisting change is counterproductive in a resilient system. Instead, by offering help to those who are willing to change, the system fosters innovation. When events begin to erode rigid connections and behaviors, innovation opens up new opportunities and resources for creative adaptation.
- *Overlap: A resilient world would have institutions whose governing structures include “redundancy.” It would also have a mix of overlapping common and private property rights, increasing access to land.* Redundancy in institutions increases the diversity of responses possible in the face of disturbance and crisis. As a result, overall flexibility and the effectiveness of adaptation increase. By contrast, top-down, centralized, “ef-



economy” (see the green arrow on the lower left of Figure 1) which combines social purpose with market-based trading. Cooperatives, credit unions, some forms of community economic development, community land trusts, trade unions, fair-trade certifications, and non-profit associations and charities are all intended in some respect to defend people, communities, and regions that have been marginalized by ideology, market failure, inadequate public policy, or by all three.

In contrast to neoliberal ideologues, social economists argue that reciprocity should be the central principle that shapes the management of markets, trade, and capital; community and social benefit should be a fundamental component of any “value proposition”; the diversity of the commons should outrank the homogeneity hard-wired into mass markets. Indeed, some advocates look upon the social economy as a “construction site” for strategies, tools, and institutions that can challenge the hegemony of the first and second systems. Its historical role is to “socialize” the first and second systems, as remote as this possibility may seem.

efficient” structures with no redundancy tend to fail when faced with change outside the scope of their mandate. Similarly, exclusive private property rights are at the heart of many strategies of resource use. Resilience increases when wider access and a mix of common and private property rights compromise this exclusivity.

• *Tight Feedback Loops: A resilient world would possess tight feedback loops (but not too tight).*

Feedback loops refer to the communication flow within a system. Information about the impact of a particular process or event is returned to the system to enable it to correct itself next time. Resilience is characterized by focused effort to maintain, or tighten, the strength of feedbacks so we can detect thresholds before we cross them.

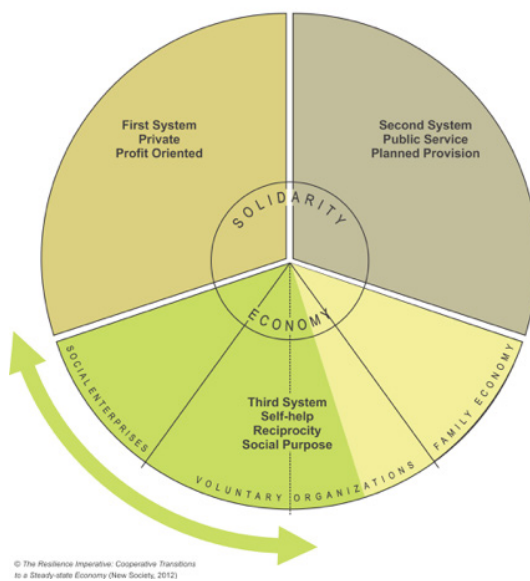
• *Ecosystem Services: A resilient world would consider and assess all the ecosystem services that the market economy currently disregards.*

The market economy does not price services emanating from the earth and its ecosystems (e.g., pollination, water purification, nutrient cycling, etc.), and therefore does not value them. Such pricing is critical in order to estimate cumulative impacts on different scales and time horizons, and to assess the effect that a development will have on the integrity of ecosystem services.

I argue that the solidarity economy has a more strategic role given the urgency of the challenges we face. It presumes in all three systems there are people, organizations, businesses, and governments that are beginning to perceive the world differently. Each system, to one degree or another, has creative actors who share (imperfectly) the values of social justice, inclusiveness, ecological sustainability, and deeper, democratic forms of participation. They are seeking and developing dynamic ways to manifest these values in practical terms.

The Solidarity Economy cuts across all three systems. (See Figure 2.) While the circle of intersection is relatively small at present, its implications are huge.

Figure 2: The Solidarity Economy



Consider for example, the Seikatsu Consumer Co-operative in Japan. Since 1965 it has been reshaping relationships between consumers and private food producers with a shared dedication to ecological farming methods and fair prices. Further, the cooperative has transformed the supply chain in between: processing, packaging, recycling, and distribution are performed by both private firms and 600 worker-owned firms (with 17,000 worker-owners). It can truly be termed a “values-added” supply chain that, as of 2012, produced 1600

products to cutting-edge ecological standards.⁶ Moreover, they are branching out to other sectors such as social care and renewable energy, seeking to imbue solidarity and cooperation among diverse actors in ways that reflect their approach to transforming the food system.

The central tenets of social and ecological economics compel us to seek balance, and to respect and learn to live within the limits of our planetary home. The Solidarity Economy compels us to craft the strategies, alliances, and partnerships that bring



about that transformation. Social purpose, mutual aid, and reciprocity—the hallmarks of the social economy—need to flourish in all three systems. The social economy has an important, though not exclusive, role in making this happen. A shift in paradigm from profit-driven economic growth to a steady-state economy will not be accomplished if we can only identify partners within our own “system silo.”

Viewed this way, “solidarity” is much more than a concept. First, it is a framework for designing and implementing strategies that strengthen the resilience of communities, regions, and societies. Second, it elevates the idea of advancing the common good collaboratively rather than going it alone. Third, solidarity is a vital motivational resource, and a renewable one. It is a resource that we need from each other in order to sustain the efforts that transition will require.

Pathways to the Next System: Action at Multiple Scales

The principles of cooperative economic democracy and the strategic orientation of the solidarity economy are manifest in a range of initiatives worldwide, differing dramatically in scale, sector, and structure. The preeminent examples of these initiatives share three salient features.

First, they take action at both a local or regional (micro) level, and also seek to influence macro-level policies and systems relevant to advancing their priorities. They actively search out the means to diffuse and scale up the impacts they are achieving in a particular neighborhood, sector, or enterprise in order to affect the lives and fortunes of more places and people.

The latter impulse is critically important. More often than not, the rules, norms and policies of various systems thwart diffusing and scaling. This may be deliberate or the result of ignorance. Consider the food sector. Debt-based financing, private property, and export-oriented agribusinesses thwart the expansion of many innovations relevant to transition. The most admirable local alternative may be restrained or even undone by the subsidization of agribusiness conglomerates or the World Trade Organization’s support for the commodification of food. In short, changing the food system is not just a local affair.



The second feature these initiatives share is interweaving the provision of basic human needs with endeavors that are fundamental to transition. The alternatives that they build in terms of food, energy, shelter, and social care are essential to the betterment of people's everyday lives. To expand each initiative's capacity to address these needs, however, requires reclaiming finance, reclaiming the commons, and localizing and democratizing ownership. Using the food sector once again as an example, to expand the capacity of an organic farm might entail gaining access to appropriate financing through the Slow Money movement, securing land affordably through a community land trust, and a change to democratic forms of ownership and governance.

Third, these initiatives build federations of networks, coalitions and movements with a shared agenda and greater capacity. Evolving a new system is certain to meet resistance from interests and power committed to the status quo. Transition will be a long, hard-fought effort that will not be effectively advanced by "lone rangers"; joint action with others is required.

RESO: Transformative Place Shaping

RESO (*Regroupement économique et social du Sud-Ouest*) is a community economic development corporation in Montreal. It started in 1982 with organizing efforts to revitalize Point St. Charles, a depleted neighborhood. By 1984, organizers were able to establish a community economic development organization named PEP (Programme économique of Pointe-Saint-Charles) and secure modest resources to pursue small business development through training and a loan program. New businesses and jobs were created. However, during the same period many more jobs were lost. Beginning in 1986 PEP changed its focus to business retention and the creation of supports to stem the flow of capital, business, and jobs from the community.⁷

It also provided strategic leadership to the building of a broader coalition of community and labor organizations, so as to produce a more comprehensive strategy relevant to poor neighborhoods and, more generally, unemployment. It was a difficult, dynamic and very public process but it succeeded in forging a



Figure 3: To rev up the engine of community revitalization put social & economic development on the same track.

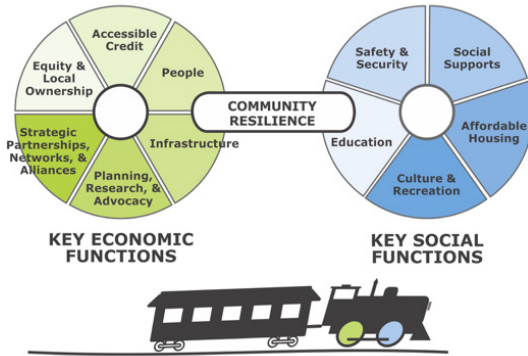
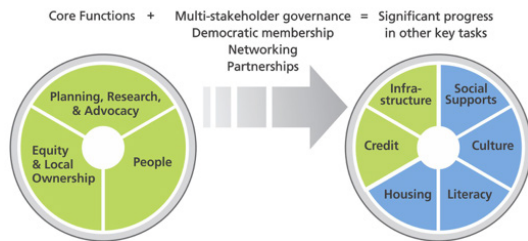


Figure 4: RESO's development system



strategy owned and supported by a broad cross-section of interests in the city. As a result, in 1989 PEP was transformed into a community economic development corporation that encompassed the five poorest neighborhoods in the southwest part of the city. RESO began its journey.

Revitalizing a territory impoverished by the mainstream economy is not a simple task. It requires thinking about the key economic and social functions critical to a healthy community. (See Figure 3.)

RESO gave priority to three economic functions. First, it conducts planning, research, and advocacy related to neighborhood interests. Secondly, it builds local ownership and develops the capacities and skills of people to work in businesses in their territory. (See Figure 4.)

RESO has not stopped there. Thirdly, it also positioned itself to exert significant influence on several other economic and social domains important to the revitalization of their community. At its outset RESO strove to revitalize an impoverished community, inspired in large part by the US experience with community development corporations. Today, RESO's focus has expanded to include shaping rapid economic growth to ensure that it serves the social, economic, and environmental interests of the neighborhoods.

