

Using the Collective Impact Framework & Adaptive Management Techniques to Promote More Effective and Widespread Green Infrastructure



Scott Altenhoff – City of Eugene – Urban Forestry

What is Green Infrastructure?

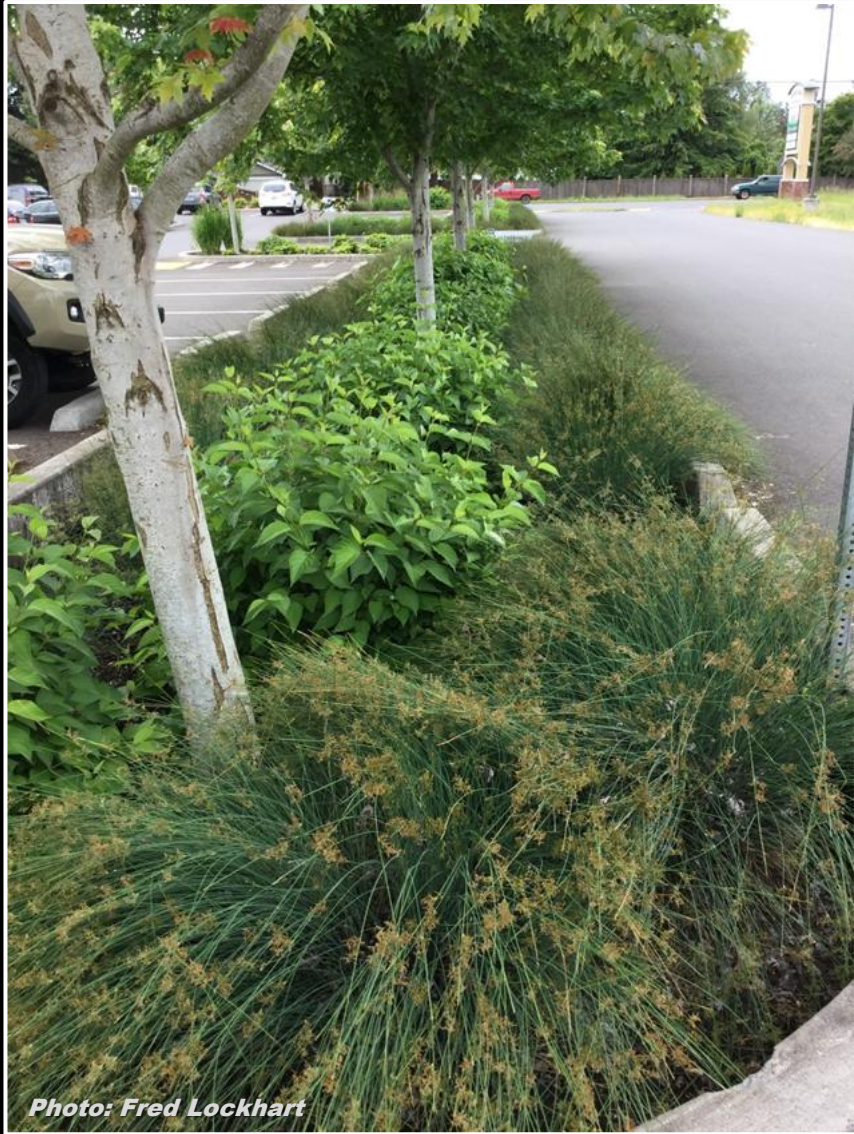


Photo: Fred Lockhart



Photo : Sequential Biofuels



Photo: Eugene Parks & Open Space



Photo: Google Maps



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Understood as a multi-scale network of ecological features and systems that provide multiple functions and benefits, GI provides a systems approach to planning and development that recognizes the value of ecosystem services and strives to integrate and enhance those ecosystem services within our built environment.”

