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Universities as Anchors of Regional Innovation

Engaging our universities in new ways creates new opportunities for regional innovation

Key Points:

- Regional innovation systems form with networks that operate with sufficiently high levels of trust to innovate.
- Regional innovation systems emerge from a portfolio of networks focused on different key components.
- Engaged universities can speed the development of regional innovation systems.

In the midst of all the political gridlock in Washington, it's easy to become cynical about the long-term competitive prospects of our nation's economy. But shift your focus to the nation's regions, and your outlook will change. There, leading edge universities have launched promising experiments to design and develop ecosystems — a series of overlapping, interacting, open networks — to support both startups and high growth companies. Ecosystems create value through interactions that lead to innovation. They generate “innovating networks” that speed ideas to market.

There's no doubt that we can intentionally design and develop these ecosystems. Nearly 20 years ago, a small team of civic entrepreneurs in Oklahoma City convened with a determination to move the city forward after a decade of stagnation. We designed



and built new networks to speed collaborative investments in focused areas.

Nearly 15 years ago, Ernest Andrade, a young professional working for the city of Charleston, South Carolina, began developing the Charleston Digital Corridor. For a roadmap, Ernest listened carefully to the lessons we learned in Oklahoma City. Now, Oklahoma City is held out as a model for the rest of the country and both Oklahoma City and Charleston are outperforming the nation in job growth. Both cities have moved to the top the list of cities that support entrepreneurs.

Innovating networks collaborate to create shared value. They take time and high levels of trust to form.

Innovating networks form the core of a dynamic regional innovation ecosystem.

What's the lesson? By following a few simple rules and frameworks, any city can develop the platforms needed to stimulate the formation of innovating networks. At the Purdue Center for Regional Development, we have been designing and developing the tools and frameworks needed to speed the development of clusters, innovating networks and ecosystems.

Here is what we are learning.

Thinking in New Ways: Change the Narrative to Promote Network Thinking

Our highly ideological national debates exact a toll: They slow down innovation. To avoid these pitfalls at the regional level, we start by reframing our competitiveness challenge. We don't present ideas in terms of public and private sectors. Instead, we look at our economy as a market economy embedded in a broader civic economy.

In the market economy, individuals and organizations make investments that are both publicly valuable and privately profitable. In the civic economy, individuals and organizations make investments that are publicly valuable but generally not privately profitable.

While business firms dominate our market economy, our civic economy is far more diverse. It includes government, educational organizations, philanthropic foundations, and nonprofit organizations. Seen from this perspective, our competitiveness



Source: Ed Mortimer

In an innovating region, the civic economy is aligned to support investments in the market economy.

challenge involves aligning our civic economy with our market economy. That's what building globally competitive clusters and vibrant ecosystems is all about. The work requires developing multiple innovating networks across both our market and civic economies. At this porous, flexible boundary, the real work of long range, transformational innovation takes place.

The overall productivity of both economies, working together, drives our prosperity. More important, we can see that our civic economy — far from being dead weight as some would have it — is central to our competitiveness. The flexibility and adaptability of our civic economy lies at the core of national competitive strength. (This is not a new insight. Toqueville saw this strength of the American form of democracy in the 1830's.)

Not surprisingly, like our market economy, our civic economy is undergoing a major transformation from closed, hierarchical organizations to open, loosely joined networks. As Brian Arthur pointed out years ago, networks can lead to major new opportunities for value creation. Changing the prevailing narrative in a region involves moving the collective thinking from closed command-and-control, hierarchical mindsets to horizontal, more flexible, open and opportunistic thinking. This idea of a vibrant ecosystem is captured in the metaphor of the rainforest.

Moving in this direction represents a big shift for many regions, especially with older industrial economies. Here, due to the industrial strength of the past, hierarchies dominated both market and civic life. So, it is not surprising that in some of these regions, the civic life is still dominated by hierarchical, risk-averse thinking. Patterns of civic interaction, reinforced by top-down, command-and-control mindsets, are narrowed by long established (but increasingly less relevant) organizational and political boundaries.

Changing the narrative within these regions represents an important first step. Stories of effective collaboration enable civic leaders to cross these boundaries more easily. Collaboration becomes more acceptable and more rewarded.

Here's an example. In 2005, the University of Wisconsin at Milwaukee began a new narrative in Southeast Wisconsin by pointing to the region's abundance of assets in freshwater

technology. Out of that shifting narrative, a new cluster emerged: The Water Council.