Much of RESO's success is attributable to the structure it devised to enable citizens and sector stakeholders to become full players in their own development process, including representation on the board of governance. RESO's membership elects sector representatives to the board: four from community



organizations, two from labor, two from small business, one from large business, one from finance, and two citizen members at large. In 2012 there were about 1,500 RESO members—a large number considering the total population of the five neighborhoods was only about 80,000.⁸

An additional factor in RESO's success has been the role of provincial, local, and federal governments. RESO won over government and other partners through its capacity to mobilize community resistance when necessary, advocate for the neighborhoods' key priorities, *and* get results on the ground. It was neither a smooth process nor a short one. But, in time, RESO secured a flow of resources to support its staff and to invest in community priorities. RESO was able to further strengthen its strategic networking and partnership development within and outside its territory.

In short, the state became an important partner in the ongoing process of empowering the community to achieve a range of durable results. Credit was increased; infrastructure investment was shaped to generate local benefits; literacy, housing, a range of social supports and cultural enterprises were also started and/or expanded. The leakage of capital and businesses from the community, so characteristic of the period 1960-92, came to end.

RESO is a rich illustration of how cooperative economic democracy can be advanced in a local area through organizing, democratic ownership, and multi-sectoral partnership. Consider the recent (2012) statement of goals for the redevelopment of Griffintown, a sub-zone within one of the five neighborhoods):

Griffintown should be a multifunctional, versatile community with room for employment zones (shops, office space, light industrial activity). But Griffintown should also be a mixed and socially inclusive neighborhood where 15 percent of new housing units are reserved for social and community housing, and 15 percent for affordable private housing. Griffintown should also be a green district, endowed with parks and high-quality public spaces accessible to the population. . . .⁹



RESO will no doubt have significant impact in advancing these outcomes. They will shape the way in which investment is deployed, expand the urban commons, and increase opportunities for community and collective ownership.

Still, notwithstanding the “green” references in RESO’s advocacy of Griffintown’s redevelopment, one might wonder, where are the goals concerned with the creation of a low-carbon economy, energy efficiency of new construction, district heating, and the use of land trusts to ensure long-term housing affordability and workspace?

The absence of advocacy around these key areas is a problem. If our collective efforts, at whatever level, fail to give attention to how we integrate renewable energy, energy efficiency, urban food space, and land tenure forms that ensure affordability over time, we miss opportunities to expand our contribution to transition to a more sustainable future. That being said, the mechanisms RESO has crafted to transform its territory in social and economic terms exhibit *some* of the factors that transition to the next system involves:

- Citizens and stakeholders are democratically engaged in shaping the places in which they are rooted.
- Ongoing strategic networking and partnership development, within and beyond their territory, is a priority, with the knowledge that no one organization can do it all.
- Efforts exist to mobilize and federate efforts to expand collective capacity to extend the range of impacts.

*Social Solidarity Cooperatives in Italy: Transforming the Social Care Sector*¹⁰

In Emilia-Romagna, a province in northern Italy, the cooperative movement has extended a multistakeholder model of service provision across the social care sector.

The population of Emilia-Romagna is four million, and it has a long history of cooperative activity. In Bologna, its largest city (population 376,000), six in ten residents are members of one or more cooperatives; 10 percent work in one



cooperative alone. In Imola (population 100,000), 115 local cooperatives account for 60 percent of local economic output. Democratically owned enterprises are present in virtually every economic sector.

Beginning in the 1970s, unemployment rose in Italy; public services, including social care, were slashed. The crisis stimulated families and care workers to consider steps they might take to stem the tide. What emerged was a vision of social care organizations actively supported and governed by their stakeholders—that is, the service recipients, their families, the paid staff, and the volunteers. Out of this crucible of need “social solidarity cooperatives” were born.

There were a handful of pilots in the 1970s and more in the early 1980s, whereupon the broader cooperative movement helped accelerate growth. By 1990 there were 1,800. A three-year campaign to change cooperative law and enable broader and more rapid diffusion of the model bore fruit in 1991. New legislation defined “social cooperatives”: they pursue the general interest of the community and achieve the social integration of citizens by managing social, health, and educational services. Two types were recognized:

- **Type A** deliver social, health, and educational services, mainly for local authorities. Workers and volunteers make up to 50 percent of the primary members. Public sector bodies are enabled to preferentially contract for Type A services.
- **Type B** focus on integrating disadvantaged people into the labor market. At least 30 percent of the cooperative’s workforce must be disadvantaged. Members include workers, volunteers (up to 50 percent), and family members.

Four guiding principles reflect the core of the social cooperative approach: 1) clients and family members participate in the design, content, and delivery of services; 2) each organization may not have more than 100 members, so as to facilitate the building and maintaining of strong social ties; 3) managers are accountable to members; and, 4) services are delivered within a defined geographical area.



Dramatic increases in the quality and cost-effectiveness of care delivery led to the insertion of a series of tax measures in the legislation. Each has contributed to scaling the impacts of the model. It is estimated there are now 15,000 social cooperatives in Italy employing hundreds of thousands of people and annually generating hundreds of millions of Euros.¹¹

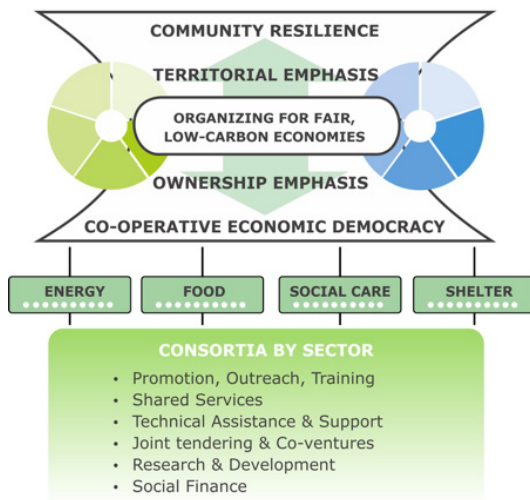
Aiding and abetting this growth is a social care consortium. As in other sectors, like manufacturing, construction, and agriculture, the consortium makes varied support services available to cooperative members. These include: market and back-office services, technical assistance and training, and a pooling of resources that boosts contracting capacity. In addition, the consortium has helped to develop a range of financing tools that link cooperative and ethical banks with local authorities. This shared infrastructure has accelerated the expansion of the model in a cost-efficient manner.

What does Emilia-Romagna tell us about system change dynamics?

- Crises breed innovation. In Emilia-Romagna's case, rising unemployment and state cuts to public services compelled people to build alternatives.
- Sector consortia can create a shared infrastructure of administrative, training, and technical services to reduce risk and costs. In addition, consortia can help build the ecosystem of tailored financial supports so critical to accelerating the diffusion of innovation.
- The rapid diffusion and scaling of a proven model requires the mobilization of citizens, stakeholders, and networks to demand more effective policy and legislation.

Together, these factors can drive system change. In Emilia-Romagna's case, they transformed a system of failing public services and inadequate private care into one of cooperative economic democracy, where efficiency and quality are rooted in solidarity.

Figure 5: Emilia-Romagna's Consortia by Sector



Both Emilia-Romagna and RESO demonstrate the importance of organizing multiple actors at different levels. In RESO the emphasis was on broadly mobilizing resources to strengthen community resilience within a specific territory. In the social care sector the emphasis is on mobilizing stakeholders into an ownership structure capable of transforming the quality of care across communities. Organized around a common sector and model, the creation of consortia

is just common sense: it reduces operational costs through shared services and it provides for a range of functions critical to the diffusion and scaling of the model's impact across the country. (See Figure 5.)

Weaving Cooperative Economic Democracy into Energy Transition

The importance of rapidly expanding renewable energy is self-evident. And it is happening, year after year, picking up speed and attracting investment from households to well-heeled financiers, including some fossil fuel companies. All in all, this is good news, but there is a real danger looming should the transition become dominated by capital that seeks to centralize and control its provision. Arguably, this was necessary in the fossil fuel era. It is not so for renewables, as has already been demonstrated in countries like Denmark and Germany, where policies were designed to foster diverse, distributed ownership models.¹²

Decentralized, democratic forms of ownership at the local and regional levels are a strategic choice. The importance of this choice cannot be overstated. First, transition is a long-term process of increasing local and regional self-reliance and resilience. Ownership means capturing cash flow and surplus that can be reinvested, not only in energy transition but also in a range of other challenges, including adaptation to climate change impacts. Second, democratic ownership

shifts the distribution of economic benefits to a broader population—a contribution to reducing inequality. Third, distributed ownership opportunities broaden the base for mobilizing human talent, energy, and capital in ways that can accelerate the transition by empowering citizens to act. Fourth, energy conservation efforts capable of penetrating to the household and business levels cannot be effective unless citizens are systematically engaged where they live and work.

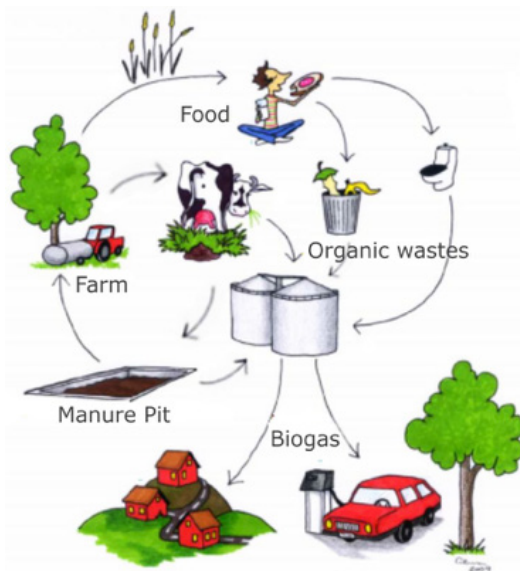
The four examples that follow are strong illustrations of the importance of these assertions.

Going Fossil-Fuel-Free in Sweden: The Efficacy of Democratic Ownership by a District Municipality¹³

Kristianstad is a district municipality that covers 1,300 square kilometers of prime agricultural land in southeast Sweden. Of its twenty-five communities, the largest has 33,000 residents and the smallest is home to 150.

In 1999, its elected representatives made the decision to become the first fossil-fuel-free municipality in the western world. Within nine years, Kristianstad cut its use of fossil fuels in half. Not only that, it was producing renewable energy for export well beyond municipal borders.

