Be Innovative; *Create a Tech-Driven Small City Main Street.*

Small City Innovation Advantages.

Small cities and towns have a tremendous advantage over larger communities when it comes to innovation in the design and operation of municipal systems to create an interesting, pleasant and prosperous community. Size is the key. A small city can be comprehended, it can be observed in its totality and it can be managed through effective communication with a majority of the citizens.

The disadvantages are money and talent. Small cities do not have the money of larger towns in the aggregate, but they may have as much or more in the margins; plus small city programs cost less than those of the larger cousins. Small cities used to have trouble recruiting talent; given the times, this is changing, especially in large metro areas. Small cities are becoming very competitive in attracting talent to both the private and public sector jobs.

The advantage possessed by small cities is only of value if the city thinks big. Small cities can have high-speed broadband internet service. They can have great access to the regional transportation system; and they can have access to the intellectual capital of its neighboring cities if it embraces the attitude of partnering and collaborating. This is the attitude that fosters innovation and experimentation.

SIEMENS

"Some infrastructure systems can be reinvented as they stand, while others must be replaced entirely".

The implication of this thought is that some day massive amounts of money will be spent to upgrade old infrastructure systems with new technologies, for those who are ready.

Main Street, a System of Systems.

Systems theory is an interdisciplinary field of science; the study of complex systems in nature and society. It is a framework within which one can examine, analyze or describe any group of objects [inputs] that work in concert [process] to produce a pre-meditated result [output].

Main street districts have street systems, stormwater systems, parking systems, regulatory systems and organizational systems, among others. Given this reality, cities can benefit from system dynamics and apply systems technology to their main street plans, programs, facilities and services.

The Main Systemic Ideas.

- A System is an organized collection of parts or sub-systems that are integrated to accomplish a pre-meditated objective.
- Systems have certain inputs that go through processes that lead to decisions to produce outputs. If one part of the system is changed, the overall system is changed.
- Everything is connected to everything else; pull one string and everything moves.
- Everyone eventually hears everything; the grapevine is an incredibly effective system for communicating accurate and inaccurate information; invest in a public information system designed to be factual.
- Effective systems save time and money; they offer the opportunity to avoid duplications and unnecessary repetitions.
- Systems can be readily transparent and easily monitored for performance evaluations.

Second, measuring outcomes is important. Performance evaluations report progress, or the lack thereof, either of which inspires further learning, innovation and action.

"With the publication of our report, 'Smart City Challenge: Lessons for Building Cities of the Future,' we are making good on our promise to share the lessons we learned about the transportation challenges America's cities face and about the innovative solutions that could help us meet those challenges. The winner of the $40 million grant was Columbus, Ohio." The other six finalists were: Austin, Denver, Kansas City, Pittsburgh, Portland and San Francisco *NOTE: Results, including their proposals, are at https://www.transportation.gov/smartcity/7-finalists-cities.*

Four Small City Main Street Innovations.

Innovations are washing over main street at an unprecedented pace and they are not all directly related to technology. While the fundamental changes driving innovations on main street are necessitated and enabled by technology, the real innovations are:

1. The presence of people living downtown,
2. The growth of small city tourism,
3. The connection of local businesses to the global economy with high-speed broadband internet service,
4. The opportunities offered by E-commerce, and
5. The evolution of main street as the social center of the city, the city's "Third Place".

As Thomas Friedman quotes from *The Panther*, **"For everything to stay the same, things must change."**

Innovations are indeed happening almost daily with hardware, software, operating systems and apps. But, significant innovations are also happening in infrastructure design and management, financial products and systems, training and education delivery systems, small business' global accessibility, economic development and social services; and all the while we need to be "green" and sustainable.

The current generations of residents are absorbing constant changes, "upgrades" and new ways of moving about, buying and selling, communicating, managing, financing, relating to family and socially interacting.

Main street can make an asset of the fascination with "change" and the obsession for new experiences. Creative thought has penetrated the very core of businesses, governments and institutions. Main street is confronted with the old axiom: "Grow or Die".
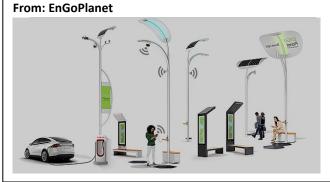

The Responsible Hospitality Institute (RHI) is a private, non-profit organization founded in 1983 and is the leading source for events, resources and consultation services on nightlife.
http://rhiweb.org/

Consider:

- Communication is instantaneous; thoughtfulness is a foregone concept;
  - ✓ Main street organizations and businesses are learning to act fast and thoughtfully.
- Social media and the "sharing" mentality have pressurized people into an obsession with FOMO, the "fear of missing out";
  - ✓ Main street can harness this obsession by frequent refreshments to the names of businesses, the facades of buildings, the messaging and lighting from "smart poles" and the creativity of dynamic programs offered in the public spaces.
- Public open spaces have always been valued;
  - ✓ Main street already employs these spaces but can perhaps expand their use with 24/7/365 assets with static displays, seasonal beautification and crop planting programs, more frequent community events, celebrations, art shows, recitals, festivals, concerts and car exhibits.
- Transportation is becoming a service;
  - ✓ Main street can exploit ridesharing, electric vehicles and the general distain people have for finding convenient parking by offering real or virtual valet service and drop-off/pick-up places.

