

The Power of Community Networks: Learnings from the Education Innovation Clusters Movement

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Table of Contents

Introduction.....	4
The Origin of EdClusters	5
EdClusters Activities.....	7
The Power of Networks.....	8
Convenings.....	9
Working Groups and Cohorts.....	10
EdClusters Principles, Profiles, and Learnings	13
How EdClusters Are Organized.....	13
Stakeholders.....	15
Partnership Models.....	16
Funding Approaches.....	18
Principles for Building a Learning Ecosystem.....	20
Profiles and Stories	21
Lessons Learned	22
Deepening the Work.....	24
Appendix	30
Appendix A - Theoretical Underpinnings for EdClusters.....	31
Appendix B - EdClusters Funders	32
Appendix C - EdClusters Participants.....	33
Steering Committee.....	33
EdClusters Around the Country.....	34
Appendix D - EdClusters Convenings	35
Appendix E – Expansive Collaboration Examples for EdClusters	36
Appendix F - Maturity Rubric For Education Innovation Clusters.....	37
Appendix G - EdClusters Stakeholders and Partners Across Sectors.....	38
Appendix H - EdClusters Funding Functions and Approaches.....	39
Appendix I - EdClusters Snapshots and Stories	41
EduvateRI - Rhode Island	41
LearnLaunch and the MAPLE Consortium - Massachusetts	41
LEANLAB Education - Kansas City.....	42
Kentucky Valley Educational Cooperative - Southeastern Kentucky	42
Remake Learning Network - Pittsburgh, Western Pennsylvania, and West Virginia	43
CommunityShare - Tucson, Arizona	45
Appendix J - Acknowledgements.....	46

Introduction

For the past six years, Digital Promise has convened a national network of leaders, regions, and organizations working to collaborate outside the traditional silos of sector and institution to design, implement, and scale promising learning tools, programs, and practices in their communities. These **Education Innovation Clusters** (EdClusters) are ecosystems that bring together educators, researchers, funders, edtech entrepreneurs, policymakers, industry, community organizations, and other stakeholders to support transformative teaching and learning—both in and out of school.



The EdClusters network has been about field-building. Dozens of regions have launched multi-sector, multi-stakeholder partnerships and built powerful formal and informal networks that incubate ideas, relationships, and projects. They launched powerful partnerships that brought schools, researchers, and innovators together around impactful initiatives. Over the past six years, this “cluster” work has matured and broadened. The “network approach” and the value of innovation partnerships have been widely championed and adopted across the education sector.

Amid the challenges of 2020, the need for and power of multi-sector, community-embedded education innovation efforts have never been clearer. EdClusters are uniquely positioned to support educators and learners [during the COVID-19 crisis](#). And many are doubling down on work to advance racial and social justice in education. Digital Promise has been honored to support these partnerships, learn from their work, amplify their stories, and create a community of practice for sharing and tackling challenges together through the Education Innovation Clusters initiative.

As Digital Promise looks toward the future of this work, we are committed to an approach we call [Inclusive Innovation](#)—an initiative focused on engaging schools and communities in deeper, equity-centered research and development (R&D) to address their most pressing educational challenges. Launched in 2019, Inclusive Innovation marks an *evolution* of the Education Innovation Clusters work. Equity-centered R&D has been the greatest promise and vision of EdClusters. We are inspired by leaders in the field and remain committed to supporting regions in building capacity to engage in Inclusive Innovation.

As Digital Promise sunsets its formal Education Innovation Clusters initiative, EdCluster leaders and organizations continue. The vital regional networks they have built are doubling down on equitable education in a time of great need. The origin, learnings, and impact of the Education Innovation Clusters movement offers vital lessons, which we have captured here.

The Origin of EdClusters

Recognizing the opportunity to build a less siloed education innovation ecosystem, the U.S. Department of Education and [Digital Promise](#) began a formal initiative in 2014 to identify, catalyze, and connect regional education ecosystems across the country. From our work with the [League of Innovative Schools](#), we had experienced the power of networks to surface challenges and breakthrough practices that can close the digital learning divide and help students become lifelong learners. And beginning in 2015, Digital Promise formed the Education Innovation Clusters network.