Figure 6: Waste streams for Biogas



How? First, the political leadership articulated and held on to the vision. Second, staff planning and coordination, engagement of citizens, and partnership development gave the vision backbone. Third, municipally owned energy and waste management companies put all the pieces together. Smart and profitable, they designed and executed projects to realize the vision in partnership with the private and public sectors.



Crucial to Kristianstad's strategy has been the capture of diverse waste streams to produce biogas. (See Figure 6.) By 2008, 4,000,000 liters of vehicle fuel were being produced, enough to fuel the entire municipal transportation fleet. By 2018, 800 buses in southeast Sweden will be fueled by biogas alone. Biogas is also used to generate enough electricity annually for 4,000 average American homes.

Another means of transforming waste into energy has been the use of wood chips to feed combined heat and power systems for district heating in two of Kristianstad's larger towns (together totaling 41,000 residents). Where the population is less dense, wood- and straw-based fuels feed mini-district heating systems and/or individual buildings.

The combination of district heating, small-scale heating, and biogas yielded an annual direct carbon reduction of about 140,000 tons by 2009.

Add to that the initiative Kristianstad is taking in wind power: by 2008, this source was generating electricity sufficient for 6,500 average American homes. Output sufficient for 50,000 homes is targeted for on-shore wind, and is already on its way to being achieved. The same target has been set for future off-shore wind farms.

Lennart Erfors, Kristianstad's climate strategist, notes many benefits of fossil-fuel-freedom. A big one is the money that householders and the municipal government are saving and the quick paybacks gained from shutting off the oil tap. Municipally owned businesses are making money, reducing carbon, and delivering public benefits while systematically reinvesting in transition.

Retrofitting Germany's Built Environment: National Framework linked to Tailored Public Bank Financing.¹⁴

In 2009, in the run-up to the Copenhagen meeting on climate change, the United Nations Environment Programme released a report on the contribution of buildings to greenhouse gas (GHG) emissions. The report claimed that 30 percent of global annual carbon and 40 percent of all energy use can be traced to this source.¹⁵ While not all of these emissions can be addressed by measures targeting



residential and commercial buildings, there is no question that such measures can make a substantial contribution to carbon reduction. Moreover, they represent an option to act at the national, state, community, and householder levels. Last but not least, investment in energy conservation in the built environment is an important job generator.

Germany is a leading example of national-level policy and incentives with regard to energy conservation—a key component of that country’s commitment to reduce GHG emissions by 80-95 percent (relative to 1990 levels) by 2050. As part of this effort the federal government has established energy efficiency standards, incentives for retrofitting existing buildings, and regulations over new building construction.

The German state development bank Kreditanstalt für Wiederaufbau (KfW) enables the energy transition through innovations that tie financial goals to energy metrics. Homes that meet stringent energy consumption reduction standards qualify for partial mortgage financing at rates around 1 percent. In addition, repayment bonuses on the completion of work go as high as 17.5 percent of the total cost, depending on the energy conservation standard met.

KfW is a public bank. Created at the end of World War II to reduce the power of the big banks, it was designed to deliver financing for post-war reconstruction across Germany under the Marshall Plan. To date, the combination of government policy and financing incentives with KfW’s decentralized delivery has achieved amazing results.

Between 2001 and 2012, 2.1 million energy-efficiency home loans totaling €45 billion were issued and a reduction in CO₂ emissions of 156 billion tons achieved. From 2009 to 2012, between 280,000 and 960,000 housing units were retrofitted annually under this program, creating several hundred thousand jobs each year. The maximum loans per new home were €50,000 and €75,000 in retrofit projects. Subsidized interest rates are available for a maximum of ten years and loan terms are capped at twenty years.



Compare those outcomes with Canada’s paltry effort in the same regard. Between 2004 and 2009 the federal government provided a web-based application procedure to award rebates for residential energy retrofits. It was accessed by 172,000 householders—only 1.3 percent of the households in Canada. The government of the time then cut the program. There are a few provincial programs. They, like the federal program, provide a menu of possible subsidies for changes such as cavity insulation, appliance upgrades, and window replacements, for which householders pay up front, and then, once all is complete, get audited prior to receiving any rebate.

This is an approach that pales in comparison with that of Germany, and also with that of Kirklees in the United Kingdom.

Kirklees, UK: Penetrating Energy Conservation to the Local Householder ¹⁶

Frustrated with the British government’s piecemeal programs in energy efficiency, the government of Kirklees (a metropolitan borough in West Yorkshire) jumped at the chance to join a European pilot program in 2000. SAVE (Specific Actions for Vigorous Energy Efficiency) sought to build local capacity to reduce carbon emissions across the European Union. The local government’s obligation was to establish an arms-length social enterprise to develop and carry out an integrated, community-based energy conservation strategy. In return, SAVE would pay 50 percent of the costs.

Kirklees Energy Services (KES) swiftly developed into a one-stop-shop, providing a range of energy conservation services promoted through an ambitious door-to-door campaign. Credit unions offered preferential loans to householders who participated, and local authorities and power utilities funded generous rebate programs, making the uptake by householders nearly painless. Contractors were vetted and prequalified to carry out the installations and paid referral fees to KES.

In 2008, KES was able to put everything it had learned into a package it could extend to low-income areas. In 2009, additional investment came from the Warm Zones Program, a national strategy to reduce fuel poverty and carbon emissions.



By July 2010 71,000 homes across the borough received an energy audit, and by 2012 132,000 undertook retrofits. Over 160 jobs were created. Households saved in total £9-10 million per year in energy costs. Annual carbon emissions fell by 55,000 tons. Every pound that local authorities and the Warm Zones Program invested in KES's work leveraged another five pounds in energy efficiency investments.

Kirklees demonstrates how much can be achieved when financing is tailored to householders' pocketbooks and when implementation can be left in local and regional hands. It also indicates how important SAVE was to program design. Research showed that 50 percent of decisions regarding energy use occur at the household level.¹⁷ Accordingly, SAVE made sure that funding was conditional on program penetration right at the household level, an objective that presumably could be realized only through community-led action.

British Columbia: GHG Reductions by SMEs¹⁸

Climate Smart, a social enterprise based in Vancouver, British Columbia, helps small and medium-sized businesses (SMEs) reduce their carbon emissions. At the core of its approach is a well-designed training, software, support, and coaching program.

Since its modest beginning as a pilot project of Eco-Trust Canada in 2007, Climate Smart has trained over 800 firms in every sector of the economy. Its programming has permanently averted the release of over 97,000 tons of GHG emissions annually (equivalent to removing over 22,000 passenger vehicles from the road). Each ton eliminated generates on average \$397 in savings to participating firms, a collective savings of \$38.5 million.

Though impressive, this hardly scratches the surface. SMEs are responsible for 27 percent of metro Vancouver's GHG emissions. Climate Smart is now concentrating on three approaches to accelerate innovation among these enterprises:

- Strategic collaborations with partners that serve or sell to large groups of SMEs—local governments, credit unions, ports, and



airports. Climate Smart tailors its turnkey program to act as a value-added service to the business community their partners serve.

- Mining its performance data sets to enable more businesses to grasp the costs savings that their competitors achieve through reductions in GHG emissions.
- Working with the provincial government to explore fiscal tools that will complement the provincial carbon tax and incentivize SME investments in training, technology, retrofitting, and improved processes.

The municipality of Kristianstad, Germany's public bank KfW, Kirklees Energy Services in the UK, and Climate Smart in Canada all speak to the strategic importance of a decentralized capacity to plug the manifold nooks and crannies through which GHGs escape into our atmosphere. Kristianstad illustrates one form of democratic ownership travelling rapidly down the path towards fossil-fuel-freedom and increased resilience. All four illustrate the importance of working across the three systems (public, private, and civil society). The diverse forms and strategies embedded in these examples also indicate the efficacy of cooperative economic democracy—its capacity to engage people and sectors in a common effort aimed at achieving a common good.

*A Values-added Approach to Transforming the Food System*¹⁹

The year was 1965, in Japan: a small group of women in Tokyo undertook discussions about the security and quality of their food supply. They were worried about farmland being lost, farmers struggling to earn a living, the use of more and more pesticides, and the trend towards more and more imports. In short, they were worried about quality, safety, and security of their food supply. Only twenty years had passed since the end of a war and they knew hunger.

They decided to approach a local farmer with a simple question. *Would you provide us with fresh food that is chemical-free in return for a fair and just price?* His response was a simple one—yes, but on one condition. You must agree to buy all my product and take care of the distribution.



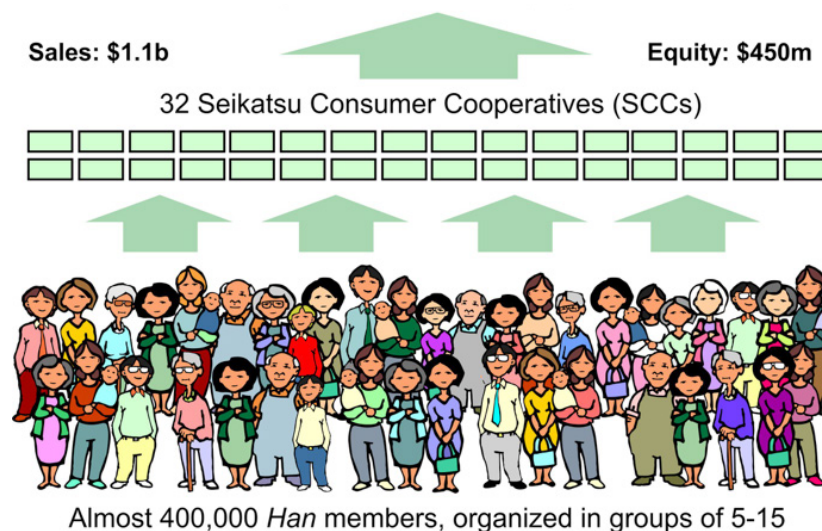
Thus was born a partnership or in Japanese, “teikei” which, according to leaders at Seikatsu, carries with it a profound colloquial meaning: “Food with a farmer’s face on it.”