Now, the Water Council — which includes leading actors from the region’s market and civic economies — stands as a global leader in the development of freshwater technologies. Instead of being constrained by organizational and political boundaries within their region, the leaders of Milwaukee’s water cluster began linking and leveraging their assets across these boundaries.

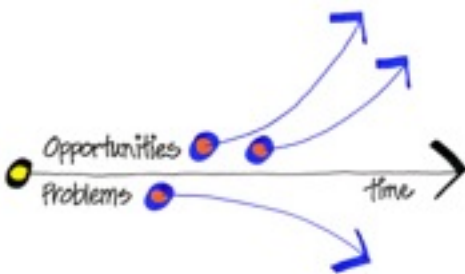
Behaving in New Ways: Create Civic Spaces and Plant New Seeds

Shifting the regional narrative, while an important first step, is not enough to develop an ecosystem. (Otherwise, every region with “Silicon” in its name would be an innovation hot spot. They’re not.) A region that embraces innovation must also establish regular places for networks to form and people to interact.

Oddly though, many regions still do not have the “civic spaces” — regular forums, meet-ups, and gatherings — where actors in the market and civic economies interact regularly. Creating these platforms creates opportunities for connection. They constitute a new type of civic infrastructure that is essential for ecosystems to flourish. Developing these platforms is simple, but not easy. They take time and persistence.

If you glance across our regional landscape, most places are still stuck in the top-down mindset of the annual meetings, leadership summits, and “sage on the stage” panel discussions. These events pay scant attention to stimulating interaction among participants. They do little to promote the behavior needed for innovation in open, loosely joined networks.

Indeed, some places must start at a more basic level. Their civic discourse has become corrupted by patterns of bad civic behavior. To begin building an innovation ecosystem, they need first to establish clear standards of civility before any large-scale innovation in the civic economy can happen.



Civic forums help people practice the habit of moving toward their opportunities. A key insight: people move in the direction of their conversations.

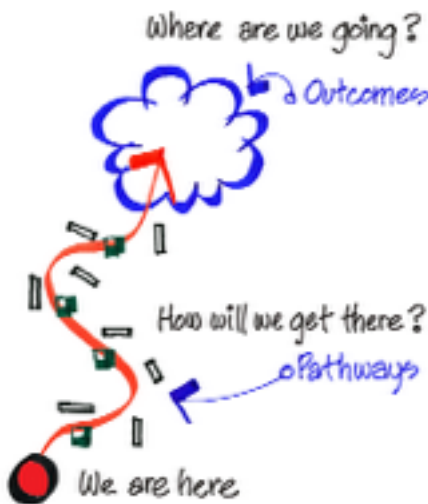
In the open networks that characterize our civic economy and our democracy, civility plays a central role. Without it, we cannot do the complex thinking needed to innovate or dress the continuous flow of challenges we face.

To make this point, we often refer to John Madison's notes of our Constitutional Convention. In May 1787, before any business transpired at the convention, the delegates passed rules of civility. These guidelines enabled them to conduct heated exchanges within these bounds. They provided the safe space for the delegates to design our new form of government.

Once a region establishes civic spaces, civic leaders and entrepreneurs can plant the seeds from which new networks form. These seeds take the form of engaging conversations that stimulate new collaborations.

To develop this ecosystem around the the Penn State College of Medicine, they have launched a monthly Innovation Cafe. During the design phase, civic leaders agreed that no single organization would "own" the initiative. Instead, they wanted to create a commons, shared by all. Each month, leaders of the Cafe plant seeds, consisting of both educational content and investment opportunities that draw participants into the monthly forum.

In a similar way at the Charleston Digital Corridor, Ernest Andrade plants seeds at regular Fridays at the Corridor events. These sessions attract new participants and strengthen ties within the Charleston ecosystem.

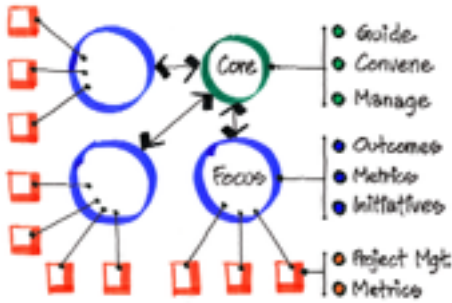


Source: Ed Morison

Strategy in open networks involves answering two simple, but not easy, questions. Strategic Doing is designed to answer these two questions quickly and make revisions based on learning by doing.