The vision for the EdClusters initiative grew out of the economic ideas on agglomeration and clustering. In the 1800s, English economist Alfred Marshall studied the grouping of certain industries in specific regions—for example, the development of the pottery industry in Staffordshire and the chair-making industry in Buckinghamshire—and authored a framework for [economic agglomeration](#). It described how clustering created a market for skills in a region, enabling the

That diffusion of innovation is a fundamental problem in education. When you think of the Rogers curve, when I think about systems change, one of the things we need is the social network and connective tissues across practitioners who are on that innovation adoption spectrum in different areas. That convening function is essential so innovators can share insights and lessons learned on a regular basis. We need to develop models that cross that chasm and build the trust that helps diffusion of innovation.

-Devin Vodicka, Altitude Learning

economical use of expensive equipment, facilitating organic communication within an industry, and allowing good ideas to develop and spread. Marshall's agglomeration theory provides a foundation for modern "[innovation clusters](#)," a term coined by Harvard University economist Michael Porter. He defines these clusters as "geographic concentrations of interconnected companies and institutions in a particular field" that disproportionately foster productivity, innovation, and entrepreneurial activity.

During the administration of President Barack Obama, the U.S. Department of Commerce's Economic Development Administration and the Small Business Administration began investing in regional innovation clusters, recognizing the power of regional ecosystems to spur economic growth. As they were seeding these investments, leaders in the White House and the U.S. Department of Education began to imagine what this kind of clustering could look like in the education sector.

Jim Shelton, then deputy secretary of Education, saw a problem with the current education R&D model as related failures of research, design and engineering, and adoption. “Educational innovation has been stymied by a flawed and fractured innovation ecosystem,” he observed in a white paper. With colleagues and thought leaders in the field, he and the Department scoped out a vision for *education* innovation clusters that could address these failures.

“Creating a network of Education Innovation Clusters,” Shelton wrote, “will require new types of partnerships that cross traditional domain silos as well as new supporting capacities and infrastructure (e.g., big data tools and learning analytics expertise). ... In [other] sectors, many innovations have come from networks of synergistic partners leveraging their unique institutional and regional strengths, common talent, technology, and infrastructure. In combination with a supportive regulatory and funding context, these Education Innovation Centers could lead the nation in the creation of new knowledge, tools and outcomes.”

In 2012, Richard Culatta, then deputy director of the Office of Educational Technology, [observed](#): “At a time when advances in technology and digital media hold the potential to dramatically reshape the way we approach instruction, assessment, and research, many barriers still continue to slow innovation in learning, teaching, and educational technologies. Accelerating the pace of innovation requires collaboration between educators, researchers, and commercial partners to work through these problems and create a shared research and development ecosystem.”

Culatta noted examples of regions across the country who were building on this nascent model: “These clusters rely on collective expertise and resources to spur ideas, incubate new businesses, and most importantly, improve student learning ... by focusing unique regional strengths.”

“[EdClusters] are organic think (and do) tanks, “third places” defined by collaboration and productivity rather than authority and institutional ownership. They’re where you go to broaden your perspective, add to your toolbox, and expand your array of collaborators to get done things that are unlikely to happen within the conventional bounds of your own organization. They are...ideal R&D Lab[s]....The motto for any cluster could be: “All of us are smarter than any of us.”

-Steven Hodas, *The Center on Reinventing Public Education (CRPE)*

Like in industry, we had growing evidence that the clustering of several regional stakeholders around shared work to accelerate education innovation creates immense value for the region—and helps to scale promising practices nationally.

Early work on the EdClusters initiative focused on building partnerships between educational technology (edtech) entrepreneurs and developers, researchers, and education practitioners. Very quickly, the ethos of collaboration among researchers,

educators, and entrepreneurs that early EdCluster work embodied evolved to include a broader range of stakeholders in local education innovation ecosystems.

With that vision, and the growing example of education partnerships across the country, Digital Promise grew an organic network of more than 20 regions around the country, each anchored by a “harbormaster”—an organization or leadership group that brings together diverse stakeholders who engage in formal programs as well as general network-building. These regional ecosystems are accelerating the pace of evidence-rich learning and the dissemination of good work and ideas.