The new project sought to collectively purchase food as a means to achieve social, economic, and ecological values. Today there are thousands of these groups made up of around five to fifteen people. They are called *Hans*. From the beginning they defined their vocation as being “living instruments” for social and ecological well-being.

The Hans met regularly to plan their purchases and work out their distribution. As their numbers grew, representatives of each Han started to have meetings to plan and aggregate their purchasing and to better coordinate with the growing numbers of farmers involved.

Eventually the work grew to a point where a legal structure was needed to better coordinate and extend the model. The first Seikatsu Consumer Cooperative was formed. There are now thirty-two consumer cooperatives with a total of 350,000 members. These, in turn, have federated nationally into the Seikatsu Union Club (SUC). (See Figure 7.)

Figure 7: Seikatsu Union Club (SUC)





The food sector within the SUC generates over \$1 billion in sales. Even more impressive is the fact there is over \$450 million in equity in the Club, much of it derived from individual members, who pay \$11 a month into their equity account until they have contributed \$3,500—a rather powerful example of solidarity based finance.

Their rationale for the equity accounts is threefold. First, they assure financial stability. Second, cooperative members view their participation in them as co-producers and co-investors in a fair and sustainable food system. Third, as **citizens** they want to preserve and defend their democratic rights and autonomy.

The orientation to transforming the food system through economic democracy and autonomy shows up in other ways as well. One good example is how they think about the relationship between distribution, processing, sustaining a fair price to farmers, and reducing carbon in the food system. Another is the 600 collective enterprises involving 17,000 worker owners involved in processing and distribution.

In a Japanese super-box store there can be as many 300,000 products to select from. In the average Japanese food cooperative, the average is 9,000. In Seikatsu, 1,600 items can be purchased, mainly staples families need to sustain their basic need for nutritious food. Why do they do this?

Securing and maintaining a large inventory is expensive. The reduction in waste food, waste plastic, and wasted energy shipping products is significant. For instance, the processors Seikatsu works with must use one of eight specified types of returnable bottles, reducing recycling costs and carbon by 2,000 tons annually. If such a rule were applied across Japan, the carbon reduction would be 600,000 tons.

As co-investors and co-producers in the transformation of the food system, the Seikatsu cooperative demonstrates a “values added” strategy to this end. Moreover, it is being extended into many other sectors: elder care, green energy, and now childcare.



It is little wonder Seikatsu was awarded the Right Livelihood Award in 1989, what some call the “alternative Nobel Prize.” As stated in their website, the award was given to Seikatsu Club Consumers’ Cooperative “for creating the most successful, sustainable model of production and consumption in the industrialised world.”²⁰

According to Seikatsu leaders, seikatsu means “Living People.” It is an apt name for those who persist in the hard work of building a resilient food system: a system that is decentralized yet connected and federated; a system that sets ecological standards that consumers and producers together ensure are respected; a system that is founded on the fundamental value of fair price and fair trade; a system that creates and reinforces our interconnectedness as human beings and our ultimate dependence on the ecological services nature provides.

Seikatsu—“Living People”—is the solidarity economy and cooperative economic democracy at work.

The Politics of System Change: Federating to Construct the Next System

Building the kinds of alternatives illustrated thus far is essential to ushering in the next system. It is far from easy. Indeed, it is contentious: opposition to systems change can be counted on. In the course of extending its reach and scope, cooperative economic democracy has encountered many points of resistance. In fact, its progress has been undermined by interests committed to defending an unfair and unsustainable status quo.

It is thus of vital importance that time be spent exploring the politics of getting from where we are now to where we need to be. To this end I now turn to two inspiring examples that help us understand just what it takes to organize our forces into politically effective federations determined to engage in the rough and tumble politics of bringing about systems change.



The Chantier: Quebec's Federated Construction Site for the Social Solidarity Economy

What kinds of organization might individuals seek to join if their ultimate goal is to transition to an economy based on the core values of care, sustainability, democracy, and inclusiveness?

- **Consider the kinds of businesses that might be included at the table.** Think of a community-owned radio station, or a nonprofit business that is recycling waste and employing a workforce that is 80 percent people with disabilities. Think about cooperative and nonprofit childcare centers that look after thousands of children while parents work. Think of a group of artisans operating a social enterprise to advance their art. Think of a cooperative that is organized to provide reasonably priced, high-quality home care to ailing elders. Think of a federation of cooperatives from across many sectors of the economy.
- **Consider the type of community-based infrastructure that could help build more of these kinds of businesses.** Think about community development corporations committed to revitalize neighborhoods and rural areas marginalized from the mainstream economy. Consider the idea of a network of community-controlled organizations providing loans and technical assistance to small businesses and social enterprises that otherwise would not likely gain access to credit.
- **Consider the kinds of organizations that could add the clout and resources that might help convince governments that business as usual has to change—that a fairer, more democratic economy is both necessary and possible.** Think of a federation of labor unions with a deep history of defending the rights of workers. Think of social movements—women's, anti-poverty, aboriginal, environmental, and others—joining together to press for change. Think of a federation of housing cooperatives from



across an entire province that aim to continue their efforts to expand affordable housing. Think about the key networks evolving around local food, sustainable production, and low-carbon consumption of energy.

- **Consider what financing institutions and mechanisms would be important to the social entrepreneurial energy and innovative products/services in order to expand the number of people producing, consuming, and acting within a framework of solidarity and transition.** Think of a federation of credit unions owned by a membership that includes 80 percent of the citizens in an entire province. Think of labor-sponsored investment funds with a mandate to invest in small- and medium-sized businesses. Think of community and social enterprise loan funds operating in a range of local communities.
- **Finally, consider what role academics and university researchers might play in a movement for significant change in the economy.** Think of a diverse array of researchers and experts who inhabit the academy. What might they contribute if they focused their research on questions which leaders and practitioners from all these other groups considered important?

Just imagine what all of these groups sitting at a common table with a common purpose might accomplish. If you do, you have begun to envision what the Chantier de l'économie sociale has become. A network of networks, the Chantier (or “construction site of the social economy”) emerged out of a crisis in Quebec in the mid-1990s.

Facing major budget deficits, the provincial premier at the time announced plans to convene an economic summit of government and business leaders, a well-established tradition in Quebec. However, this time civil society demanded to be at the table. In 1996, the women's movement and its allies flooded the streets to express their opposition to policies that deepen poverty and exclusion. Among their numbers were dynamic organizations that had emerged in Quebec over the previous ten to fifteen years. Community development corporations (CDCs)

had been making a significant impact, revitalizing some of the poorest urban neighborhoods. Rural CDCs had taken shape in many parts of the province. A new generation of cooperatives and social enterprises was beginning to blossom.

These latter groups contended that opposition, while necessary, was not enough. Propositions to advance democratic, decentralized, proactive approaches to economic and social development had to be part of the mix. And that included new kinds of coalitions. CDCs like RESO had brought together business, trade unions, and the community movement and forged neighborhood economic and social action. And they were achieving concrete results.

In response to the growing pressure, they won a seat at the 1996 summit table. It was the first time these movements had taken part in such an event, and they took full advantage of it. By the end of the summit they had forged agreements with government, the private sector, and the labor movement that recognized their contribution and their legitimacy as actors in the economy. Following this political recognition, a task group was created to put the Chantier in place.

Figure 8: Quebec's Chantier de l'économie sociale

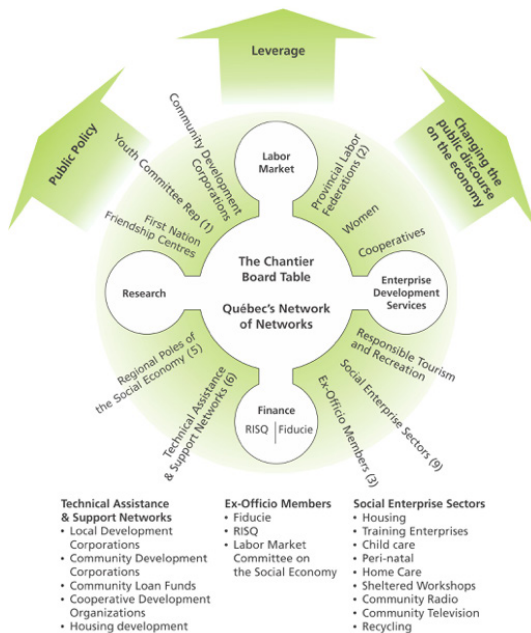


Figure 8 depicts the first ten years of its evolution: the scope of its vision, its major functions, and the diversity of the networks that governed its work. The Chantier member networks represent hundreds of organizations, which in turn represent hundreds of thousands of members committed to promoting the Solidarity Economy.

The Chantier umbrella includes partnerships with local development organizations in urban and rural areas, the province's major cooperative technical assistance organizations, and networks of social enterprises within



particular sectors. This density of community-based actors across the entire province plays an important role in supporting the planning, development, and coaching of new social enterprises and cooperatives

Its formal partnerships with university researchers is strategic: documenting what is working and what is not, codifying best practices, building the rationale for and details of innovative financing tools, mapping the field and the results being achieved, and undertaking policy research and development. This work has been part of establishing the credibility of the social solidarity economy.

The Chantier has formed two important financing vehicles. Réseau d'investissement social du Québec (RISQ) is a \$10 million investment fund that flowed directly from the 1996 summit commitments made by the private sector, labor-sponsored investment funds, and the Quebec government. Exclusively focused on financing collective enterprises, RISQ has consistently leveraged other sources of financing, including loan funds held by local development organizations and credit unions.

Ten years on, the Chantier created a second financial instrument, the FIDUCIE (*fiducie* means “trust” in English). Capitalized to the tune of \$48.8 million, a combined investment of the federal government, two trade union-owned investment groups and the Quebec Government.²¹ This social venture fund is a big step forward. Bridging the gap between financial markets and social economy enterprises, it pools the risk and reduces the costs of financing for both investors and enterprises. Those social enterprises that qualify are offered a “patient capital product”—loans with a fifteen-year capital repayment moratorium that can be used for two things: working capital (always a scarce type of finance), and loans to finance the acquisition, construction, or renovation of real estate assets.

