

The Plexus Imperative

Applying Network Thinking for Value & Wealth Creation

A Primer by Larry Quick

September 29th, 2005



© Larry Quick 2005

Contents

• The Plexus Imperative	4
• Six Fundamental Plexus Principles	7
• The Plexus Process	7
• Overview of the Application of the Plexus Process	8
• The Author: Larry Quick	9

For further information regarding this document, please contact either:

Larry Quick:

Email: lquick@newcommons.com

Tele: +1 401 222 9774

Web: www.newcommons.com

New Commons US Studio: 56 Pine Street, Providence, RI, USA 02903

Larry Quick authored this primer. It is designed to provide a brief overview of an alternate way of thinking and process for the development of 21st century capable organizations and communities. It is not intended to be definitive, and is best understood in conjunction with the presentation companion that it accompanies.

Feedback and discussion is welcomed.

When reading and applying the concepts and knowledge within this document it is requested that the copyright be honoured. This work is licensed under the Creative Commons Attribution-NoDerivs License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nd/2.0/> or send a letter to Creative Commons, 559 Nathan Abbott Way, Stanford, California 94305, USA.

As the publisher of this work, Larry Quick has an open access policy that enables anyone to access our content electronically without charge.

We want to encourage the circulation of our work as widely as possible without affecting the ownership of the copyright, which remains with the copyright holder.

Users are welcome to download, save, perform or distribute this work electronically or in any other format, including in foreign language translation without written permission subject to the conditions set out in the Creative Commons Attribution-Share Alike License.

Please read and consider the full license. The following are some of the conditions imposed by the license:

- Larry Quick as the author is credited;
- The New Commons website address (www.newcommons.com) is published together with a copy of this policy statement in a prominent position;
- The text is not altered and is used in full (the use of extracts under existing fair usage rights is not affected by this condition);
- The work is not resold;
- A copy of the work or link to its use online is sent to the address below for our archive:

Copyright Department: Info@lqa.com.au

You are welcome to ask for permission to use this work for purposes other than those covered by the Larry Quick' Creative Commons Attribution-NoDerivs licence.

To find out more about Creative Commons licenses go to www.creativecommons.org

For more information on New Commons visit www.newcommons.com

For more information on Larry Quick, please see his profile at the rear of this document.

Larry can be contacted at: lquic@newcommons.com

The Plexus Imperative

Though we may be unconscious to it at times, we live and work in a *'network of networks', or 'system of systems'* defined by social, economic, environmental, social systems, and built-environment systems. All of which play a part in a greater integrated 'whole system' – a *'plexus'*.

Plexus, as defined in the dictionary, refers to *'any complex network or interwoven structure'*. We can see and are part of the plexus through a myriad of things we use on a daily basis – information and communications technology (telephones, TV, the internet, local area networks), networked services (ATM's, online banking), social systems (communities, groups, organizations), economic systems ('the market', customer and supply networks,), business systems (production lines, business processes, financial transactions), built environment systems - city and community infrastructure (transport, water, and energy systems), flora and fauna (birds, bees and flowers), and the natural environment (climate, ecosystems). There are also those systems that we don't generally see, but through science, know they exist – for example the deep space of the universe's planetary systems, and the sub-atomic systems that are the basis of all energy and matter. And the plexus that we know and use every moment of our time is a plexus that provides us life itself – the human body.

Given that we live in a plexus, the question is: *why don't we use this way of thinking and processing as a platform for how we learn, understand, design, plan and implement change?*

In addressing this question the Plexus Imperative thinking and process provides an alternative perspective and practical tools for organizational and civic strategy. It also forms a new possibility for creating authentic value and wealth for organizations and communities in this new century.

The Plexus Window

The agrarian and industrial economies produced thinking, analysis and processes that, over time, served most wealthy communities well. In particular, the power and proliferation of the industrial 'machine' drove ways of thinking and processes that exponentially changed the world and created new means of wealth creation that still underpin the economies of most economically wealthy communities. However, in recent times, new means of social and economic wealth creation have arisen that have changed this landscape, providing new opportunities where communities are seeking to either shift from agrarian and industrially driven wealth creation, or complement them. Plexus thinking is at the heart of most of these.

