

Extract from  
“Intentional Cities, Intentional Economies”  
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## Creating New Capital: Chapter Three

Intentional cities have a vision and a plan for the future that is owned by a broad cross-section of people in the community. In the process the stakeholders have learned about the assets in the community that are currently meeting human needs, and about how the community systems work to either enhance or erode future capacity. The plan has goals and targets that reflect the community’s needs for economic development, wealth creation and well-being. Unmet needs have been identified, along with underutilized resources, as well as an inventory of all the assets needed to provide real wealth.

Now it’s time to start seeing the community as an enterprise, and its citizens as the owners. With this lens, the capacity the community has to create real wealth and well-being can be characterized as the *community capital* used to produce that wealth. A dictionary definition of the word *capital* is “assets available for use in the production of further assets.” The word’s origin comes from *capus*, the head of a cow, dating back to agrarian societies where people counted their productive capacity from the number of cows they owned. If assets are examples of the real wealth we have to meet our needs, then *community capital* represents the capacity to create this real wealth on an ongoing basis.

This generative nature of capital is of particular interest for community leaders. Community capital – the generative capacity of a community - forms the foundation of the economy. A thousand boards are assets that might be enough to build a house, but managing a forest for sustainable yield to feed a sawmill in the long run, will help insure that many more houses get built. The forest and the sawmill are the capital base. Their combined capacity to continue to produce lumber, along with the forest’s capacity to produce oxygen, to absorb carbon dioxide, to provide habitat for wildlife, and to serve as a critical part of the water cycle, will help insure a healthy and sustainable human community can continue to live nearby.

Competent capitalists know that in order to produce the items that make it possible to earn a profit and create wealth, they need to maintain their capital in good working order. This means continually reinvesting in upkeep and maintenance of the assets, keeping on top of the latest technology, and minimizing the costs of production. The accounting and taxation systems that are prevalent in North America and Europe systematically account for the capital reinvestment needed through depreciation schedules that estimate what investment is needed to maintain the capital’s current value by compensating for the loss in value over time, as an asset is used up.

To begin a local community economic development program that will create long-term wealth, it is important to start to think like a community capitalist - to know all the local sources of real wealth, and to have a plan for their ongoing care and maintenance. It is equally important to know their generative capacity over time – the conditions needed to insure that the community capital can continue to produce the assets the community needs. In the case of the forest, the conditions might be adequate rain and sunlight, and a conservative management plan that attends to the life cycle regeneration of the trees and their ecosystem. In the case of the sawmill, it might be regular maintenance on the machinery, along with a replacement schedule for the major equipment. The long-term capital plan will also include the conditions for the employees – training, wages, opportunities for growth and development. An additional consideration will be the impact of operations on the community defined as broadly as possible - if the sawmill is routinely filling the surrounding environment with emissions and waste, this will obviously work against long-term sustainability.

## **Ten Types of Community Capital**

What are the different types of community capital we need to build to achieve real wealth creation? The community systems and the asset inventory give us insight into the community capital we have, and the resulting productive, or generative, capacities are important enough to highlight when considering the strategy for our community enterprise. Looking at these different systems, the types of community capital they use to create assets are as follows:

### **Environmental Services**

*1. Natural Capital:* Natural capital is the stock of environmental assets that produces more assets; for example, a healthy forest produces trees, habitat, carbon sequestration, erosion control, beauty, recreation, and water purification if the natural capital base – its essential regenerative capacity – is maintained. Clear-cutting the forest by a timber company might produce some monetary income for a short period of time for a limited number of people, but it is spending down the region's capital, just as if you start to use the principal of the savings account that you have in the bank instead of taking the interest income to pay for your expenses. If it goes on for too long, you won't have any money left. Strengthening our natural capital involves finding ways to protect and enhance those natural systems that provide the environmental services we need – air, water, climate, soil, food, waste assimilation, beauty, recreation, materials – without undermining their capacity to continue to provide the services in the future.