RISQ and the other technical assistance organizations are dedicated to improve management capacity and worker skills. These organizations, along with stakeholders associated with the FIDUCIE, are important resources for developing a cadre of competent social entrepreneurs who can develop new enterprises and put the financial packages to good use. There are also several university-based



diploma and degree programs in Quebec that offer training for the leadership that will expand the social solidarity economy well into the future.

In less than two decades the Chantier has woven together a dynamic, federated development system. It aligns and coordinates action around key economic functions and imbues them with social purpose. Born of a virtuous circle of opposition and proposition, the Chantier has been adept at constantly leveraging resources, and coherently advancing a concrete agenda that yields concrete results. Importantly, it also has demonstrated it has an ongoing capacity for opposition when necessary. When a new government tried to increase the cost to parents of Quebec's high-quality, nonprofit, cooperatively run childcare system, the Chantier played a major role in mobilizing protests that within one week saw 25,000 people hit the streets. The government backed down. This ability to propose first and oppose when necessary has allowed the organization to protect its gains while continuing to enlarge the economic and political space occupied by the social economy in Quebec.

*La Via Campesina: Building a Global Movement for Food Sovereignty*²²

La Via Campesina (LVC) grew out of the radical erosion of rural life experienced by the Latin American peasantry in the second half of the twentieth century. Policies of the World Bank and the International Monetary Fund (IMF), as well as the fossil-fuel-intensive "green revolution" represented an assault on small farmer agriculture across Latin America. Governments moved to transform food into an export commodity to earn foreign currency. As a consequence, social and economic relations between rural people and the State deteriorated. At the same time, the IMF forced heavily indebted governments to cut services in order to borrow from northern capital markets. Markets opened up, commodity-based agriculture spread, and cheap, subsidized food from the North was dumped in the South. All the while, prices paid to farmers serving local and regional markets declined.

Local and regional organizing coalesced in 1992 with the formation of a Latin America-wide network of peasants and farmers to resist destruction and build a



new model. In Europe, India, and even North America, more and more farmers were coming to the same conclusion. As peasants and farmers operating small- to medium-sized farms began to understand the forces at work, the organizing across borders accelerated. In 1993, seventy leaders of peasant and farmer organizations met in Belgium and formally committed to work together to defend their rights and resist neoliberal assaults on local food producers.

From the outset, LVC acted strategically. Its ground rules ensure that the voices of grassroots peasant and small-farmer organizations are not compromised or muted:

- NGOs, foundations, and aid agencies cannot be members.
- No financial support will be accepted that is conditional on the donor's participation in the members' decision making. LVC maintains a deep suspicion of international agencies that seek constantly to involve themselves in consultations, multistakeholder dialogues, and conflict resolution.
- Only the LVC can represent member interests in any forum.
- LVC is militant and makes clear demands. Conflict—aggressive debate and protest—is understood as an important tool for building a critical mass for positive change.

LVC's adversarial strategy is balanced by a wide range of positive propositions hammered out through extensive discussion and debate. This can take a lot of time. Still, the LVC has shaped and organized the largest global social movement in human history, involving some 500 million families who are members of one of 148 organizations in 69 countries.²³

Food sovereignty is the central proposition of the LVC. It sees local and national markets as the priority and asserts that countries have the right to define their own food, farming and agricultural policies, regardless of World Trade Organization (WTO) rules. It argues that food has a central role to play in addressing goals related to poverty reduction; to the preservation of rural life, economies and environments; and to sustainable management of natural resources. Prices must



be fair to both producers and consumers. It proposes maximum limits on farm size; equitable local control over seeds, land, water, and forests; and the abolition of seed patenting.

LVC's building phase was characterized by a militant assertion of its point of view through diverse forms of protest in many settings, most notable being international meetings of the WTO, the IMF and the World Bank. Where LVC members asserted the moral supremacy of human rights over free-market ideology that reduced food to a profit-generating commodity. In the process, LVC catapulted food sovereignty into the public discourse.

Attempts by the World Bank and WTO to co-opt the movement through jet-setting dialogues were rejected. LVC defines these agencies as "clear enemies." In contrast, it considers the Food and Agriculture Organization (FAO) of the United Nations as a space in which agricultural policies counter to those of the World Bank and WTO could be developed.

In 2002, the United States and Europe began dumping food into Latin America at prices lower than the cost of production. As Peter M. Rosset pointed out,

This hurt farmers worldwide. Nor do US or European family farmers benefit from their nation's low price export practices. Chronically low crop and livestock prices, coupled with subsidies that go to larger, corporate farms, leave family farmers in the North without either a price or a subsidy that can cover their living expenses and farm loans, leading to massive farmer bankruptcies.²⁴

LVC's current internal priorities are to strengthen leadership at local and regional levels in order to increase their members' own capacity to mobilize. One initiative is to extend the reach of LVC training schools, women's training centers and political education. A second is to establish regional secretariats in order to strengthen the organizations of weaker members.

LVC has also established a university to increase the capacity of the sons and daughters of peasant farmers to accelerate and sustain the transition away from



fossil-fuel-intensive forms of agriculture. While practical in its orientation, the university is critical to advancing the political differentiation of food sovereignty from the dominant agricultural model.

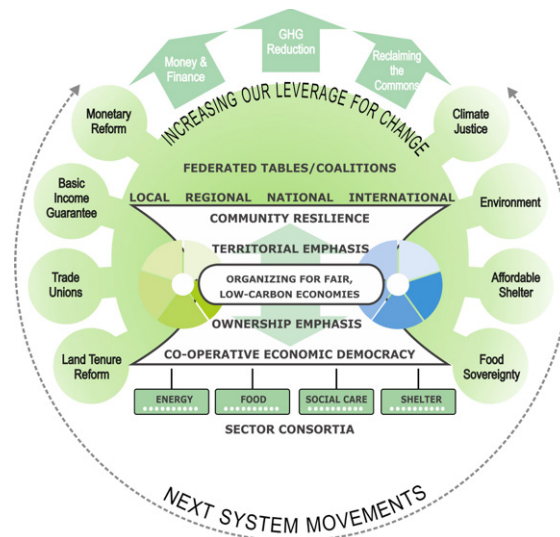
In summary, LVC has employed a three-pronged approach. It **resists** a globalized food system in which food is merely another commodity. It **builds** decentralized and democratic food systems based on the principles of fair price, fair trade, and sustainability. It **advocates** from the local to the global. It is a dramatic example of what it takes to build a sophisticated new politics that has system change as a core priority.

Federating to Expand our Leverage

The diverse cases explored thus far largely confirm the LVC approach: advancing cooperative economic democracy effectively requires us to **resist** what thwarts transition, **build** out the alternatives and, whether in opposing or proposing, vigorously **advocate**.

Figure 9 depicts the central importance of consciously federating our organizations so as to more powerfully advance cooperative economic democracy and, importantly, to advance the broader, macro system changes vital to transition, the subject of the last section of this paper.

Figure 9: Co-Operative Economic Democracy - Organizing for Transition





Globalization, the neoliberal mantra of the last forty years, must be transformed into a federating strategy grounded in **glocalization**. Via Campensina illustrates a way of thinking about the challenge of connecting the dots: we must organize coalitions that federate across scales, sectors, and movements into a multi-nodal but unifying political force that can press for the system changes we need at different levels. In short, we need a vision of organizing and federating our efforts. As the twentieth century's most famous community organizer, Saul Alinsky, often emphasized: if you're not organized you won't contend.

Goals and Strategies Aimed at Macro Level Change

At the outset I introduced four crosscutting trends: (1) climate change, (2) the ecological crises, (3) the peril and promise of the third industrial revolution, and (4) the major obstacles to transition embedded within the interlocking systems of money and finance based wholly on debt. Exploring strategic options for addressing these crises is the focus of this section and is based on four propositions that reflect my assumptions.

My first proposition is that the consequences of these trends, if not altered, will severely disrupt human life, at every level, distorting and displacing our capacity to advance a positive and transformative agenda. Instead, we will be diverted into coping with a tapestry of triage.

My second proposition flows from the first, to wit, that at every level our efforts to broaden and deepen cooperative economic democracy must be designed to a) reduce GHG emissions; b) increase ecological restoration; c) secure basic minimum incomes; and d) transform our relationship with money, finance, and debt.

My third proposition is that we must find ways to federate our resistance, building, and advocacy actions to advance macro level system change relevant to each of these four domains.

My fourth proposition is that the members of diverse networks and alliances reflect on these propositions and develop a common agenda for acting on them.



Climate Change

Kevin Anderson, a top climate scientist, sets out our choices starkly:

The future will be radically different from the present. It will either be radically different because . . . we've grasped the nettle and we'd be prepared to make the sorts of changes that would initially be quite challenging socially and politically, to reduce our carbon dioxide emissions OR a little bit further down the line, we will be faced with huge social and political repercussions because of a very significantly changing climate.²⁵

In short, unless we act with sufficient wisdom, alacrity, and effectiveness, human suffering will rapidly and inexorably spread and deepen across the planet. We cannot wholly rely on the “logic of the market” to mediate the most important choices to be made.

For example, we cannot “unhook” from fossil fuels overnight. Simply to terminate the use of fossil fuels would seriously impede transition. We need a planned and controlled implosion of their use, calibrated to an ambitious ramp-up in renewable energy production, energy conservation, smart grids, and energy storage capacity. The transition to renewable energy requires significant fossil fuel energy to create the infrastructure such a radical shift entails. Ironic as it might seem, we need fossil fuels to power the transition quickly enough to meet the urgent need to radically reduce GHG emissions. Planning and strong regulation are required at multiple levels.²⁶ Non-intervention is not an option.

Meta-Goal 1: To minimize investments that contribute to GHGs and maximize investments that reduce them, in order to limit global warming to 1.5-2 degrees Celsius.

Goal 1.1 Price Carbon to Accelerate Systematic Transition

Implement an ambitious annual increase in the price of carbon in order to systematically reduce fossil fuel dependence.