Plexus as a way of thinking stands back from the worldview of the industrial metaphor of hierarchies, silos, separation, machine thinking, black and white, lineal and serial process, simplicity, and two dimensions; and overlays an alternative view of networks, networks within networks, nodes of capability, connectivity, flows of transactions, interdependency, complexity, non-linearity, lateral views, integration and inclusion, authenticity, sustainability and access to a view – for value and wealth creation at a multi-dimensional level.

It does not seek to overturn industrial thinking, but to provide an alternate and complementary way of thinking, analysing, and providing process for strategic social economic wealth creation.

Plexus thinking sees the early 21st century as a window of opportunity or threat based on how we address what we call six plexus imperatives:

Plexus is how the world works. Based on the examples above, look around you and reflect on and count just how many interdependent systems there are that together form the critical 'backbone' to your life, your family, the organization in which you work, the community in which you belong, and the place in which you live. You will soon see that it is how we live.

We have the science, technology, anatomy & design processes to understand and enable us to apply this thinking. In the past there was good reason why we didn't think, apply and act this way – we simply didn't have the means to understand and use it. Today we have the understanding and the practical tools needed to apply plexus thinking and process to do whatever we choose. In fact, medicine, IT, biotechnology, transport design, the Internet, environmentalists, social scientists and stock brokers are just some of the sectors that use it. So why don't we use it for critical problem solving and opportunity creation in areas like economic development, business planning and strategy, community development, cultural integration, and to integrate economic and environmental planning? In fact it is how our brain works, so this is an opportunity to more fully apply what we have!

In a dynamic new century, the industrial view of planning, and the siloed approach to organization are sub-optimal and limiting. Just take a hard look at these traditional approaches at an organizational, community, economic, social, cultural and environmental level and look for examples of their breakdown. Generally we don't have to look too far to find a program that doesn't integrate with other programs, a department that doesn't talk to another, a supply chain that either doesn't work or is expensive to keep, or a group of government agencies that don't work together. Though indeed a disaster of immense proportion, the response to and management of Hurricane Katrina is an example of the tip of the iceberg of the size of the current and impending dilemma facing community and organizational leadership.

It's the optimal way to proliferate and maximize innovation in a sustainable manner. Though not necessarily the best example of social network application, Silicon Valley stands as a testament to the innovation power of innovation and economic network practice. Siloed innovation of the 20th century is not the way to compete in global economies. In the new century, a highly integrated local, regional and national innovation system, based on network thinking, is the only way!

Plexus thinking is the basis for a much needed, new generation of authentic, whole systems, form of sustainable wealth creation. If we choose to take a plexus, network-based approach to economic development, a new array of 'unsiloed, unbound and unbundled' capability opens up to be converged, and reconfigured – in a manner that suits local, regional and global conditions. In understanding what capability we have rather than just looking at investing in the development of the new, 'best thing' – *the new winner industry or product* - we are able to invest potentially smaller amounts, to gain more affordable, authentic and sustainable outcomes.

Emerging global power bases are plexus enabled. Look deeply into the economic and social competition presented by business forces like China and India. We mistakenly view these economies through the frame of countries and geographic bases, and not global networks. If viewed through the eyes of the plexus, China and India's immense and highly connected expatriate populations are clearly the biggest global business networks and 'economies' in the world today. Also, look deeply into how modern terrorist networks like Al Qaeda organize themselves. It is not through the co-responding 'government silos' that are tasked with responding to their attacks, but through highly complex networks of local and global cells that adapt and align in response to anything that is done to them.

Our technical systems capability is now ahead of our ability to provide 'people thinking and process systems' to match. How often do we feel ironically deluged and dis-empowered when the things that are created to help, feel like they are doing the exact opposite. Email, the web, telephones, chat, online transactions, the new business manual, software applications, wifi, ADSL, 200 TV stations, world radio, Podcasts, MP3, the multiple systems we interact with, the local, the regional, the global, the universal!! With only industrial metaphors, and industrial thinking and planning frameworks we are at the mercy of the 'systems technology tsunami' that hits us at all levels of community. To be able to get real use and value from this type of technology requires us to apply a new people-based systems and network approach, to the application of and requirement for systems and network technology.