Do Strategy in New Ways: Link and Leverage

When it comes to building a strategy for an ecosystem, our traditional linear approaches — strategic planning — just won't do. This approach is simply too slow and costly. Instead, we can build our networks intentionally by teaching people how to collaborate quickly, move their collaborations toward measurable outcomes, and make adjustments along the way. These new strategy practices — which at Purdue we call "Strategic Doing" — accelerate network development in an intentional and disciplined way.



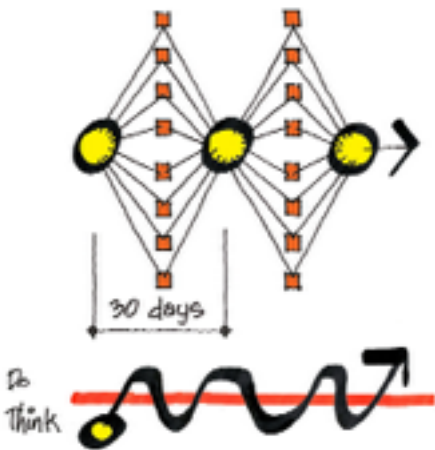
Strategic Doing forms a managed network with a core team, outcomes (with success metrics), and projects (with metrics and milestones).

Traditional strategic planning operates from the premise that we can discover most of what we need to know through detailed analysis. The fallacy, of course, is that complex systems are unknowable in this way. No amount of analysis is complete. In addition, strategic plans generated with long periods of data gathering and analysis are very difficult to implement. They exhaust our energy and fail to inspire participation.

Strategic Doing is different. It is designed to form collaborations quickly by “linking and leveraging” our existing assets across the network. As we do, we also align them. Because we are dealing with complex systems that are continuously changing, Strategic Doing presumes that the only way forward is to learn by doing.

With clear, simple rules to guide this process, participants in emerging networks learn the new skills of deep collaboration. By teaching these skills across a region, more networks form faster. We scale ecosystem development. In the end, regions with more innovating networks will be more competitive. They will learn faster. They will spot opportunities faster. And they will align and act faster.

With Strategic Doing, we form hypotheses quickly and test our assumptions with “pathfinder projects”. Moving into action has another significant benefit: we form bonds of trust more widely and quickly. We are scaling the development of trust. By alternating periods of thinking and doing in short “time buckets” — usually 30 days — we make continuous adjustments in our strategy as we move forward.



Source: Ed Morison

Strategic Doing is designed on agile principles. There is no such thing as a final strategy. Continuous reviews lead to continuous revisions.

Equally important, developing strategy in networks must rely heavily on visualizations. Because we are dealing with complex systems that we cannot see, visualizations help us align our mental models. Visualization, a key tool of design thinking, reduces confusion. Text — in the form of endless Power Points, or long, unread strategic plans — opens the door to widely varying interpretations. In contrast, pictures engage a different part of our brain. The more vivid our imagery, the more we are likely to become emotionally engaged in our collaborative work. Seeing and gaining new insights becomes a shared experience.

To capture the complex collaborations that characterize a vibrant innovation ecosystem, we have created a simple visualization, a



Ecosystems require a portfolio of collaborative investments. By mapping existing assets on this portfolio, regional leaders can begin to see how to strengthen their existing networks.

Strategic Doing Portfolio that outlines the type of networks that make an ecosystem or regional innovation cluster vibrant. The theory of transformation underlying the portfolio is straightforward. It says simply:

- A vibrant ecosystem needs brainpower to power it.
- It needs support networks for innovation and entrepreneurship to convert brainpower into wealth.
- The ecosystem also needs networks to develop quality, connected places, because both talent and growing companies are mobile; they will only locate in quality, connected places where people can comfortably connect.
- A vibrant ecosystem relies on new, intentionally developed narratives to both guide participants to new opportunities and to attract new resources to the ecosystem.
- Finally, an ecosystem cannot develop without a deep pool of people with the sophisticated collaboration skills to guide and develop these new networks.

Most of the results we want from an ecosystem — cool places, creative people, hot companies, innovative clusters — are “emergent”. They emerge from a balanced set of underlying investments. An effective regional strategy focuses on generating measurable returns from these underlying investments.

Power the Engaged University with Strategic Doing

We do not need to leave the development of these ecosystems to chance. We have natural anchors for these ecosystems in every region of the country. For a host of reasons, colleges and universities can be leading their development:

- Colleges and universities are the major source of talent needed to power these ecosystems;
- With students, faculty, staff and alumni, they can assemble the networks needed to support startups and high growth companies;

- Their campuses, especially when they are connected to the surrounding community, provide high quality physical development to make their region “sticky” to both talent and high growth companies;
- They provide a rich source of stories — the new narratives — that can align resources and speed the development of these networks; and
- They have the convening power to bring together the different actors within the ecosystem and teach the skills of deep collaboration.