- Tax carbon emissions from all fossil fuels in proportion to carbon content.
- Start carbon taxes low, so individuals and institutions have time to adjust. Then raise taxes substantially and briskly on a pre-set trajectory that imparts stable expectations to investors, consumers, and governments.
- Use some carbon tax revenue to offset unfair burdens to lower-income households.²⁷

Goal 1.2 Termination of fossil fuel subsidies worldwide

Working country by country, take steps to end all fossil fuel subsidies.

Actions pressing for the elimination of *direct* subsidies (averaging \$110 per ton) are having an effect. Pre-tax global subsidies have declined from 0.7 percent of global GDP or US\$523 billion in 2011 to an estimated 0.4 percent in 2015 (US\$333 billion).²⁸ The current cash subsidy is about six times greater than the support provided for renewable energy. According to the International Energy Agency, even a partial phase-out of fossil fuel cash subsidies would generate 12 percent of the total emissions reduction needed by 2020 to stay below the 2°C target.²⁹

Governments could deploy recaptured subsidies to important investments in climate change. The first of these are measures to accelerate the phase-out of coal, the largest source of GHG emissions. A second investment is the \$100 billion per year necessary for energy transition and climate adaptation in economically disadvantaged countries. A third is the development of low-cost financing to facilitate decentralized and democratic ownership of renewable energy.

Note that fossil fuel subsidies do not include the external costs that these fuels inflict on the environment and on human health. The IMF estimates that in 2015 these costs will reach \$5.3 trillion. Savings to governments from reduced expenditures in these areas—costs being created as a result of fossil fuel use—are estimated at \$2.9 trillion. This represents a radical increase in State fiscal capacity.³⁰



Goal 1.3 Tax the top 10 percent of Carbon Emitters

Generate \$150 billion per year for climate change adaptation and investment in energy transition in poorer countries by instituting a tax on high-end consumers of air travel.

Recent research by French economist Thomas Piketty has led him to advocate a consumption tax on the top 10 percent of individual carbon emitters.

Global CO₂ emissions remain highly concentrated today: top 10 percent emitters contribute to about 45 percent of global emissions, while bottom 50 percent emitters contribute to less than 10 percent of global emissions. Top 10 percent emitters live on all continents, with one third of them from emerging countries.³¹

Such an approach would increase tax equity by targeting the individuals whose lifestyles contribute the most to carbon pollution. Piketty suggests alternative approaches to collecting this tax. His recommendation is a tax on business class, first class, and full-fare economy airline tickets.

Goal 1.4 Accelerate the Transition to Renewable Energy

Accelerate investment in renewable energy and smart transmission grids within a policy framework that increases the diversity and distribution of ownership.

Accelerating the transition to renewables requires multiple strategies. The diverse array of renewable energy technologies already available should be deployed in the locations that maximize the advantages of each. Policies and incentives which unleash the energy, talent, and concern of citizens and ensure a wide distribution of ownership are critical to increasing the resilience of communities, regions, and countries.

Goal 1.5 Major Retrofitting of the Built Environment

Invest systematically in retrofitting all existing residential and commercial buildings to achieve maximum efficiency in energy use and carbon reduction. The



examples of Kirklees, Germany's climate policy and low cost public bank financing (KfW), and Carbon Smart offer proven strategies in this regard.

Degraded and Threatened Ecosystems

There is strong interrelationship between action on climate change and investment in the protection and restoration of specific ecosystems. Forest protection, soil and watershed restoration, water conservation, wetlands preservation and restoration, and agroforestry all contribute dramatically to reducing carbon emissions and increasing the planet's capacity to sequester carbon.

Meta-Goal 2: To maximize ecosystem protection and restoration.

Goal 2.1 Invest in Ecological Protection and Restoration

Investments that help sequester carbon, conserve water, and increase soil fertility are particularly urgent.

Research indicates that carbon sequestration is higher in soil where crop rotation combined with green and animal manure is practiced and where little or no pesticides, herbicides, and industrial fertilizers are applied. This yields a double impact—more carbon is sequestered while the reduction in artificial inputs decreases GHG emissions.³²

A second way to combine carbon sequestration with increased local food production is to invest in permaculture and agroforestry initiatives that restore degraded environments through water conservation, soil restoration, and revegetation (e.g., food forests). There are many examples, at every scale, from the Loess Plateau in China (Figure 10) to backyard restoration. In addition to carbon sequestration and food security, these initiatives serve to reduce poverty and improve livelihoods.

In terms of agroforestry, estimates of potential carbon sequestration range from 12 to 228 tons per hectare, depending on the environment.³³ Globally, the International Panel on Climate change estimated in the 2000 report that as many as

Figure 10: The Loess Plateau



630 million hectares of unproductive croplands and grasslands could be converted to agroforestry.³⁴ Even a modest twenty-five tons per hectare would then yield a carbon reduction impact of 15.75 billion tons. This is the equivalent of taking 3.35 billion cars off the road.³⁵

Central to realizing this potential are financing, educational, and technical supports aimed at the transition of existing agricultural practices and land use.

The Third Industrial Revolution: The Zero Marginal Cost Society

The late twentieth century gave birth to the third industrial revolution. The impact that the internet has had on communications and global interconnectivity was barely imaginable forty years ago. It is already wreaking havoc on many iconic twentieth-century industries. More is coming. In manufacturing, 3D printers now are producing everything from prosthetics to houses, with far less infrastructure and far fewer workers. Production is decentralizing, supply chains are shrinking, and costs per unit are falling.

The rapidly evolving and expanding renewable energy industry, combined with the emergence of automated logistics and transport (facilitated once again by the internet), make it possible to conceive of a widely distributed, tightly connected neural network that will drive the marginal costs of energy to near zero. The



potential for decentralized, low-cost, resource-efficient, autonomous, and democratic production and distribution of goods and services is tremendous.³⁶ Cooperative economic democracy can and must capture these emerging opportunities.

However, there is a big downside. Jobs in this new age of automation will be displaced, big time. A survey of experts by the Pew Research Center found that the vast majority expect “robotics and artificial intelligence will permeate wide segments of daily life by 2025.” Half of those surveyed expect a significantly negative impact on jobs.³⁷

As jobs become increasingly precarious, how do people realize sufficient security to carry out the tasks necessary to strengthen their own resilience, that of their families, and their communities? For example, how is unpaid care of the sick, the elderly and children to be valued? Or the countless, unpaid projects that contribute to food security and ecosystem restoration?

One widely cited option is to implement a basic income guarantee (BIG): a monthly income to ensure that people can meet their basic needs so they can invest time in improving their lives and the life of their community.³⁸

An article by the Conference Board of Canada (a conservative think tank) suggests this is an idea whose time has come. It explores the effects of MINCOME, an experiment in a basic income guarantee conducted in Dauphin, Manitoba in 1974-1979. MINCOME’s health and social impacts were itemized by researcher Evelyn Forget. The article and the report are widely referenced internationally by organizations and institutions advocating the BIG:

Using data sources that had never before been assembled, Ms Forget demonstrates that hospitalization rates of MINCOME recipients fell by 8.5 per cent relative to similar non-recipients. Visits to doctors declined, especially for mental health concerns—meaning that the GAI [guaranteed annual income] appears to have produced a significant reduction in provincial health spending on the target population. More adolescents stayed in school to grade 12. Marital stability was maintained, and there was no



evidence that fertility rates increased, or that birth outcomes changed. In short, the MINCOME experiment appears to have had some important success in terms of improving population health and reducing health costs, with few negative social costs.

If the MINCOME results could be reproduced and generalized across Canadian society, a GAI might produce sizable net fiscal savings, especially for provinces. A GAI that delivered income support through the tax system would allow the existing provincial welfare bureaucracy to be sharply reduced. Improved population health for lower-income persons could create savings on health care, through reduced hospitalization and fewer visits to doctors. And if the GAI system were properly calibrated to lower the welfare wall, greater labour force attachment and higher net income tax revenues could be achieved.³⁹

Clearly, this mechanism generated significant benefits even within the confines of one small town. The contributions it would make as we rush towards a zero-marginal cost society could be extensive indeed.

Meta-Goal 3: Institute basic minimum income guarantees (BIG) at the local/regional and national levels to ensure adequate income and reduce the negative impacts of livelihoods displaced by the third industrial revolution.

A variety of BIG pilot projects are currently proceeding in different parts of the globe, including Holland, India, and Brazil. Networks advocating the BIG exist at multiple levels. The Basic Income Canada Network started in 2008. It is a member of the Basic Income Earth Network (BIEN), started in the mid-1980s. BIEN has recognized twenty affiliated national networks and two transnational networks.

One example of the gathering momentum is in Switzerland. A recent national citizens' initiative mustered sufficient support to force a debate on guaranteed income in the national parliament. Under the Swiss constitution, all citizens' initiatives that collect more than 100,000 signatures may go to referendum; 125,000 were collected by 2014. However, this referendum only took place after a series of



official deliberations in the Federal Council and the National Council. The initial votes of these bodies expressed broad opposition among Switzerland's existing political parties to a guaranteed income, despite opinion polls that affirm majority support for such legislation. The 2016 referendum result was a massive 77 percent rejection by the voters. Critics of the measure said that disconnecting the link between work done and money earned would have been bad for society while supporters argued that it would not be money for nothing but rather a recognition that 50 percent of the total work done is unpaid in society.⁴⁰

Such a range of activity is promising. The Swiss parliamentary debate is indicative of how wide a range of perspectives can converge to resist BIG. Nevertheless, momentum will likely continue to grow as the job-disrupting impacts of the third industrial revolution mount and the precariousness of employment increases.⁴¹ Young people already are very worried about whether they'll have a job in the future. A survey across nine countries recently found that more than one in four of those aged sixteen to twenty-five believe their current job will be done by computers within ten years.⁴²

Money, Debt, and Finance: Major Obstacles to Navigating the Transition

The most comprehensive study done in the US estimates that to achieve an 80 percent carbon reduction in America would cost close to \$5 trillion.⁴³ The International Renewable Energy Agency estimates investment needs to be doubled to \$550 billion per year if the two-degree Celsius target is to be met, and even more if the 1.5 Celsius target is to be met. In any case, the global estimate is staggering—well over \$16 trillion over a thirty-year investment horizon.