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It’s ultimately about **people and **organizations** making that choice.”**

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Photo: Worlfram Burner



Photo: Friends of Trees



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Photo: Eugene Parks & Open Space

A Prime Example of Green Infrastructure in Eugene



Photo: Raptor Views Aerial Imaging

Multi-functionality



Image: Google Maps



Photo by Rick Obst

Helping to turn community liabilities into assets



Photo: Eugene Parks and Open Space

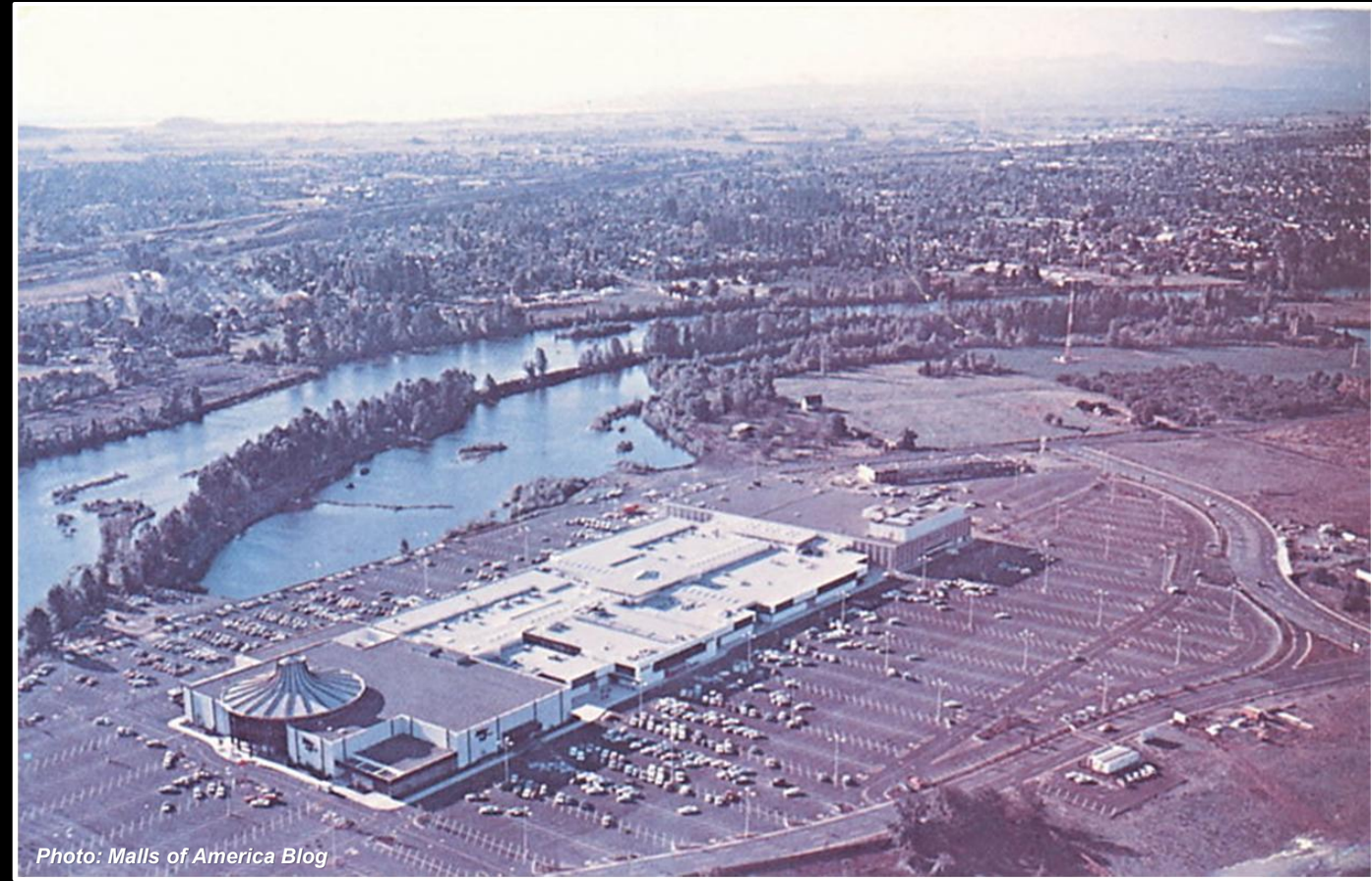


Photo: Malls of America Blog

A broad array of partners and stakeholders



paths and bridges at Delta Ponds are level and well built.
Heron Marychild | 02.15.14