That’s the path we are following. We start by teaching Strategic Doing. With our university partners — including colleagues at Michigan State University, the University of Alaska, Northern Illinois University, Kansas State University, the University of Wisconsin-Milwaukee, the University of Wisconsin-Parkside, the University of Missouri, and The University of Akron – we are building a network of university centers that understand and can apply agile strategy. Our immediate goal is to teach a Strategic Doing certification on five campuses next year. We are targeting twenty to thirty universities in three years.

In our work with Michigan State, we have developed *Strategic Doing: The Game*. The game introduces the deep skills of collaboration quickly. By producing remarkably detailed strategies in a few hours and charting a simple path forward, *Strategic Doing: The Game* resets our shared notions of strategy. It’s no longer a deadening, endless exercise. Strategy becomes fun, fast and engaging.

In the years ahead, fully engaged universities will guide the development of regional innovation systems. New approaches to strategy provide the framework for developing sophisticated collaborations quickly and moving them toward clear, measurable outcomes.

Engaged universities — through faculty, students, alumni and staff — will power the formation of these regional innovation systems. We have reached an exciting inflection point.

Strategic Doing: The Game provides a simulation for developing sophisticated strategies quickly. Players begin to understand that strategy in open, loosely connected networks requires a new approach.

Ed Morrison



Ed Morrison is the regional economic development advisor at the Purdue Center for Regional Development, joining the staff in 2006. For over 20 years, he has conducted strategy projects with economic and workforce developers in the U.S. He guided the private sector team, based in the Oklahoma City Chamber of Commerce, that partnered with the City to transform Oklahoma City. He also guided the early development of the Charleston Digital Corridor.

His work emphasizes the strategic value of focused regional collaborations and open innovation, network-based models in today's global economy. Ed developed a new discipline called Strategic Doing to accelerate these collaborations that is now widely used across the U.S. and is now gaining attention internationally. His work won the first Arthur D. Little Award for excellence in economic development presented by the American Economic Development Council.

Prior to starting his economic development work, Ed worked for Telesis, a corporate strategy consulting firm. In this position, he served on consulting teams for clients such as Ford Motor Company, Volvo and General Electric. He conducted manufacturing cost studies in the U.S., Japan, Mexico, Canada, Italy, Sweden and France.

Ed started his professional career in Washington, D.C., serving as a legislative assistant to an Ohio Congressman, staff attorney in the Federal Trade Commission and staff counsel in the U.S. Senate. He holds a B.A. degree cum laude from Yale University and M.B.A. and J.D. degrees from the University of Virginia.

Purdue Center for Regional Development

Formed in 2005, the Purdue Center for Regional Development (PCRD) answered the call for our nation's research universities to become more engaged in promoting regional prosperity. And for good cause. Our nation's competitiveness is tied to our regional economies where sophisticated clusters of innovative businesses form and grow. Our research universities help accelerate this innovation with innovative approaches to regional engagement that are agile, adaptive and responsive.

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Pioneering these new approaches comes naturally to Purdue, and this purpose—defining the contours of regional engagement for the 21st century research university—defines the work of PCRD. The energy to pursue this purpose is rooted in our values. We build sophisticated collaborations quickly by relentlessly looking for mutual benefits and behaving in ways that build trust and mutual respect.

We anticipate dramatic changes to the academic and market landscapes for our nation's research universities in the coming years. Our proactive response is to continue to explore new ways to co-create value with those willing to invest in their future prosperity. In defining the tools, frameworks and strategy disciplines to guide these sophisticated collaborations, PCRD stands at the forefront of this important work.

Strategic Doing



Strategic Doing teaches people how to form collaborations quickly, move them toward measurable outcomes and make adjustments along the way. In today's world, collaboration is essential to meet the complex challenges we face. Strategic Doing enables leaders to design and guide new networks that generate innovative solutions. It is a new strategy discipline that is lean, agile and fast—just what organizations, communities and regions need to survive and thrive. You can learn more about [Strategic Doing on the PCRD website](#). You can download background [here](#); watch an introductory video [here](#); and keep up with Strategic Doing on our [blog](#) and [Facebook page](#). Questions? Send us an e-mail at strategicdoing@purdue.edu.