A way of integrating traditionally disconnected capability to form a robust and integrated base for social, economic, environmental and cultural development. This is most probably the most crucial imperative of all. For too long we have taken for granted that disconnected and disoriented social, economic, environmental and cultural policy, strategy and action is optimal in identifying, understanding and reacting to today's problems and opportunities. By any measure, whatever we are up to today is not sustainable through this type of thinking! The world is far more complex than the way we treat it. It is now time to recognize that, and shift our thinking to a new level that does not deny the complexity, or reduce it, but absorbs it in a way that works for people and our planet.

In a global world that is more and more locally lead through these imperatives, there is no longer a hiding place for leaders. To quote a time-honoured maxim from Einstein: *'we cannot solve our problems with the same thinking that created them'*. If we believe that the above eight imperatives represent an accurate account of our individual and collective world's, we have no alternative but to learn, test and deploy this new way of thinking, processing and acting.

Six Fundamental Plexus Principles

The basic starting point in understanding plexus thinking and process requires reflection on six fundamental principles that collectively and synergistically form the basis for the plexus approach:

1. Our world is comprised of a plexus of local, regional, & global networks at a social, economic, environmental & cultural level.
2. Such networks are not bounded or constrained by geographic or organizational boundaries.
3. All parts affect all other parts, and the sum of the whole is greater than the sum of the parts.
4. Networks comprise & require leadership & management of:
 - a. An array of connected, interdependent capability
 - b. Flow of transactions - information, communication, education, production and trading transactions (ICEPT)
 - c. Creation & leverage of value & wealth for all constituents
5. All networks operate within an environment – a dynamic set of conditions that are driven locally, regionally & globally.
6. Networks and network effect thrives or dies according to a networks ability to dynamically synchronize capability and value adding in sync with immediate and emergent conditions.

The Plexus Process

Though application of the plexus process is adapted to the specific situations and requirements of the project or program in focus, there are generally eight primary elements to the process:

1. Create network understanding of the immediate & emergent conditions.
2. Create network understanding of what value we are wanting to add.
3. Understand what network capability we have & need - at an integrated systems level.
4. Organize and foster collaboration within the required capability network.
5. Focus behaviour on achieving integrated, authentic & sustainable value and wealth creation - *social, economic, environmental & cultural capital* – a '4BL' four bottom line approach.
6. Amplify a new, organic narrative for change – a new network conversation.
7. Monitor immediate and emergent conditions.
8. Keep it dynamic – keep network capabilities and value add, in continuous tune with conditions.

Overview of the Application of the Plexus Process

Over the past ten years, the plexus approach has been applied in many forms to a variety of situations. Below are some recent programs included to illustrate the diversity of application:

RI Economic Policy Council: A variety of projects applied to integrated social, economic, environmental and cultural strategy development and implementation. These include:

Catalyzing a Life Science Research, Education and Innovation Network for the Ocean State':

Through seed funding by the US National Science Foundation (NSF), the Rhode Island Experimental Program to Stimulate Competitive Research (RI EPSCoR) was founded as a multi-faceted program to build 'state of the art' life science capability. With a critical US\$9 million grant request to NSF due in September 2005, RI EPSCoR convened a group of researchers, educators and industry representatives to apply the plexus approach to not only winning the grant, but to consolidate the network of capabilities that would act as a catalyst for a Life Science research, education and innovation network for RI.

'Integrating the Stewardship of RI's Bays, Rivers and Watersheds':

In pursuing a new approach to protecting their bays, rivers and watersheds – in a way that would enhance ecological, economic, cultural and recreational values that these unique resources provide – the RI General Assembly created the RI Bays, Rivers and Watersheds Coordination Team. The legislator's reason in doing was that *'an inter-agency team is the most effective way to transcend the limited responsibilities and jurisdictions of each agency, address complex issues using an ecosystem based approach, and provide continuity over time'*. The RIEPC commented that *'if given adequate support, the Coordination Team has the potential to not only meet the legislative vision, but to change the very nature of government as we know it'*. Staff from a variety of agencies and industry and environmental groups participated in a plexus driven approach to map capability, and to create a formative strategic platform.