In 2016, we scanned adjacent fields and relevant learnings in education, research, civic technology, and innovation, including such topics as:

- Impact of Collaboration on Innovation: Diffusion of Innovation, Social Network Theory, Spread of Social Capital
- Engineering Effective Collaboration: Social Physics, Emergence, Design-Based Implementation Research, Startup Communities and Civic Innovation
- Models of Collaboration: Innovation Clusters, Networked Improvement Communities, Communities of Practice, Formal/Informal Learning Ecosystems, Collective Impact, Community Schools
- New Learning Models: Funds of Knowledge, Connected Learning, Placed-Based Learning, Project-Based Learning

Taken together, this snapshot formed the theoretical underpinnings for EdClusters that informed our individual and collective theories of change as well as the partnerships and programs EdClusters developed. Additional learning and research continued to inform the EdCluster model, but this 2016 analysis remained fundamental (see Appendix A).

This work has been sustained over the years by a range of funders at the national and regional level who supported convenings, programs, research, and resource-development and dissemination that has resulted in regional ecosystems with national impact (see Appendix B).

EdClusters Activities

Much can be learned from the EdClusters work as it has matured and evolved to build a field, practices, and commitment to silo-busting collaborations in service of transformative teaching and learning. Digital Promise’s model for network support included:

- Convenings
- Working groups and cohorts
- Storytelling
- Technical assistance
- Tools and resources

Over the course of six years, the EdClusters initiative grew to include participation from more than 50 organizations across the country, and Digital Promise identified more than 20 regions around the country who supported EdClusters activities and partnerships (see Appendix C).

Digital Promise supported more than 10 EdCluster regions with dedicated technical assistance that helped them grow their impact in the areas of research, funding and development, strategy, stakeholder engagement, storytelling and communications, partnership and governance infrastructure, events, educator

professional learning, and program design. Over time, EdClusters brought in new partners and funding, reached new audiences, launched new initiatives, and codified impact.

We learned that deeper engagements like these were essential to catalyzing and supporting EdClusters as they mature. Just as essential were the opportunities for these leaders to connect with colleagues across the country doing similar work.

“Our work supports educators through authentic community-building that fosters belonging and collaboration....[resulting in] greater educator engagement over time and...cultivating student-led learning environments.”

- Nakeyshia Kendall, Mindcatcher

The Power of Networks

In [NET GAINS: A Handbook for Network Builders Seeking Social Change](#), Madeleine Taylor and Peter Plastrik examine how networks can facilitate rapid growth and diffusion of information, ideas, and other resources. They create “small-world reach” with “short ‘pathways’ between individuals and organizations,” bringing people together efficiently and in unexpected combinations. We saw this value play out across the national EdClusters network as it forged connections and spread promising tools and practices.

We think in silos, but our challenges don't exist in silos. They are community challenges. We have to help people create the connective tissue. People literally work on the same problems but don't talk to each other and have so much to learn from each other. Cross-pollination opens up solutions that would otherwise be invisible to one part of the ecosystem.

– Joseph South, ISTE

Over the past few years, philanthropies, non-profits, education institutions, and those across the government and social sector have grown in their understanding of the power of networks. The EdCluster movement has both learned from and informed this work across the education field; its influence can be seen in [“The US Education Innovation Index”](#) from Bellwether Education and [“The Role of Networks in Advancing Personalized Learning”](#) from FSG Consulting.

For example, Digital Promise and the EdClusters network sought to better understand how to map our networks and how to measure their strength, health, and impact. Drawing on network science, we saw the importance of measuring trust, number and strength of ties, and diffusion of ideas within our network. We leveraged and adapted tools to gauge the health of the national EdClusters network—and help regions better understand their own. (See Network Health Evaluation articles and tools compiled [here](#)).

June Holley emphasizes that this “network weaving” can be facilitated by key activities like working groups organized by a network hub, but it is truly the job of everyone in a network. To that end, the two network activities that participants consistently cited as most impactful were those that brought them together for collaborating and sharing: convenings and working groups. As the field evolves, the value of programming that forges these connections remains essential.