Photo Credit: Chickadee and Raven



Photo: Eugene Parks & Open Space

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- 2) To provide a brief summary of the Collective Impact framework**
- 3) To provide a brief summary of Adaptive Management principles**
- 4) To initiate a discussion about how we might better use these two concepts to improve and expand our region's GI network**

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The real key to GI is its multi-functionality and its ability to work with - rather than against - natural processes

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It appears that the most significant problems are related to a general lack of coordination and “information flow” among partners and stakeholders

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- **Lack of interaction/conflicting agendas among key stakeholders resulting in social network fragmentation**

“Culture Eats Strategy for Breakfast”

-Peter Drucker

Backward

Forward

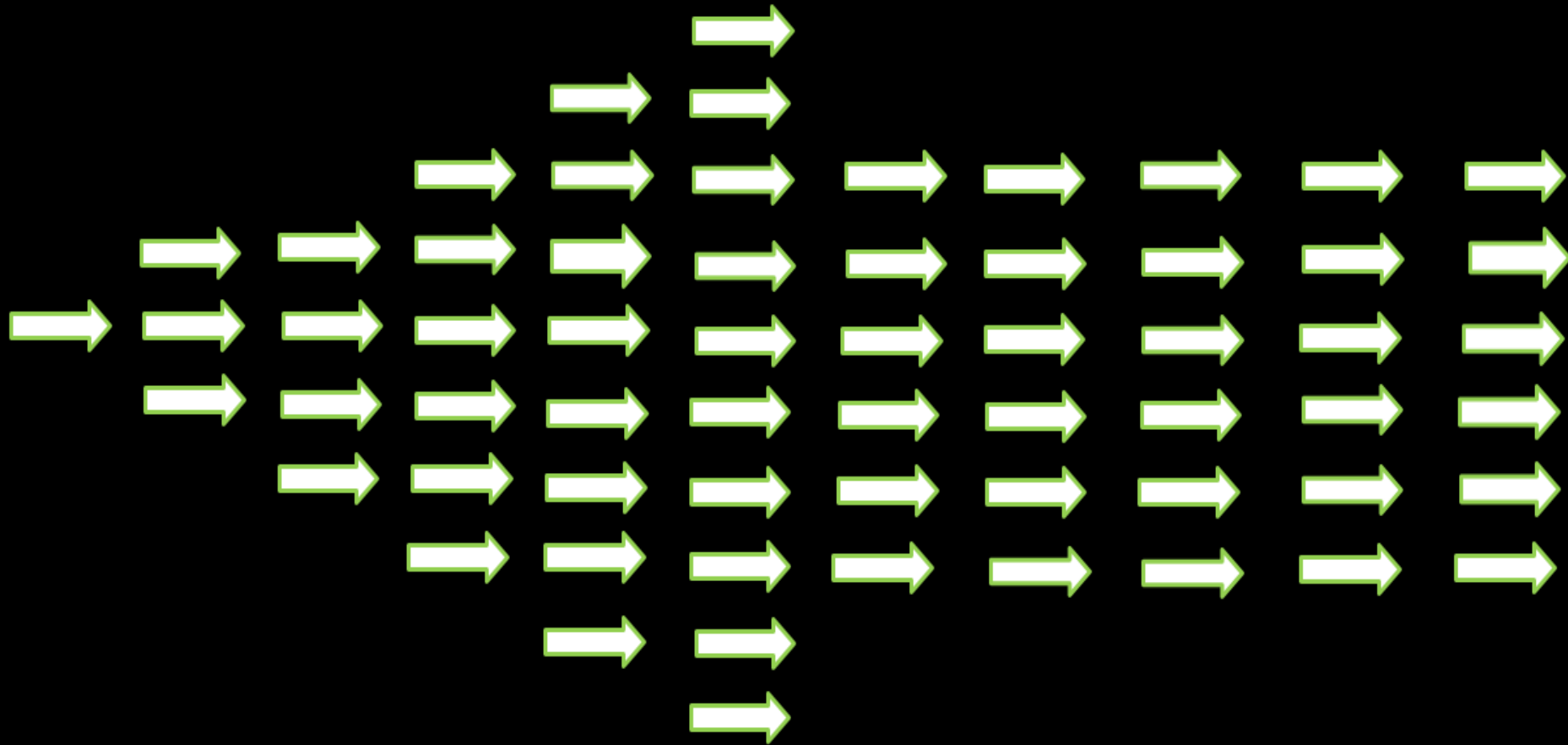




Photo: Eric DeBord

The Collective Impact Framework

Stanford SOCIAL
INNOVATION REVIEW

Collective Impact

By John Kania & Mark Kramer

Stanford Social Innovation Review
Winter 2011

Collective Impact

LARGE-SCALE SOCIAL CHANGE REQUIRES BROAD CROSS-SECTOR COORDINATION, YET THE SOCIAL SECTOR REMAINS FOCUSED ON THE ISOLATED INTERVENTION OF INDIVIDUAL ORGANIZATIONS.

BY JOHN KANIA & MARK KRAMER

Illustration by Martin Jarric

The scale and complexity of the U.S. public education system has thwarted attempted reforms for decades. Major funders, such as the Annenberg Foundation, Ford Foundation, and Pew Charitable Trusts have abandoned many of their efforts in frustration after acknowledging their lack of progress. Once the global leader—after World War II the United