### **Infrastructure and Built Environment**

*2. Built Capital:* The Built Capital in a community includes the buildings, the infrastructure (roads, electric generation and transmission, pipes, wires, cables, water and wastewater treatment plants, etc.), housing, parks and recreational facilities, commercial and industrial facilities, and other constructed elements of community life. Strengthening the Built Capital involves standard capital planning, as well as a thorough review of how

the existing Built Capital is meeting the range of needs that have been identified. A very important, and problematic, aspect of the Built Capital, of course, is the land use patterns that result from its development. Sprawl, unserviced areas, squatter settlements, all these represent dysfunctional side effects of developing and maintaining Built Capital – the new approach is to do it in a way that is consistent with community well-being and real wealth.

A Sustainable Energy Plan will also be part of the Built Capital plan since revolutions in energy markets and technologies based on global ecologic crisis, peak oil, and sustainable energy systems becoming cost-effective mean that communities will benefit from a coherent, whole-system approach to energy that hasn't been required in the past.

**3. *Technological Capital:*** The technological capital includes the ways in which communities harness their intellectual resources to create tools, systems, machines, arts, skills, and materials that are designed to improve our lives. Building on our capital in this area means supporting the education, creativity, and access to materials that are required to create innovative technologies. For example, in a depressed township in South Africa, a young man who was educated in physics has come up with an idea for a solar and bicycle powered battery charger – many of the people in the settlement use car batteries to power their electrical needs in their homes. If he can gain access to the materials he needs to develop the new system, his good idea – which would generate income in an impoverished area, provide low-cost energy to the people in the community, and reduce CO2 emissions all at the same time – might succeed.

### **Social and Cultural Capital**

**4. *Social Capital:*** Social Capital is one way of recognizing the economic importance of all the ways we are connected to each other, the relationships, networks, and values we share, and the cooperative systems we use for interacting. The net result of social capital is the capacity for successful and effective collective action. When we're thinking in terms of how social capital produces additional social assets, we need to be mindful of all the ways that we can enhance the connectedness of our communities. When we're developing other strategies, we need to be careful not to do things that inadvertently rob our community of these connections. It's also important to avoid a situation where the social capital in one sector of the community works against the ability of other sectors to have connections with the community as a whole – the bonds between members of the local mafia could be called a form of social capital, in fact, yet its role in the community does not enhance other social assets.

**5. *Historic and Cultural Capital:*** Our community's historic and cultural capital represents the economic aspect of the ways we express our identity and creativity within a supportive community - the historic resources we have that could be developed into tourist attractions, the cultural centers that celebrate our music, art, drama, dance, and other creative endeavors, the programs in place to build and transmit our cultural understandings to others. To build and maintain historic and cultural capital involves a multifaceted approach that strengthens leadership qualities, enhances the built environment where cultural activities can happen, fosters creativity and talent, treasures

historical records and information, and promotes tolerance and respect for differences. The creative economy has now surpassed the traditional manufacturing sector in the United States, so the role of cultural capital is more important than ever.

## **Human Development**

**6. *Human Capital:*** Our human capital includes all the knowledge, skills and capabilities that people already have accumulated. By extension it includes what they can learn, invent, create, and contribute to the community as a whole. To strengthen the human capital in our communities, we need to develop strategies that increase capabilities on every level. People who live up to their potential enhance their lives and the life of their communities. Maintaining these capabilities also involves developing systems that enhance wellness, and that care for people who are sick, physically and mentally challenged, too young or too old to care for themselves. It means building the caring capacity of our communities, so that people feel supported, feel a sense of belonging and mutual support, and where family relationships and social networks are healthy for the individuals in them.

## **Governance and Institutional Capital**

**7. *Institutional Capital:*** A standard definition of institutional capital is hard to find – to some it means the financial resources controlled by key institutions and to others it represents the institutional framework governing the economy. For the purposes of this book, we define institutional capital as the structures, organizations, legal, and financial frameworks that enable a society to function. This includes the legal system and the rule of law, the insurance system that helps communities manage risk, the systems that establish different exchange mechanisms (national and complementary currencies), the regulatory structures that protect the natural environment, human rights, and human health and well-being, and all the institutional arrangements that provide a foundation for economic activity.

