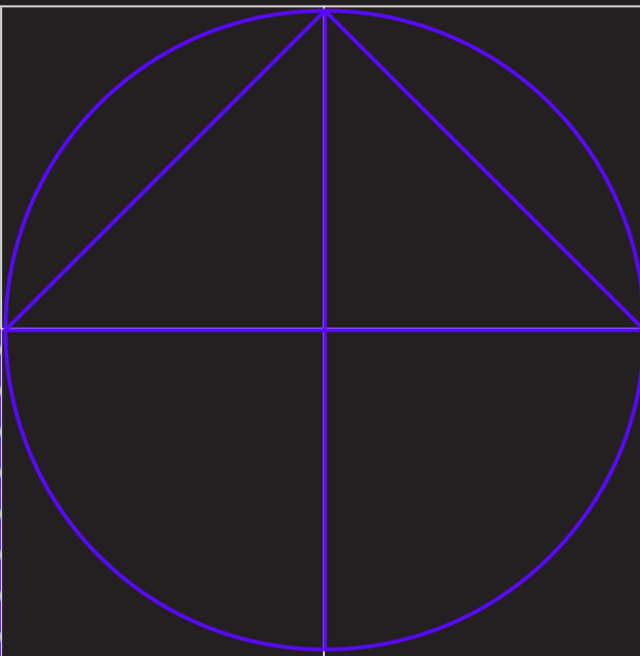
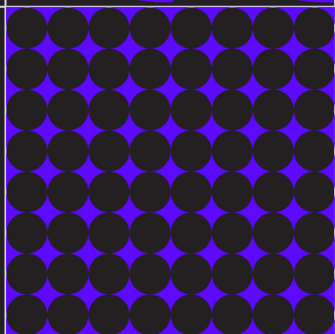
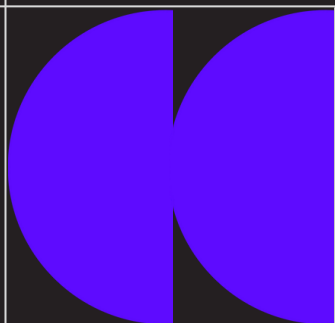


INNOVATION NORTH



Session 1 Briefing Note:

CHOOSING THE APPROACH TO INNOVATION



We Live In An Age of Disruption

Organizations face greater disruptions than ever before. Some even label this the fourth industrial revolution.

The list of disruptive forces is both familiar and daunting: global interconnected marketplaces, digital transformation, climate change, social disruptions, unstable political and global structures, hyper-competition, revolutionary innovations in services and products, and many others. This powerful convergence may overwhelm leaders who were trained to manage in a more stable world.

To understand how to innovate in a world of disruption, we must understand both traditional and novel approaches to management thinking and innovation.

Traditional Approaches to Innovation

Traditional approaches to both **new product innovation** (NPI) and **new service design** (NSD) follow a linear process.

- **NPI** moves through stage gates: scoping ideas, building the business case, developing the idea, testing/validating and launching. Each stage screens the project and requires different levels of approvals.
- **NSD** tends to be more iterative, partly because new services do not always involve significant investments. A typical process involves developing a new strategy, delivering the new service, measuring desirable outcomes, and adjusting the service toward desirable outcomes. If the service involves significant investments, new service design can also follow the longer stage-gate process of new product innovation.

NPI and NSD force organizations to systematically work through an idea, identifying risks and market potential. This systematic exploration is especially important before organizations make major investments. NPI and NSD also gives senior management multiple opportunities to assess the project with more detailed information each time. Organizations, then, can cautiously move through the innovation process, without major losses.

These traditional approaches to make sense for well-defined problems or potential solutions. However, in today's world, outcomes are often unpredictable, because of

the major disruptions in the larger environment. Innovations may be quickly replaced or rendered unsuitable by bigger forces. Today, organizations need to understand the system and apply systems thinking.

We Live In a World of Systems

Leading thinker Donella Meadows defined a system as “a set of related components that work together...to achieve an objective.”

You are composed of systems and comprise systems. Your body is made up of muscular, circulatory, and nervous systems. You also are a part of many systems, including your team, your organization, your organization's supply chain, and the financial markets. Similarly, you are part of a family, a community, a city, and a planet. These systems are nested in and overlapping with other systems.

And, each one of the systems in which you are engaged has a purpose. Your bodily systems keep you alive and healthy. Your team seeks to innovate, your organization has a mission, and society seeks for well-being.