'Positioning Providence as a Hub of Design Thinking':

Taking the immense design capabilities of Rhode Island through institutions like the Rhode Island School of Design (RISD), the plexus process was used to strategically map and network such capability. When completed, the work of a variety of design minded participants from industry, government and the 'cultural industries' clearly illustrated ways for RI to create something much more than what was at first seen. The plexus process continues in assisting Providence's 'Design in Action' group to place Providence at the centre of design thinking and design mindfulness.

'Creating the Finest Urban Waterfront in America':

Special Area Management Plans (SAMP) are a critical way of providing a 'network in focus' approach to environmental management that dynamically connects and integrates the logical inclusion of social, economic and cultural conditions and capabilities. Through the RI Coastal Resources Management Council, the plexus process was applied by the Coastal Resources Center to cultivate a new way of thinking about waterfront and bay design and management in an urban context. The process encompassed government, industry, environmental and cultural planners from four cities in creating an aligned view of what the SAMP needed to achieve, and how it would be achieved. It also provided a unique opportunity to consolidate the collaboration between seemingly disparate groups and entities.

Other RIEPC Projects in Progress:

Other projects currently in progress for the RIEPC include the design of a new approach to the Southside District of Providence – one of the poorest sectors in RI, and a capability network based strategy for the Blackstone River Valley Corridor which spans from Worcester, Mass, across the border into Providence, RI.

General Motors Holden (Australia):

Over the course of two years plexus process was applied throughout the engineering department and innovation area of GM Holden to create an aligned, high level to 'grass roots' integration of strategy.

Central College (Australia):

The plexus approach was used as a strategic innovation tool and a means of fostering an integrated network approach to educational institution planning.

The Author: Larry Quick

Larry Quick is a civic and corporate strategist.

Born and raised a devout 'Aussie', Larry's experience spans Australia, Europe, Asia and the USA.

He has completed projects across a broad range of community, business, industry and government sectors for international and national corporations, government and not for profit agencies. These include General Motors Holden (Australia's largest vehicle manufacturer), Telstra (Australia's largest telecommunications provider), Simplot, Ciba Chemicals, all Australian state governments, and the federal government, RI State Government, RI Economic Policy Council, Coastal Resources Management Center, Cornish Associates, Congress for New Urbanism, EPSCoR (the National Science Foundation's Experimental Program to Stimulate Competitive Research), and the RI Economic Development Corporation.

A key focus of Larry's research and work is network thinking and strategy and its application to innovation and change in 'whole systems' that encompass social, economic, environmental and cultural capital. Through his research and experience in network-based strategy, Larry is the author of the Plexus Process. Plexus is designed to apply network thinking to strategy.

The Plexus model has been applied to organizations and projects including the Engineering and Innovation Departments of General Motors Holden, the development of design centres in Australia, the development of Special Area Management Planning in Rhode Island, the development of Providence as a hub of design thinking, and to RI EPSCoR – the NSF's Experimental Program to Stimulate Competitive Research.

Larry also has a keen interest in Regional Innovation Systems and the need for re-thinking conventional approaches to national and regional innovation through using a systemsbased approach to R&D strategy and innovation proliferation. His Open Platform Innovation Systems (OPIS) model was developed to provide an alternative approach to conventional R&D and innovation proliferation.

He is also a sought after speaker. Recent speaking engagements include the Creative Clusters Conference in Brighton, UK; the Creative Cities Summit in Florida, USA; the Critical Cities Think Tank in Melbourne, Australia; and Creative Places & Spaces in Toronto, Canada. He is also on the global advisory board of the Global Creative Economy

Convergence Summit to be held in Philadelphia in January 2006, and on the Executive Committee of the Congress for New Urbanism to be held in Providence RI in June 2006.