From: EnGoPlanet

- Retailing and dining are being transformed by e-commerce into stay-at-home activities;
  - ✓ Main street can provide education of trends in store and display designs, delivery services, "experience" shopping and partnerships between retailers and restauranteurs.
- Blockchains offer new secure and transparent ways for businesses to interact and for governments to offer improved administration and municipal services.
  - ✓ Main street can offer education and training on new business technologies, such as blockchains, using existing main street businesses, nearby universities and business organizations.
- "Smart poles" are a new application of available technology. The internet has been around for decades; the new idea is to connect the internet to old technology electric power and streetlight poles. Linking the old and the new creates opportunities.
  - ✓ Main street can partner with the city to ensure that streetscape improvements and infrastructure upgrades include high-speed broadband internet service along with security, lighting and other information capabilities.
- Last-mile warehouses are necessary for immediate deliveries of goods and services ordered on-line. With AI and in-home listening devices, we may soon receive goods we want before we order them.
  - ✓ Main street can partner with city agencies to properly locate warehouses, loading zones and rideshare delivery facilities to ensure their efficiency and service to main street businesses and customers.

Main Street Master Systems.

A systems approach can be applied to many facilities not traditionally systematized, such as, public art; locations, calls for artists, maintenance and replacement schedules lend themselves to a public art management system.

The facilities and services that benefit from a collaborative systems approach that organizes and engages multiple people and organizations are:

- Marketing and management
- Integrated land use and circulation
- Parking with drop off/pick up zones
- Stormwater amenitization
- Multi-modal transportation services
- Renewable energy demonstrations
- Ubiquitous free internet service
- Omnipresent security
- Open spaces and connections
- Rotating public art
- Reduced solid waste
- Recycled water and sewer processes

Systems analysis is called upon when systems are complex and the outcome of any course of action is uncertain.

Systems Analysis.

Systems analysis is an explicit formal inquiry carried out to help decision-makers identify a better course of action and make a better decision than s/he might otherwise make.

A systemic view of organizations is trans-disciplinary and integrative. The systems approach gives primacy to the inter-relationships, not to the elements of the system. Systems Analysis, the learned skill, provides tools and techniques for studying systems in a holistic manner; systems like cities.

A great resource is ***Thinking in Systems: A Primer*** *by* Donella H. Meadows (Author) and Diana Wright (Editor). Ms. Meadows worked on The Limits of Growth for the Club of Rome and fully understands the systems approach to developmental analysis.

The Dashboard Concept.

In ***Smart Machines***, the IBM authors present the idea of smart systems coming together in a city-wide dashboard. Such a dashboard connected to the streetlight and power pole network flush with sensors can provide an incredible amount of real time, cross-platform, location-specific information such as accident data, road closures and maintenance issues.

Master Planning.

The inherent prerequisite for development of every master system is a master plan. A comprehensive, long-term plan that considers the fundamentals of the system being designed plus the direct and indirect impacts of the plan and the expected master system…impacts of externalities on the system; and impacts of the system on its environment.

Goals and Objectives Data Collection Market Analysis SWOT	Alternatives and Evaluations	Final Master Plan Land Use and Circulation Infrastructure Marketing and Management

Conclusions.

The social contract honored for the last several generations has dissolved. Domestically, the 20th Century social compact was that everyone could expect secure employment, the realistic prospect of owning a home, reliable health care, a comfortable retirement and the opportunity to send one's children to college. Internationally, multilateral institutions prospered.

The social compact of the 21st Century is unclear; still being defined. So far, the deal between people and their society is not as comforting, dependable or enlightened as the previous deal.

- Globalization's effects are eroding the fundamentals previously depended upon.
- The "race to the bottom" is gaining speed.
- The 21st Century social compact is evolving to be more individualistic; more subject to global conditions and less oriented to the common good.

Main street organizations and their host cities, small and large, have the opportunity to re-define a compact with their residents and businesses based on their collective and thoughtful vision of the city's future.

- Globalization and technology are redefining the role and opportunities for main street businesses and organizations, small and large, domestic and foreign.
- The opportunity exists to use the new technologies to establish main street participants in the New Global Economy. Ubiquitous high-speed broadband internet service is the price of admission.
- Innovative management, financial and marketing systems are available to main street organizations and businesses.

With high capacity internet service, main streets can be the locations for investments in face-to-face and virtual shopping, education, entertainment, recreation and living. At the end of the day, the main street organizations in small cities and towns have choices:

- They can encourage city hall to experiment with new technologies and programs in the main street district prior to initiating citywide innovations.
- They can encourage the city to provide high-speed broadband internet service in the main street district as a utility, freely available to everyone.
- Main street can establish trading partners and other direct market interventions.
- Main street can leverage it colleges, libraries and incubators to offer small business support, local entrepreneurial education, training, financing and resources necessary for local businesses to participate in the global economy.
- Main street can perpetuate the status quo at its existential risk.

Social and economic forces are driving innovations on main street, enabled by new technologies. **The real innovations are:**

1. **The presence of people living downtown,**
2. **The growth of small city tourism,**
3. **The connection of local businesses to the global economy with high-speed broadband internet service,**
4. **The opportunities offered by E-commerce, and**
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