States had the highest high school graduation rate in the world—the country now ranks 18th among the top 24 industrialized nations, with more than 1 million secondary school students dropping out every year. The heroic efforts of countless teachers, administrators, and nonprofits, together with billions of dollars in charitable contributions, may have led to important improvements in individual schools and classrooms, yet system-wide progress has seemed virtually unobtainable.

Against these daunting odds, a remarkable exception seems to be emerging in Cincinnati. Strive, a nonprofit subsidiary of KnowledgeWorks, has brought together local leaders to tackle the student achievement crisis and improve education throughout greater Cincinnati and northern Kentucky. In the four years since the group was launched, Strive partners have improved student success in dozens of key areas across three large public school districts. Despite the recession and budget cuts, 34 of the 53 success indicators that Strive tracks have shown positive trends, including high school graduation rates, fourth-grade reading and math scores, and the number of preschool children prepared for kindergarten.

Why has Strive made progress when so many other efforts have failed? It is because a core group of community leaders decided to abandon their individual agendas in favor of a collective approach to improving student achievement. More than

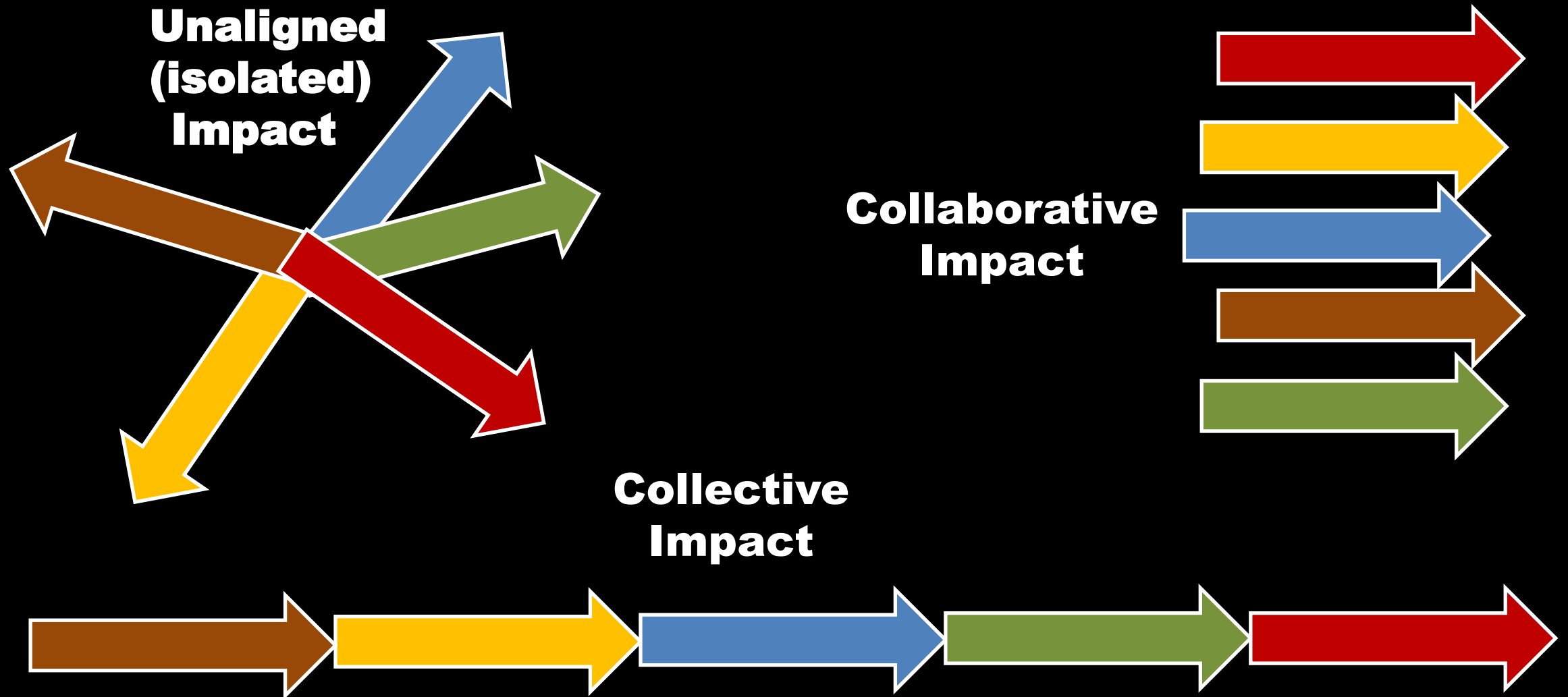
300 leaders of local organizations agreed to participate, including the heads of influential private and corporate foundations, city government officials, school district representatives, the presidents of eight universities and community colleges, and the executive directors of hundreds of education-related nonprofit and advocacy groups.