## **Economic Capital**

Economic capital is what some people would tend to identify as the only relevant subject for economic development, and they would identify this capital as what we're calling financial capital, rather than every possible type. We distinguish three types of economic capital: entrepreneurial, financial and potential exchange capital.

**8. *Entrepreneurial Capital:*** The entrepreneurial capital in your community includes those businesses and organizations that mobilize all the other types of capital to produce the assets that meet human needs. Entrepreneurial capital includes both the for-profit and non-profit sector – the manufacturers, service industry, retail shops, hospitals and day care centers, architects, engineers, planners, beauty parlors, restaurants, amusement parks, golf courses, hotels, schools, universities, nursing homes, all of the employers who put us to work. The sum total represents a critical part of the productive capacity in any community, without it the economy wouldn't function.

**9. Financial Capital:** The financial capital available for the creation of real wealth includes the loan resources available through the banking system, and the savings and investment made by individuals and institutions. Strengthening and increasing this type of capital always seems like the largest barrier to successful economic development, yet it isn't impossible to do. What it takes is some creative thinking about new ways to provide the liquidity and resources that new ventures need to get started.

**10. Potential Exchange Capital:** Besides the economic assets which are measured in national money (dollars, euros, pesos, yen), another form of capital that is often overlooked is capital that can be mobilized through complementary currency systems. This happens all the time – experienced elderly people mentor younger adults, the skills of retired and unemployed people can be used even if they do not have a job right now, empty space in public buildings can be used when the official government functions are not in session, we could fill empty chairs in schools or restaurants, we express ourselves and our creativity with or without monetary reward. One of the key ways that we can build real wealth in our communities is to tap this potential exchange capital by introducing complementary currency exchange mechanisms that mobilize potential resources for the benefit of the community. This capital is important because it contributes to our well-being without being limited by the scarcity or availability of national money. The word 'economy' comes from the Greek words *oikos* and *nomos*, meaning 'management of a household.' The functions of a household include but also go beyond those that are captured in the monetized exchanges, so to truly understand our economy, we need to look beyond the value that is translated into conventional monetary terms.

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All ten forms of capital described above produce the critical flows of assets through the economic system. Capital is the foundation, the reproductive system, the greenhouse that grows a healthy economy. If you picture your community as an island, and measure all the flows of money, resources, goods, and services in and out of the community, it's easier to understand how this works. If the island maintains its natural capital, so that the soils stay productive, the water is abundant and clean, and the plants and animals are all healthy, then it can produce food for the people that live there, with possibly some extra agricultural goods or products – jams, wool, sweaters, lumber, furniture - to sell to the mainland. If the money from the mainland is saved in local banks (financial capital), then there are loans available to people who want to borrow to start a business. If the local schools teach people to foster their creativity and innovation and understand risks, then there might be some entrepreneurs who could figure out how to make better sweaters or furniture (entrepreneurial capital). They might charter a company (institutional capital) and work with local community leaders (social capital) to build a larger factory (built capital). A training program for the workers would help insure that there were people with the skills to make the products (human capital).

Each asset – the skills of the workers, the incorporation of a company, the entrepreneurial imagination – has a base of experience and collective support behind it that allows it to reproduce itself in new ways. This is the capital base. The way all the different forms of capital work together, and the flows of different assets through a community, and among different communities, form what we've come to know as the economic system.

## **The Economy as a System**

The term “economic system” is used so frequently that we often lose sight of its meaning. Systems have certain characteristics, and by understanding more about how systems work we gain valuable insights into how to improve our local economic system. Each local economy is a bit like a different kind of car. Each make and model has its own unique features – a convertible roof, cruise control, one burns diesel another uses high test gasoline; there are hybrids, electric cars, trucks, and vans. But they all have a transmission, wheels, a steering system, gauges that give you an idea of the fuel level, warning lights, etc. So by understanding what all cars have in common, you also can understand more about your particular vehicle.

