



HUMAN SYSTEMS
DYNAMICS INSTITUTE

Innovate or Replicate: Choices for System Change

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The tool we shared in May was a self-assessment of innovative capacity and emerged from ongoing conversations we are exploring about innovation in a complex system. We are asking how we can use HSD to help build capacity to see, understand, and shift system-wide patterns in innovative ways. Recently, we came back to the conversation, focusing for a moment on an organization that was in some real distress as they tried to bring about significant system change.

I found myself reacting strongly—over-reacting actually—to what I saw as predictable and ineffective work. I was agitated at their apparent drive to put structures in place, even in the midst of what seemed to be a disorganized rush to just get something accomplished. They knew they wanted and needed something innovative, yet they clung to the old ways of looking at and attacking their challenges. They seemed to be rushing ahead without really grounding their action planning in the reality of their situation. From my perspective, it seemed they were at a point where, if they did not change their path, there was no way their project would be successful, in spite of their powerful commitment of time, energy and financial resources. And I wondered about my strong reaction to their dilemma.

I recognized the situation felt familiar! I spent over twenty years, working in an industry where it was difficult to get people to think in concrete terms about where they were going or what they wanted to create. Knowing that what they needed was real reform and systemic change, they often settled for dabbling with new configurations of old patterns that had not worked in the past. Hard working, well-intentioned individuals were held hostage in a culture that did not value real innovation. Rather than “re-invent the wheel,” which was their internal code-phrase for innovation, they adopted others’ “best practices” and believed that, if they implemented with enough fidelity, they could actually get the results they sought. Rather than working to see and understand the underlying patterns of interaction that created their challenges, they treated “symptoms” they could see at the surface.

Nothing is intractable.

When I confessed my over-reaction, a colleague explained that experience in IT work had shown her two possible paths for problem solving. First is "maintenance," and the second is "development". Maintenance is the function for on-going support of a computer system. It focuses on minor adjustments and day-to-day performance. It is about doing what we've always done and doing it a bit better. Development, on the other hand, is creating a new system to solve a new business problem or to find a new solution to an old problem. We talked about the differences between the two approaches, exploring what those might mean in the context of organizational and individual change. We realized that maintenance depends on **Replication**, with the purpose or goal of increasing certainty. Development, on the other hand, requires **Innovation** to step to the edge of uncertainty and find a new way.

Table 1 outlines major differences, as we see them, existing on a continuum from Innovation to Replication. Sometimes a system needs to be completely transformed because it no longer serves its original purpose. Old models of functioning and service just don't work any longer, and challenges emerge as the old patterns create complex challenges across the entire system. In these cases, the only way to respond is to innovate and find changes to system-wide patterns of decision making and interaction. Innovation is the only option when . . .

- ▶ The public education system does not prepare students for life and work in the 21st century
- ▶ System processes and procedures are built for manual or mechanistic work that can now be accomplished through digital or computerized systems
- ▶ Health care organizations no longer adapt quickly enough to keep up with the changing trends and research in medicine and/or pharmaceuticals
- ▶ Public, private, and governmental organizations and agencies come together across for-profit and non-profit lines in collaborative efforts to create new, more adaptable systems to meet the challenges of today's turbulent landscape

Sometimes, however, a system just needs to keep going or to adjust or shift current operations to respond to everyday changes in expectations or needs. In those cases, replication is enough. Replication is enough when . . .

- ▶ Organizations "outgrow" technical systems to manage their records and data functions
- ▶ Mechanical systems require adjustment to new specifications or regulations

That colleague and I explored questions and functions that might drive the two approaches, identifying four foundational differences between the two: how they define work, how they plan for work, how they assess work, and how they collaborate around work. “Innovators” see their work as questioning what is and seeking new ways to fit into an emerging landscape, while “Replicators” see work as holding the current status and sustaining what is. Innovators use theory-based iterative cycles of inquiry, analysis, and action that allow them to gather data, take informed action, and then assess outcomes that feed back into the next round of planning. Replicators, on the other hand, see planning as based on implementing best practices with high fidelity to meet local demands and externally created and enforced performance standards. Innovators use collaboration as a way to improve their processes through feedback and informed action. For Replicators, however, since external standards and regulations are already in place, collaboration connects individuals across the system to share lessons learned.

While there are some times when replication of best practices may be the best choice, they cannot address the uniqueness of every situation. Practices anywhere work because they meet unique system needs and conditions in a given time or place. That does not necessarily mean they will work in every situation that exhibits a similar set of needs. What might work in one place and time, may not meet the needs in another place or time. You cannot predict, and you cannot control enough of the system conditions to force a “best practice” to work in a new setting. If the best practice does not consider the myriad needs of a local environment, no amount of fidelity will guarantee it will work in a new situation. Too often, however, when a best practice does not work, we blame ourselves for not implementing well, rather than explore what might not have fit in our system.

Over the years of building capacity for turbulent change, we have heard a number of fears expressed by individuals and groups when they know they need innovation, but are leery of moving that direction. They say they don’t have time to wait for everything to get “set in place” for a major innovation. Some express concern that the system will fall apart if they don’t decide on structures and processes before they move forward. Yet others just cannot see the real potential they have to move a system forward and create a path as they go toward commonly shared goals. Still others just want to follow another’s path to maintain their sense of certainty and predictability.