These leaders realized that fixing one point on the educational continuum—such as better after-school programs—wouldn't make much difference unless all parts of the continuum improved at the same time. No single organization, however innovative or powerful, could accomplish this alone. Instead, their ambitious mission became to coordinate improvements at every stage of a young person's life, from "cradle to career."

Strive didn't try to create a new educational program or attempt to convince donors to spend more money. Instead, through a carefully structured process, Strive focused the entire educational community on a single set of goals, measured in the same way. Participating organizations are grouped into 15 different Student Success Networks (SSNs) by type of activity, such as early childhood education or tutoring. Each SSN has been meeting with coaches and facilitators for two hours every two weeks for the past three years, developing shared performance indicators, discussing their progress, and most important, learning from each other and aligning their efforts to support each other.

Strive, both the organization and the process it helps facilitate, is an example of collective impact, the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem. Collaboration is nothing new. The social sector is filled with examples of partnerships, networks, and other types of joint efforts. But collective impact initiatives are distinctly different. Unlike most

Different Types of Group Impact



The Collective Impact Framework

Common Agenda

Shared Measurement

**Mutually Reinforcing
Activities**

**Continuous
Communication**

Backbone Support

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Backbone Support

- **Separate organization(s) with staff**
- **Resources and skills to convene and coordinate participating organizations**