Traditional approaches to innovation assume that if you innovate a new product or service, you will create changes in the market. It assumes cause and effect. A systems approach recognizes that your reactions result in many interactions.

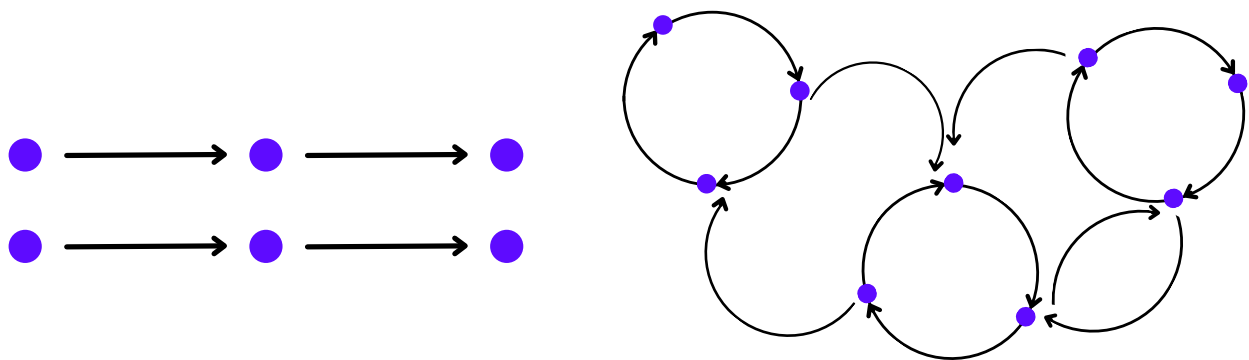


Figure 1 - Linear Thinking vs. Systems Thinking

System elements all affect each other. A financial market collapse affects your organization, which affects you. Similarly, your organization's actions can stabilize or destabilize the more macro systems. Systems exhibit fundamental features that are important to understand.

Relationships rather than nodes are key. We tend to focus on 'things', such as people, buildings, products. Systems force us to think about the relationships among the things. These relationships can include social interactions, information flows, communication lines, materials exchanged. The more complex a system, the greater the number of relationships.

A system has a purpose. The nodes or things in a system form relationships because they have a purpose. If they didn't have a purpose, the nodes in the system wouldn't cohere into a system. And, what's really important is that the collection of nodes can achieve a purpose that no single node can create. In other words, no single person in your team can innovate new products or services as well as the team can.

Time is critical. Because the nodes and relationships are important, time and timing become important in understanding systems. Systems thinkers recognize that feedback and delays can change outcomes. So, your new products or services may be good ideas, but where and when the new product or service are introduced are important.

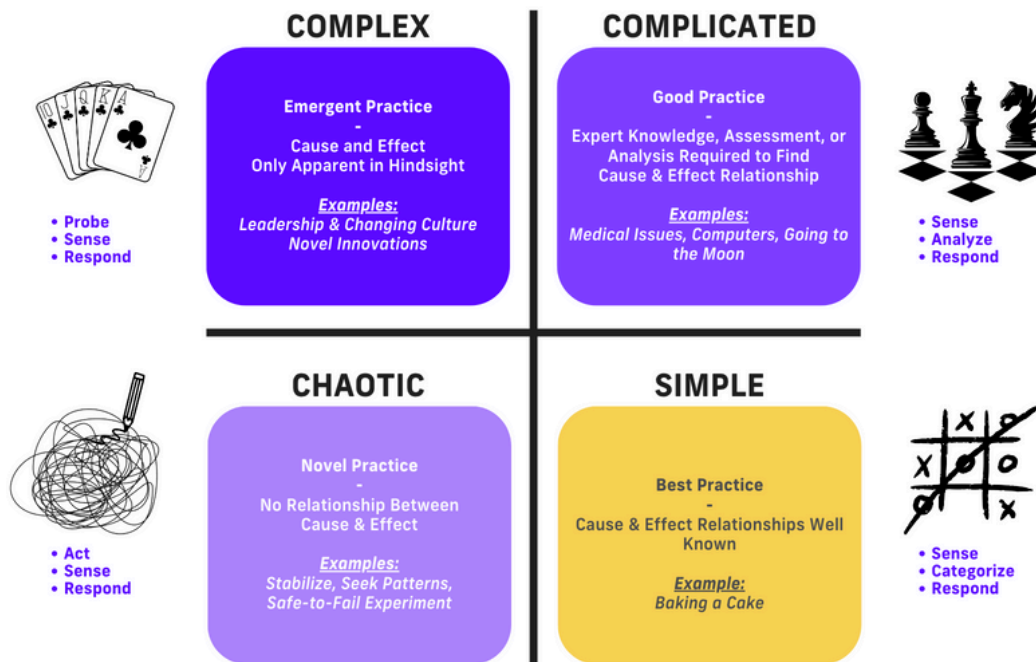
When Traditional Thinking Works...And When It Doesn't