Convenings

Before the partnership with Digital Promise, the U.S. Department of Education’s Office of Educational Technology brought a handful of participants together around the concept of the Education Innovation Clusters in 2012 (Philadelphia) and 2013 (Arizona). Beginning in 2014, Digital Promise began hosting annual in-person convenings for the Education Innovation Clusters network with regional EdCluster co-hosts, in partnership with the U.S. Department of Education through 2017. These convenings, detailed in Appendix D, brought together hundreds of leading educators, researchers, entrepreneurs, community-builders, policymakers, and funders to:

- Collaborate on shared challenges
- Share tools and practices that support the work of EdClusters
- Visit organizations and partners in the local host “cluster” network
- Build connections with innovators from across the country

These convenings provided a vital touchpoint for network participants to seed new work. Participants reported they found the convenings to be inspiring and action-oriented. Each year, from 2015–2019:

- 89–95 percent of convening survey respondents found the convenings valuable/useful or highly valuable/useful to their work or thinking
- 87–100 percent of convening survey respondents found the convenings interesting or very interesting
- 90–97 percent of convening survey respondents said they were likely or highly likely to attend a future convening

Convenings are essential for seeing what others are doing. They were big catalysts for us in San Diego to see what’s possible and then envision what the model could look like locally, inspiring us to come together to do more. And those connections, both across the country and at home, continue.

– Katie Martin, Altitude Learning

The convenings inspired or launched new work, supported the formation of new EdClusters, and seeded or supported numerous partnerships on projects or initiatives. Convenings demonstrated the network effect in action:

- Regions began research collaborations (e.g., eight regions came together to design research studies for their cluster work).

- Tools that had been successful in one region were piloted in other regions (e.g., impressed with the CommunityShare platform that galvanized real world learning connections for students in Tucson, Rhode Island’s Highlander Institute began a pilot of the program in their own region).
- Long-term learning connections were forged among organizations and regions (e.g., education innovation leaders from San Diego set up multiple “field trips” for local educators to visit Pittsburgh and see the Remake Learning Network in action and learn from school and district leaders there).
- Resources were workshopped, shared, and implemented across regions. Over the years, more than 40 organizations presented or workshopped more than 25 tools, reports, or resources at these convenings (e.g., LEAP Innovations shared their framework for personalized learning).
- Seven cohorts or working groups were formed from the ideas and needs expressed by attendees at these convenings (e.g., the 2016 convening galvanized a call to action that launched the Equity Working Group).

Working Groups and Cohorts

One of the most powerful impacts of the annual EdClusters convenings was the prioritization and sharing of network-wide working groups. Beginning in 2016, Digital Promise convened working groups of practitioners from across the network to collaborate on key topics.

<p>Shared Language for Edtech Pilots</p>	<p>In 2016, Digital Promise began convening education innovation leaders from multiple sectors to develop an API (shared language and terms) for edtech pilot partnerships. Three working groups compiled and defined a shared language framework and set of terms around three areas: Edtech Company Readiness; School Readiness; and Research and Outcomes. The work fed into efforts from the Learning Assembly and laid the foundation for a framework published by the U.S. Department of Education in 2017.</p>
<p>Equity</p>	<p>Issues of inequity within education and their regions drive the work done by many EdClusters. Innovation has the potential to disrupt systems of inequity and ensure equitable opportunity for all learners, regardless of race, geography, language, gender, learning difference, or socioeconomic status. In order to tackle this challenge, EdClusters began deeply considering issues of equity, diversity, and inclusion in how they do their work—and whom they engage with in doing it. As a result of discussion at the #EdClusters16 convening, EdCluster leaders surfaced the need for tools to assess and address issues of equity in their work and regional networks. An equity working group shared promising practices with each other; learned from each others’ experiences; discussed needs, challenges, and ideas around equity in education innovation; and</p>