In Europe, restoring just 15 percent of degraded ecosystems is estimated to come with a price tag of 10 billion Euros per year. Current public and private investments fall far short of this level.⁴⁴ Globally, the Bonn Challenge targeted 150 million hectares of degraded lands being restored by 2020, and 200 million more by 2030. To meet that target requires the investment of a minimum of \$35 billion per year. To bring land degradation under control, the estimated cost is \$300 billion per year.⁴⁵



What is patently obvious is the central importance of finance and investment to transition. The subject is a huge one, well beyond the scope of this paper.⁴⁶ What is possible here is an explanation of how we can start redirecting money and investment in the public interest. The rationale for this strategic choice is embedded in the interplay between trends in the fossil fuel industry, the risk of a collapse in the growing carbon bubble, mountainous levels of debt, and the looming specter of long-term deflation.

Fossil Fuel Prices, the Carbon Bubble and the Risk of Deflation

The advent of cheap fossil fuels, combined with the communication/transportation revolutions of the nineteenth and twentieth centuries, ushered in a historically unprecedented phenomenon. We call it “economic growth.” As a concept it barely existed in 1859 when oil was discovered in Sarnia, Ontario. Thereafter, conceptually and practically, economic growth took off, buttressed with huge flows of credit to finance colossal infrastructure in production, refineries, electricity and distribution systems and roads.

By these means, oil has achieved a complete transformation of human life on the planet. Debt-based financing fueled the transformation. Economic growth reduced the risk that the debts incurred in the process would not be paid back.

Since the mid 1970s this context has been slowly shifting. The cost of exploring for and producing oil, the most powerful and flexible of the fossil fuels, has been inexorably rising with the exhaustion of low-cost sources. For every dollar invested, more energy is required to produce a new unit of energy. Nevertheless, market prices generally have remained high enough to preserve profit margins.

Not at the moment though. In the first quarter of 2016 the price of oil collapsed to \$30 - \$35 a barrel.⁴⁷ Why? There are two main reasons.

The huge debts accumulated in the last decade have hit the proverbial wall. The debt to GDP ratio is eclipsing any gains that might be expected from taking on new debt. Likewise, small- and medium-size business and household debt have climbed steeply. The result is a focus on debt reduction by governments,



businesses, and households. This in turn reduces disposable income and tax revenues. Austerity policies, which broaden and deepen the decline in demand within economies, are dictated by neoliberal ideology. The circle closes with the knock-on effect: declining global growth and slackening demand for fossil fuels. This is one part of the oil price dynamic in play.

But there is another: until recently, shale oil production in the US was skyrocketing. This reduced US oil imports at the same time as China's growth began to slow. That has coincided with Saudi Arabia's resistance to cutting its production, and the determination of other countries (including Iran) to export oil to meet their own budget shortfalls. The resulting over-supply and falling demand is the second key to understanding the precipitous drop in the price of oil. No one can predict with confidence when prices might recover.

As a consequence, the exploration programs and expansion plans of higher-cost oil producers are being shelved. Capital expenditures are being slashed and jobs cut. All are common measures taken in economic downturns to preserve cash flow until growth resumes. All also add to the potential for deflation to take hold.

This prospect is already having a deleterious effect on stock prices in the fossil fuel sector. But there may well be worse to come. Recent climate math calculations undertaken by Oil Change International categorically indicate that we cannot put in any more fossil fuel infrastructure nor can we expand from current levels of production.⁴⁸ Does this not put the balance sheets of energy companies at risk? Mark Carney, governor of the Bank of England thinks so. He calls it a "carbon bubble."⁴⁹ Proven reserves in the ground underpin the share price—so long as people believe those reserves will be extracted at some future date. But that seems evermore unlikely, given the growing global awareness that such a volume of extraction would be catastrophic. This is a problem an increasing number of investors are fretting about. Indeed, it is fair to say there is now massive concern on the issue of stranded fossil fuel assets. The COP 21 agreement in December 2015, for all its deficiencies, is contributing to this concern and the divestment away from fossil fuels.



The veil is lifting and as it does the gross distortion of reality on which markets have been depending is being revealed. Share value based on proven reserves is approaching mythic status. As concern mounts, the rush to the exits will accelerate into a cascade of sell-offs. The carbon bubble will burst.

Some may say that such an economic contraction will be salutary; it will reduce the demand for fossil fuels and natural resource extraction. I'm inclined to agree but am less optimistic regarding its immediate implications. Our collective capacity to invest in the transition to a fair and sustainable economy may in fact be weakened by deflation and the bursting of the carbon bubble.

It is vital to ask how we might increase the space and means through which we can spur the investment in transition. It is also vital first to look more closely at debt and the structural factors that contribute to its inexorable growth.

The Invisible Bars of our Debt Prison

How money is currently created is a mystery to most. The dominant assumption is government prints it, a myth that is dead wrong. The result is that we do not realize that we live behind the bars of a debtor's prison.

The fact is private banks issue virtually all of the money supply; Ninety-seven percent of it in the UK and in the same ballpark in the US. Every time an individual, business, or government takes out a loan, digital money is created out of thin air and deposited in their account, to be repaid at a compounding rate of interest.⁵⁰ The holders of the debt must grow their income fast enough to pay down that interest as well as the principal. Failure to do so means bankruptcy and loss of assets. In societal terms, debt servicing demands economic growth, thus our conundrum: we cannot continue to eternally grow on a finite planet.

To continue with the current system is tantamount to accepting our lot, and languishing in a debtors' prison we will never grow ourselves out of. It means we accept our collective impotence to get on with the transition to living decently within the limits of one earth. We are foregoing the opportunity to free ourselves from a vicious debt trap that robs of us the colossal resources required for transition.



“The veil is being lifted and as it does the gross distortion of reality on which markets have been depending is being revealed.”

“Colossal” describes well the contribution compound interest makes to the debt trap. In Germany, Margrit Kennedy has compiled evidence published in 1995 indicating that the embedded costs of compound interest across household, business supply chains, and government finances add 35 percent to the cost of delivering public services: public provision of rubbish collection, 12 percent; provision of drinking water, 38 percent; sewage disposal, 47 percent; provision of public rental housing, 70 percent. At the household level, her calculations are equally astounding—33 percent of all household expenditures can be traced to compound interest (triple the value-added tax paid to the German government).⁵¹

Where do all the interest payments go, and what is the scope of the costs in financial terms? Kennedy and fellow researcher Helmut Creutz estimated that, as of 1995, the transfer of wealth was immense: the bottom 80 percent of the population was transferring 600 million Euros per day to the top 10 percent of the German population.⁵² That’s a significant contribution to inequality.

Similarly, debt-based money generates a structural debt problem that is driving a range of pernicious policy decisions. These include the imposition of drastic austerity policies; constant delays to critical infrastructure investment; retarded investment in GHG reduction and climate adaptation measures; inattention to the restoration of degraded ecosystems; neglect of water conservation; and, forgone investment in more ecologically sound food production.

Governments currently tax or borrow to finance their operations and infrastructure. Their investment in infrastructure is wholly inadequate to meet today’s needs. If growth falters or deflation takes hold, how will it be possible to make the necessary investments with the tax and debt-based tools currently available?⁵³



Meta-Goal 4: To increase government issuance of debt-free money, for direct investment in transition, despite deflation and low growth.

Currently, the option to reassert government control over even part of the money supply through the issue of debt-free money is not a subject of serious debate in many countries. Yet historically, the ability to invest directly into the real economy through the provision of long-term, low-cost financing has enabled the construction of priority physical and social infrastructure.

Canada is a prime example. From 1938 to the early 1970s, the Bank of Canada (BOC) bought federal bonds and charged interest to the government. However, as a wholly owned subsidiary of the federal government, the profits from these interest charges went right back into the public purse. The result was the creation of money at no cost apart from the net cost of the transaction between the BOC and its owner, the government of Canada.

The benefits were significant. Low-cost, long-term financing became directly available for investment in public priorities—the war effort, the Trans-Canada highway, the St. Lawrence Seaway, major airports, municipal infrastructure, and the social security system. Moreover, all of this was done without any discernible impact on inflation.

Forty years ago this source of no-cost money was lost when Canada turned over money creation to the banks. The decision has saddled the country with debt and significantly reduced its capacity to invest in priorities that advance the interests of its citizens. Governments must “live within their means” and not “saddle future generations with debt,” or so the refrain goes. Investments to accelerate the deployment of innovations, to adapt to known climate change threats, and to provide a BIG are severely curtailed because of the apparent necessity to borrow virtually all our money from the banks and pay them compound interest in return. It is an arrangement that benefits the richest 10 percent of the population.

It is beyond the scope of this paper to explore how this could be carried forward in different countries. However, a few comments are in order.



In Canada, some progress could be made on the strength of a case currently before the Supreme Court. In December 2011, a citizens group, the Committee on Monetary and Economic Reform (COMER), filed a lawsuit to force a restoration of the BOC to its mandated purposes. In essence they want the BOC to provide interest-free loans to the federal, provincial, and municipal governments as stipulated in the Bank of Canada Act (1938). In January 2015, the federal government lost its appeal that the case be dismissed. The government had sixty days to appeal the decision and did not, paving the way for the case to go forward.

COMER's legal representative is the constitutional lawyer Rocco Galati. Of the current case, he says, "It impacts the entire country in a profound way, right down to the bone of our economics and the history of the way we've maintained and lost, through illegal action, our independent monetary policy. It's huge."⁵⁴

In Europe, where member central banks operate collectively through the European Central Bank, debt-free money is a much more difficult proposition. The Euro is the common currency and national central banks have no direct role in money creation. This is not the case in the UK where a Positive Money campaign has been generating much debate over the benefits of regaining State control of all or part of the money supply. Elevating the public discourse on the subject has been the call of the new leader of the Labour Party, Jeremy Corbyn, to institute quantitative easing for the people. He proposes that a portion of the money supply be created for direct investment in critical priorities, including renewable energy, critical infrastructure, and affordable housing.