How do we support our clients who face the need for innovation in their systems? We help them build capacity to:

- ▶ See their work differently:
 - ▷ Stand in inquiry, considering the patterns of interaction and decision making that will move them to the next step down the road. We help them explore options and functions that will take their organizations to the next level of functioning.
 - ▷ Understand the underlying dynamics that generate today's patterns so they can leverage the power and speed of change inside the system to create and establish the innovation they need.
- ▶ Plan their work differently:
 - ▷ Build a theory base that guides their actions and informs their inquiry at each decision point.
 - ▷ See the journey before them as an ongoing process of adaptation, which is the most viable path for meeting and addressing the day-to-day bumps in the road, as well as the long-term challenges of change.
- ▶ Assess their work differently:
 - ▷ Use data that is both true and useful to assess progress toward their goals and the need to revise their interactions at multiple intervals along the way.
- ▶ Collaborate around their work differently:
 - ▷ Engage across lines of difference to share information, data, and perspectives to create a broad brushstroke understanding of the challenge

Every human system is unique in the challenges it faces, the constraints that shape it, and the work it does. There is no inherent "right" or "wrong" in how we approach change and transformation. Neither replication nor innovation is "naughty or nice." What we have to consider is fitness to purpose. Does the action we take create the best fit in the environment? Is this action the most likely to create the patterns we desire and to ensure sustainability for this system in the current environment? As my colleagues and I examined the question of fitness, we put the descriptions of Innovators and Replicators as a continuum from one to the other to allow for selection and adaptation along each spectrum, as the situation demands.

While I have a personal preference for the “Innovation” end of the spectrum, I also recognize that “Replication” is not naughty! Just as there are times when innovations are needed for system-wide change, sometimes maintenance and replication of others’ evidence-based practices are what will best address current challenges. Wise practitioners see the need for both approaches, read the system patterns and cues, and make intentional decisions as they make choices to influence systemic change.

It is our belief that, at either end of the change continuum, people are engaged in behaviors that can be learned. One way to think about adaptive capacity is as facility in using both approaches, shifting between the two as appropriate to any current and emerging environment.

Join us in this conversation about building your organization’s capacity for knowing when innovation or replication will best serve emergent needs and building the skills to do them both with equal finesse. Contact me at info@hsdinstitute.org.

Innovation and Maintenance: A Continuum of Approaches to Transformation

	Replication ←	→ Innovation
Sees work as . . .	<ul style="list-style-type: none"> ▶ Maintaining current applications, with some tweaking to make current processes or procedures more efficient and/or robust ▶ Maintaining and updating current state, with improvements being based on external definitions and specs of “best practice” 	<ul style="list-style-type: none"> ▶ Finding new solutions for old problems; seeing new challenges that need better solutions ▶ Exploring, visioning, and creating questions and solutions that move the system’s functioning to the next level to meet local needs
Plans for work by using . . .	<ul style="list-style-type: none"> ▶ Descriptions of what currently exists and finding “best practices” for maintaining that ▶ Required specifications around current practice or “best practice” to guide and assess implementation 	<ul style="list-style-type: none"> ▶ A theory base that informs insights and decisions across the life of the project ▶ Robust and flexible responses that allow for adaptation throughout planning and implementation
Uses assessment to . . .	<ul style="list-style-type: none"> ▶ Measure the degree to which one reduces uncertainty ▶ Check periodic system performance against external measures and expectations 	<ul style="list-style-type: none"> ▶ Assess the ways and degree to which one responds creatively to uncertainty ▶ Determine the degree to which current and future performance and progress meet system needs at any point in time
Sees collaboration as . . .	<ul style="list-style-type: none"> ▶ A valued way to get people involved, but it cannot actually enhance or enrich the work because outcomes and specs are already established by what is in place or by the requirements of the “best practice” 	<ul style="list-style-type: none"> ▶ A valued way to gather data and information about need, process, implementation, and other forms of feedback on an ongoing basis to inform further action

Replicate? or Innovate? A System Needs Profile

Use the following scale to reflect on the current system challenge to create a profile that will indicate the degree of innovation or replication needed to address this need.

1. Consider each question and circle the number that represents your current system.
2. Use a line to connect the numbers from one row to the next.
3. Reflect on the resulting "profile" to consider the type of solution you need for this current challenge.

Our current solutions generally serve the purposes of the system, but need some help.	1	2	3	4	5	Our current solutions no longer serve the purpose of our system.
We need to find ways to make our current system more efficient and/or robust.	1	2	3	4	5	We need to find ways to move our system to the next level of service and/or functioning.
Best practice solutions exist that match our current need.	1	2	3	4	5	Our needs are unique and require an adaptable solution.
We can identify specifications and requirements for determining success and progress for this solution.	1	2	3	4	5	We need the system to adapt and respond according to emergent and unpredictable requirements.
Success for this solution will be measured by how well it reduces uncertainty for the whole system.	1	2	3	4	5	Success for this solution will be measured by how well it enables creative responses to uncertainty.
We will assess functioning of this solution by using periodic checks against external measures.	1	2	3	4	5	We will assess functioning of this solution through ongoing feedback about how well it responds to system needs at any given time.
We will engage people to get "buy in" so the solution can be implemented with rigor and fidelity.	1	2	3	4	5	We will collaborate on design, implementation, and ongoing feedback to ensure the solution is adapting and responding as needed.

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