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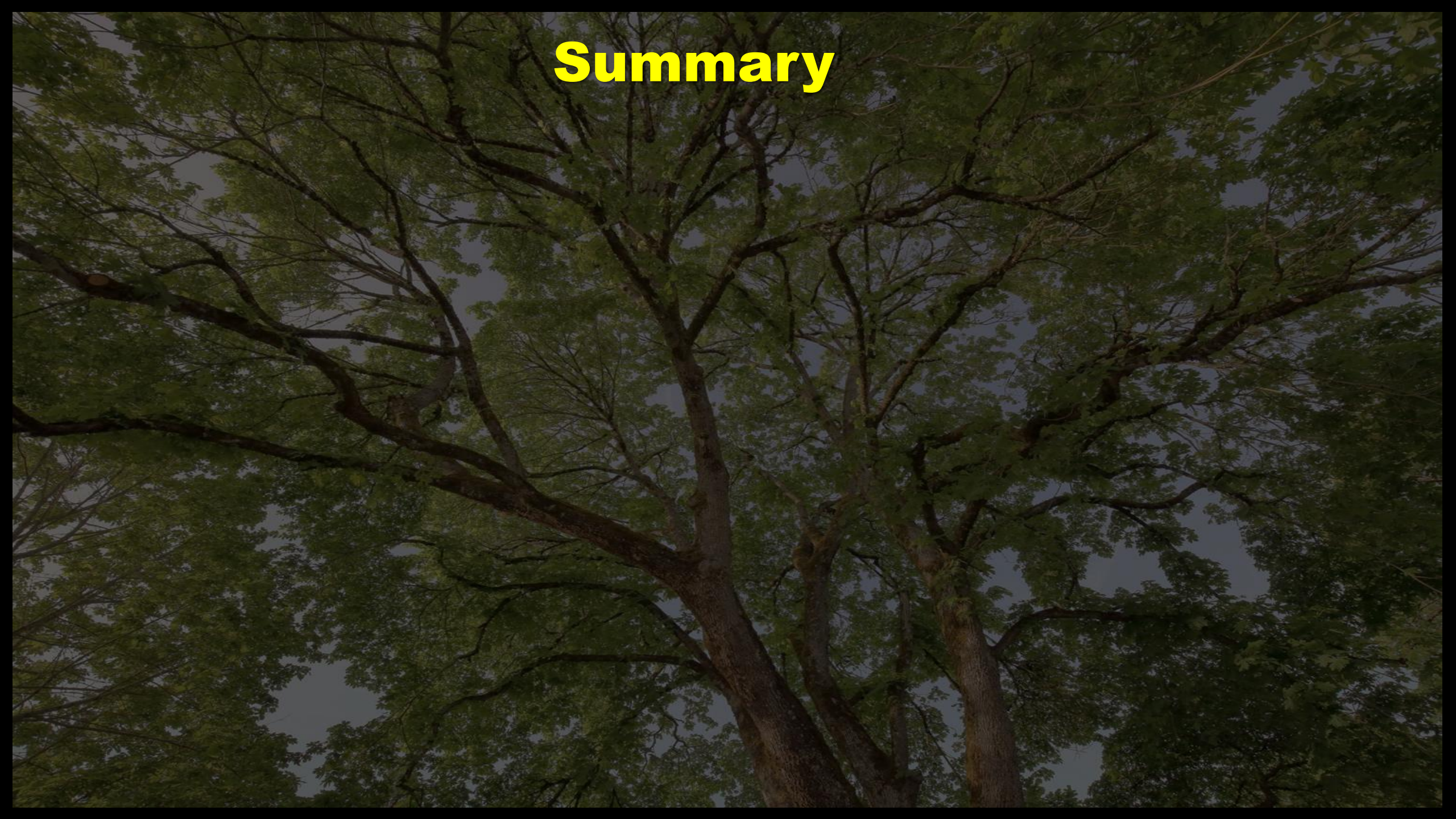
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- **Incorporate tools with which GI managers can monitor, evaluate and share the outcomes of management actions**
- **Continually capture new information gained through research (scientists), and the adaptive management and monitoring process (GI managers)**
- **Transform this new data and information into useful knowledge to expand our understanding of BMPs**