The arguments being mounted against Corbyn are vociferous. Some say his proposals risk spendthrift interference in monetary policy by politicians who will be tempted to use the money for their own pet ends. Others argue that the proposals are a strategic response to the dangers of deflation and to significant unmet needs in the country, pointing to the billions that flowed into the banks during the financial crisis, which have done little more than help repair bank balance sheets and inflate the property and housing market. The debate is not going to go away.⁵⁵



“ These measures would enable the accountable, systematic distribution of no- or low-cost, long-term financing to the investments most strategic to transition. ”

To bridge these divides it might be wise to establish clear boundaries as to the kinds of investment to which such money would flow. Transition priorities—accelerating renewable energy, energy conservation strategies, public transit, ecological restoration, BIG, etc.—would channel money directly into the economy. Growth would be stimulated in key sectors. Jobs would be created. New tax revenue would be generated. People’s financial security would be significantly improved.

A key worry for opponents is the possibility of political meddling in the direction and management of such investments. In this regard, it is useful to reflect on the experience of the Reconstruction Finance Corporation (RFC), a US government corporation that operated 1932-1957. The RFC provided financial support to state and local governments and made loans to banks, railroads, mortgage associations and other businesses. It was RFC financing to rural electricity cooperatives that helped close the gaps in rural America’s access to electricity. To this day these cooperatives are generating and transmitting power to large swaths of the country. RFC also helped finance many of the direct job programs that put money in people’s pockets during the depression years. During World War II, RFC organized production by establishing eight subsidiaries to supply a range of products—metals, synthetic rubber, tin, manila hemp—critical to the war effort.⁵⁶

In a like manner, an arms-length, government-owned corporation could channel investment to areas specified in a transition mandate. Sector-specific subsidiaries populated with public, private, civil society, and scientific expertise could be established. Together, these measures would enable the accountable, systematic distribution of no- or low-cost, long-term financing to the investments most strategic to transition.



Concluding Remarks

In the early sections of this paper I advanced cooperative economic democracy as a framework of concepts, values, practices, and models that aims to reflect:

- resilience over growth;
- cooperation over competition;
- sufficiency over efficiency;
- well-being over the right to possess;
- fairness and equity over the freedom of markets, trade, and capital;
- decentralized and democratic ownership over concentrated private ownership;
- the commons over the inalienable rights of private property; and,
- our dependence on nature over our right to dominate it.

Within the confines of time and space these features have been contextualized and illustrated, sometimes quite specifically, while other times more diffusely (for example, the commons over the inalienable rights of private property, and why the valuing of sufficiency over efficiency is so important). Indeed, even though the final graphic in the cooperative economic democracy section calls for federating to reclaim the commons as a major priority, I barely touch on it. However, the ecological services of the climate system and the ecosystems we depend on are arguably the most important commons we need to reclaim, restore, and define. I am well aware of these limitations and expect readers will discern others I have neglected or omitted.

I have given short shrift to a number of ownership issues. Just one important one is the absence of commentary on the concentrated ownership of land and its contribution to gross inequality, economic and social marginalization, and ecological degradation.

I have also given little attention to the diverse and dynamic range of financing alternatives that are being constructed, and on the other hand, the regulatory options to reform the out-of-control corruption of the global casino.



I have not even touched on the obvious and complex challenge that impacts ushering in a next system: the global military industrial complex, especially the gross waste of desperately needed resources and, in the US, the ideological drift into what former Chief of Staff for Colin Powell, Larry Wilkerson calls the “National Garrison State.”

In any case, despite these and other unspoken limitations I want to thank Gus Speth and Gar Alperovitz for their leadership in undertaking The Next System Project. I deeply appreciate the opportunity to reflect on at least some of the questions you and your team set out for consideration. I look forward to the next steps along the path to a new system.

March 2017

Notes:

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- 42 Ben Schiller, “Kids Are Scared Of A Future Where Robots Take All Their Jobs,” co.exist, January 18, 2016, accessed March 28, 2016, <http://www.fastcoexist.com/3055427/kids-are-scared-of-a-future-where-robots-take-all-their-jobs>. While beyond the scope of this paper, the motivation and design of a BIG is critically important. Guy Standing examines the design features carefully as well as the arguments for and against and suggests that a BIG “be seen as basic in the sense that, without it, other rights cannot be realized,” such as those to shelter, food and education. Standing, *A Precariat Charter: From Denizens to Citizens*.
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- 44 See Ian Dickie, “Financing Ecosystem Restoration in the EU,” Economics for the Environment Consultancy, 2013, accessed March 29, 2016, <http://www.ceeweb.org/wp-content/uploads/2013/10/Financing-Restoration-of-Ecosystems-in-the-EU-Ian-Dickie-071013.pdf>.
- 45 Douglas McGuire, Sven Walter et al., “Sustainable Financing for Forest and Landscape Restoration,” Food and Agriculture Organization of the United Nations and United Nations Convention to Counter Desertification (UNCCD), 2015, accessed March 29, 2016, <http://www.fao.org/3/a-i5032e.pdf>.
- 46 Such a discussion would have to cover two critical issues: 1) the speculative economy of derivatives, hedge funds, and currency trading dwarfs the world’s “real economy” (around \$70 trillion in GDP); 2) the current incapacity of governments to curb the offshore banking and legal antics of multinational corporations in order to avoid taxes. This depletes governments of billions in annual revenue.
- 47 This has happened before. Since 1973 five major spikes in the price of oil have occurred, after which prices have fallen precipitously. Most recently, oil prices peaked at \$147 a barrel in July 2008. The high price converged with the sub-prime mortgage crisis to trigger a collapse in the price of oil to below \$40 a barrel. However, prices soon rebounded to \$90-\$100 a barrel, sufficient to establish a margin of profit in high cost, high carbon projects, like the Alberta tar sands. Other commodities also recovered and sustained high prices. So even while much of the economy languished, commodity prices were able to keep ahead of the cost of extraction. Why? The trillions in debt generated to reflate economic growth in the west plus China’s ongoing growth kept the prices high.
- 48 Greg Muttitt, “The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production,” *Oil Change International*, September 22, 2016, <http://priceofoil.org/2016/09/22/the-skys-limit-report/>.
- 49 Daniel Tencer, “Mark Carney: Climate Change Threatens Financial System, Oil Could Be ‘Stranded’ Asset,” *Huffington Post*, September 30, 2015, http://www.huffingtonpost.ca/2015/09/30/mark-carney-climate-change_n_8222008.html.
- 50 Most people are under the delusion that the deposits of other bank customers are the basis for lending and that the role of the banks is that of an intermediary. Josiah Stamp, Director of the Bank of England, one of many who has tried to set the record straight, put it this way in 1927:
- The modern banking system manufactures money out of nothing. The process is perhaps the most astounding piece of sleight-of-hand that was ever invented. Banking was conceived in inequity and born in sin. Bankers own the earth; take it away from them, but leave them the power to create credit, and with the stroke of a pen they will create enough money to buy it



back again...If you want to be slaves of the bankers and pay the cost of your own slavery, then let bankers continue to create money and control credit.

- 51 Kennedy, "Interest and Inflation Free Money," 8.
- 52 Kennedy, "Interest and Inflation Free Money," 8-9.
- 53 For example, consider the minimum investment required for one climate adaptation measure in Vancouver, British Columbia. Metropolitan Vancouver has an extensive dike system to protect low-lying areas from inundation. The 2007 Panel on Climate Change estimated that the sea level will rise one meter by 2100. The engineering and related costs of upgrading the dike system to protect against that rise were estimated to be \$9.5 billion in 2012. Given most recent evidence of the likely sea-level rise, that estimate may well be conservative.
- Yet local and regional governments in Canada are limited to taxing property and levying user fees. This makes Vancouver virtually impotent to undertake such a project, no matter how urgent it is. Even with the major share of Canadian taxation (92 percent), senior governments are also constrained and will become more so by low growth, or still worse, if deflation were to set in.
- 54 Les Whittington, "Rocco Galati in Court to Challenge how Bank of Canada Does Business," *Thestar.com*, March 23, 2015, accessed March 29, 2016, <http://www.thestar.com/news/canada/2015/03/23/rocco-galati-in-court-to-challenge-how-bank-of-canada-does-business.html>.
- 55 Ambrose Evans-Pritchard, "Jeremy Corbyn's QE for the People is Exactly What the World May Soon Need," *The Telegraph*, September 16, 2015, accessed March 29, 2016, <http://www.telegraph.co.uk/finance/economics/11869701/Jeremy-Corbyns-QE-for-the-people-is-exactly-what-the-world-may-soon-need.html>.
- 56 "Reconstruction Finance Corporation," Wikipedia, accessed March 29, 2016, https://en.wikipedia.org/wiki/Reconstruction_Finance_Corporation.



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Michael T. Lewis is well known in Canada and internationally as a practitioner, author, educator, and leader in the field of community economic development and the social economy. His experience cuts across the full range of functions connected to community renewal and development. He has built and advised a wide range of businesses, organizations, and governments all over Canada and internationally as well. An innovator, activist and thinker with a penchant for linking practice with policy and the micro and macro, Mike's leadership in Canadian Centre for Community Renewal and elsewhere continues to help connect the dots and stay ahead of the curve.



New Systems: Possibilities and Proposals

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We at the Next System Project want to help dispel the wrongheaded idea that “there is no alternative.” To that end, we have been gathering some of the most interesting and important proposals for political-economic alternatives—in effect, descriptions of new systems. Some are more detailed than others, but each seeks to envision something very different from today’s political economy.

We have been working with their authors on the basis of a comparative framework—available on our website—aimed at encouraging them to elaborate their visions to include not only core economic institutions but also—as far as is possible—political structure, cultural dimensions, transition pathways, and so forth. The result is two-dozen papers, to be released in small groups over the coming months.

Individually and collectively, these papers challenge the deadly notion that nothing can be done—disputing that capitalism as we know it is the best and, in any case, the only possible option. They offer a basis upon which we might greatly expand the boundaries of political debate in the United States and beyond. We hope this work will help catalyze a substantive dialogue about the need for a radically different system and how we might go about building it.

James Gustave Speth, Co-Chair, Next System Project

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