To start at the most basic level, the definition of a system is, according to Merriam Webster's dictionary is: “a regularly interacting or interdependent group of items forming a unified whole.” In a car, these are all the components, and the unified whole that is formed is greater than the sum of individual parts. If you lined up the wheels, the engine, the axels, the steering wheel, the windshield, the seats, the body, the mirrors, and the gauges, along the floor of your garage, it would just be a large pile of stuff. But once all the parts are working together, the car can roll out of the driveway and down the street.

A system is therefore a unified whole with interacting parts, and the parts have characteristics that all systems share. One part is a system flow – something that moves through the system and interacts with other parts. Another part is a system stock – a place in the system where the flow might tend to accumulate. When we describe the interacting parts of systems, we assume that one variable in a system has an effect on other variables. The word for this effect is feedback, and the interactions can produce either positive feedback or negative feedback.

In our metaphorical car, one flow might be the gas through the engine and out the exhaust pipe. The stock would be the gas tank, where fuel is stored before use. When the gas pedal is pushed by the driver (another component of the system), more gas is delivered to the engine. So the feedback between the pressure on the gas pedal and the gas flow to the engine is positive – the more pressure, the more gas. Positive feedback means that the two variables affect each other in the same direction, so more of one means more of another.

When the driver sees that the car is going faster than the speed limit, she puts her foot on the brake. The more pressure on the brake, the slower the car moves, or the less speed it

has. This is an example of negative feedback, where more of one thing leads to less of something else. More brake pressure, less speed. Positive and negative feedback among different variables in a system can produce a number of different results. In our car example, if the driver wants to travel at the speed limit, there is a combination of positive and negative feedback that produces a relatively consistent result. The same is true in our bodies, where our body temperature is maintained at a relatively constant level of 98.6° F through the positive feedback of metabolism combined with the negative feedback of perspiration.

When there is only positive feedback in a system, or when the sum of all the feedback in the system is positive (just like basic math, where two negatives can equal a positive) the system produces a reinforcing result, where things get worse and worse or better and better, depending on the variables. There are many examples of this, compounding interest in a bank account, population growth, and climate change, are a few of the obvious ones. In the bank, more money means more interest is paid, means there is more money, and so on – positive feedback plus more positive feedback. With population, more parents produce more offspring, which in turn become parents. With climate change, more warmth means less white ice at the poles to reflect the sunlight, which makes the temperatures there warmer, which in turn leads to less ice. In this example, more CO<sub>2</sub> makes more warming (positive feedback), more warming means less ice (negative feedback), less ice means more warming (negative feedback), and the net result is positive, creating a vicious cycle.

These two patterns – a combination of positive and negative feedback that results in equilibrium or in reinforcing increase or decrease – are called *system archetypes*, which means a pattern of behavior over time that can be observed in a variety of different systems. There are many system archetypes<sup>1</sup>, and understanding how patterns of behavior in systems can be changed is a key to understanding the economy as well.

The economy's behavior over time exhibits the characteristics of an archetypal system with cycles of expansion and contraction driven by positive and negative feedback loops from different variables. At a very simple level, one kind of economy – the boom and bust natural resource economy of gold rushes and fossil fuels – can be seen as a system archetype called “Limits to Growth”<sup>1</sup>. In this archetypal pattern of behavior, positive feedback on the right side of the diagram below leads to exponential economic growth (the result of reinforcing feedback), which finally hits the wall of finite resources on the left, which then leads to rapid decline as the positive feedback of the right reinforcing loop collapses in reverse on itself.

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<sup>1</sup> For more information about all the system archetypes, there are many good resources. One source I find helpful is a web site called The Way of Systems: [www.systems-thinking.org](http://www.systems-thinking.org). To see

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<sup>1</sup> This name is derived from a book by the same name by Dennis and Donella Meadows and Jorgen Randers back in the 1970s. It was revisited by the authors in a new book called *Beyond the Limits* published in 2000.

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how the archetypes apply to community development, please visit the LASER web site resource section at:

[http://www.global-laser.org/resources/trend\\_analysis.pdf](http://www.global-laser.org/resources/trend_analysis.pdf).