Collective Impact + Adaptive Management



Photo: www.burnmouthecho.com

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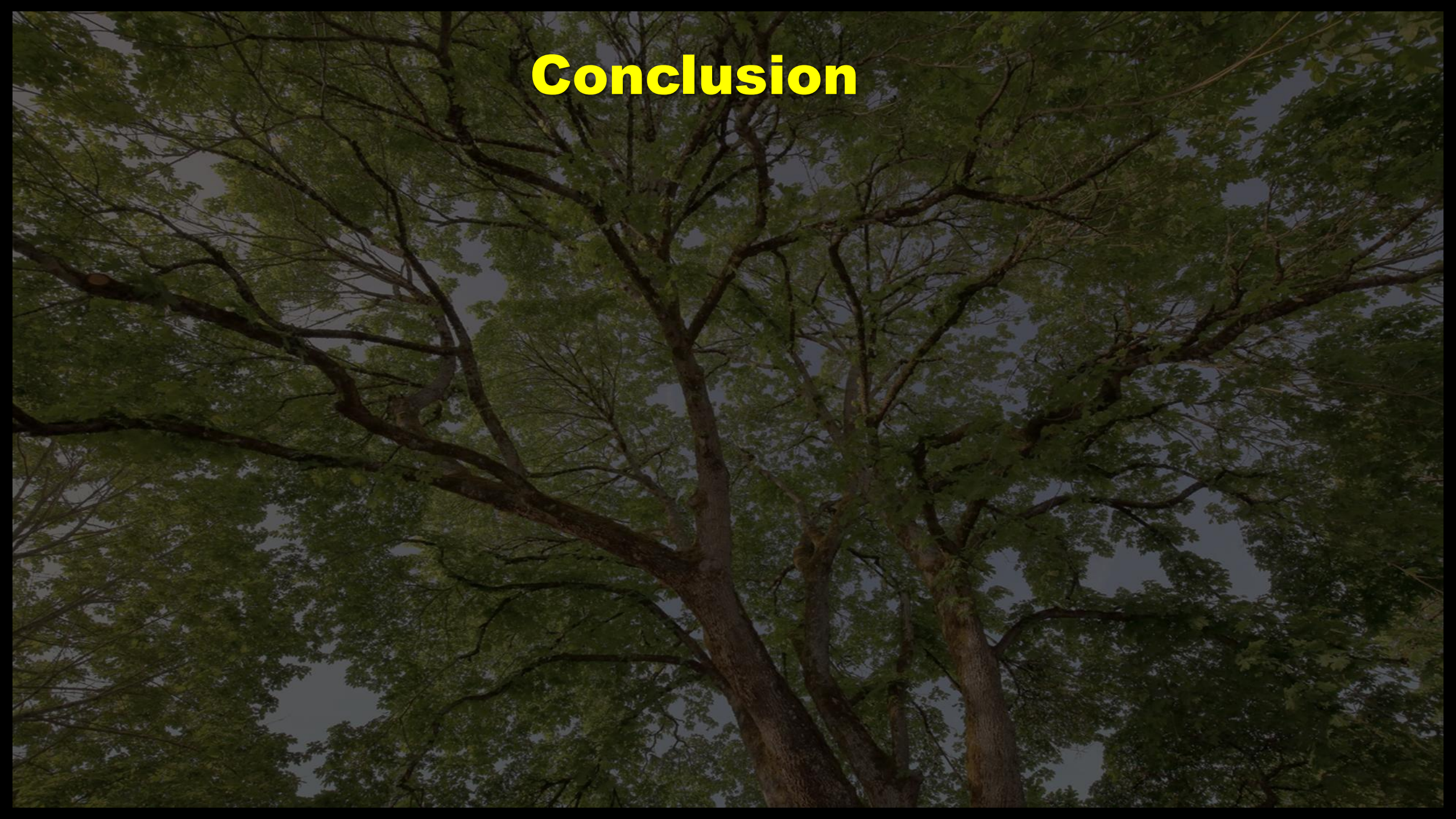
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We need to break out of our respective silos; researchers, GI managers and field staff all need to share their knowledge/insights

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The most significant challenge for advancing a robust and integrated form of green infrastructure may be one of **leadership** and **collective action.**”

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References:

Allen, W.J., Bosch, O.J.H, Kilvington, M.J., Harley, D. & Brown I. (2001) Monitoring and adaptive management: addressing social and organizational issues to improve information sharing. *Natural Resources Forum* 25(3):225-233. Accessed online at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.570.9407&rep=rep1&type=pdf>

Holling, C. S. (2001). Understanding the complexity of economic, ecological, and social systems. *Ecosystems*, 4(5), 390-405. Accessed online at: <https://link.springer.com/article/10.1007/s10021-001-0101-5>

Kania, J., & Kramer, M. (2011). Collective impact. Accessed online at: https://ssir.org/articles/entry/collective_impact

Kimmel, C., Robertson, D., Hull, R. B., Mortimer, M., & Wernstedt, K. (2013) Greening the Grey: An Institutional Analysis of Green Infrastructure for Sustainable Development in the US. *Center for Leadership in Global Sustainability, Virginia Tech*, 6. Accessed online at: http://narc.org/wp-content/uploads/CLiGS-NARC_GI2013_final.pdf

McChrystal, G. S., Collins, T., Silverman, D., & Fussell, C. (2015). *Team of teams: New rules of engagement for a complex world*. Penguin.



Thanks for Your Time and Attention!

I Look Forward to Your Comments & Questions

Photo: Eric DeBord