Innovation approached through traditional thinking has served organizations well and will continue to do so in some situations. The challenge for business executives is knowing when they require traditional thinking and when they require systems thinking.

The Cynefin (kuh-NEV-in) Model is particularly helpful in explaining when traditional thinking works. (This Welsh word means 'habitat.') It was developed in 1999 by Dave Snowden when he worked at IBM.

The quadrants distinguish between different types of issues. Although there are no axes on this model, the right side of the model represents a more ordered world, in which a traditional, linear thinking approach applies. The left side requires systems thinking. We describe the quadrants below.

Cynefin Model



Simple: In a simple environment, cause and effect can be known. Activities can be controlled and their outcomes seen; examples include baking a cake or taking a customer order. Activities are often repeated and lend themselves to step-by-step manuals; deviations are easy to spot. Innovation often seeks to build greater efficiencies. In these cases, organizations can seek 'best practice'.

Complicated: A complicated environment has many more elements. It's difficult to solve problems, but they are ultimately solvable with enough experience or machinery. Activities here including engineering a building or taking people to Mars. Innovators spend time understanding the system and analyzing data, but can still take a traditional, structured approach to decision making. As there are many potential answers, there is no single best practice, but multiple 'good practices.'

Complex: This area is our main focus. Here, system elements have many relationships which can be invisible. Most problems involving people or ecosystems are complex. These activities include managing an team or changing your organization's culture. Almost any activity that involves people is complex. In these cases, there is not single best practice or even good practices, as innovators cannot know the whole system. So, they tend to use the techniques often describes as design thinking. They start by understanding the problem and ultimately develop small prototypes that leave room for failure.

Chaotic: This domain is most difficult to address. Patterns are unknown and there is considerable turbulence. Arguably we are experiencing such chaos in many domains, due to technological, social and environmental disruptions. For example, we do not know what blockchain will do to the financial sector. Organizations in these environments want to innovate in ways that keep future lines of action open.

This first Innovation Learning Lab will help you understand this new way of seeing the system. The table below captures how traditional and systems thinking differ.

	Traditional Thinking	Systems Thinking
Motivation	Answers to problems.	Answers are unknown, so innovators are inspired by questions, possibilities, and opportunities.
Direction of Analysis	Zooming out: Innovators anchor on the firm and zoom out to consider the implications on their future and the bigger system.	Zooming in and out: Innovators anchor on the system, which is often long-term and big picture, and then zoom in to implications to the firm. They then continue zooming in and out.
Objective or Purpose	Shareholder-based purpose.	Collective purpose. This purpose represents the best interests of the larger system. It is <i>not</i> a stakeholder perspective, which can sometimes lead to compromises.
Data	Facts and numbers are prioritized. Focus is on measurement, analysis, and solutions. Uncertainty is masked.	Stories, graphics, and art offer new ways of seeing and stimulate creativity. Uncertainty is embraced.
Analytical Logic	Deductive, inductive, analytical. Innovators assume that the system is stable, cause and effect are known, and outcomes can be predicted.	Abductive, inventive, creative. Innovators recognize the need for adaptation, so emphasize experimentation and trial and error.
Decision Choice	Trade-offs, optimization.	Comfortable with opposing ideas.
Self Image	Seeing one's self outside the system.	Seeing one's self as part of a system.

The Promise of Systems Thinking

Today, companies are disrupting larger systems while also being disrupted themselves. We have some ideas about how to innovate in such turbulent environments, but collectively, we are in new territory. The Innovation Learning Lab will bring some of the ideas that we know to the table and the group will collectively contribute their shared insights.

We don't have all the answers, as we are all playing in a new environment. But we know it is important to innovate the innovation process in this time of disruption. With diverse innovation leaders at the same table, we can figure out how to innovate products and services that create value, while stabilizing macro systems that are bordering on chaos.

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