	<p>developed a toolkit to help EdClusters address equity in their work. This early work supported several EdClusters in restructuring their partnerships, leadership, and approach to programming to better center and amplify the leadership of marginalized communities. The “equity audit” tool the group created informed the published framework: Equity Inquiry for Education Innovation Networks.</p>
<p>Research Cohort</p>	<p>With the help of the Kauffman Foundation, Digital Promise worked with eight EdClusters to develop research questions and designs that would help them better understand the nature and function of EdCluster networks—how innovation diffuses within them, how certain structures sustain or accelerate partnerships, and the strength and health of ties within them. With education researchers and thought partners, the collaboration generated a range of questions and themes for EdClusters to investigate in their regions, including:</p> <ul style="list-style-type: none"> • How networks facilitate the equitable diffusion of social capital • How networks scale learning innovations • How resources and information are shared among networks • How networks galvanize around initiatives or goals • How networks are affected by geography • How networks influence policy
<p>Social Network Analysis</p>	<p>As EdClusters increasingly sought concrete ways to measure the health and scope of their regional networks, we formed a research cohort that provided a subset of organizations with hands-on support in developing research questions, conducting a social network analysis (SNA), and analyzing and interpreting data. SNA is a research method for understanding relationships and connections between individuals, groups, and things. The approach helps networks understand who is working with whom, how information is given or acquired, how power is concentrated or shared within an organization, and how special interest groups form and function. Supported by Digital Promise researchers, these EdClusters drew on the best of network science tailored to their context and needs. They leveraged SNA to explore a variety of questions that informed their programming, investments, and understanding of the nature of their network connections. Their examples are captured in our toolkit for EdClusters on Planning a Social Network Analysis, which provides a simplified approach to SNA and practical supports for regions to conduct an SNA.</p>
<p>Asset Mapping</p>	<p>To help EdClusters improve their own local networks and support community connections, the Community Asset Mapping working group</p>

	<p>brought together EdClusters to share best practices for identifying assets and partners, both current and potential, in their regions. The group focused on ways to map, codify, and create directories for these efforts, both internal and external facing. The result was the launch of an Asset Mapping toolkit, a tool for identifying and visualizing existing strengths in a community. Asset maps can take many forms and cover many topics, but the ultimate goal—underscoring local strengths—remains the same. EdClusters shared asset maps they created to highlight local resources for students and educators, show connections between edtech innovators in their communities, provide a directory of network people and programs for their network, illustrate inequities in philanthropic investment across different neighborhoods, and provide career and continuing education advice to their community. The goals of the Asset Mapping work were to help EdClusters determine the asset map’s purpose and audience, the process for gathering data, a curated list of resources, and more.</p>
<p>Storytelling for Innovation Portfolios</p>	<p>With the launch of Digital Promise’s Innovation Portfolio platform in 2019, EdClusters as well as school districts in the League of Innovative Schools had the opportunity to showcase their work and partnerships in new ways. To support EdClusters in telling their story through these profiles, Digital Promise worked with a series of EdCluster-connected organizations to capture their impacts, codify their multi-sector and multi-partner work, and communicate the essence of key programs and initiatives through digital “snapshots.” More than 50 portfolios provide an overview of education innovation in League districts and EdClusters across the country.</p>
<p>Real World Learning</p>	<p>Digital Promise worked with districts, leaders, and researchers to identify pressing challenges in supporting real world learning opportunities for students. As the need for sharing more promising examples across regions became clear, the League of Innovative Schools and the EdClusters networks launched a joint cohort on Real World Learning. Over six months, the cohort dove into the partnerships and strategies needed to support equitable real world learning opportunities for students, both in and out of school. This collaboration culminated in the creation of the Real World Learning Playbook, which showcases lessons, programs, and events that have been implemented in schools and across communities. It expands on the Real World Learning tool that Digital Promise developed in collaboration with educators, thought leaders, researchers, and 12 school districts across the country in 2018.</p>

EdClusters Principles, Profiles, and Learnings

EdClusters have taken a variety of forms over the years. Governance structures, partnership models, formality of network, focus of work, funding models, and kinds of programs and partnerships varied by region and over time. Their stories are as inspiring as they are instructive. They are as diverse as they are linked by common practices and commitments. EdClusters undertook a variety of activities and programming in their communities, around a range of topics, compelled by mission, opportunity, and need (see early examples of EdClusters activities [here](#)). Over time, we learned about the kinds of people and structures that needed to be in place to sustain these ecosystems. A taxonomy of roles and definition of key terms can be found [here](#).



Watch an overview video on EdClusters: [What are Education Innovation Clusters?](#)

How EdClusters Are Organized

Primary to this work was a regional leadership entity we often called the harbormaster. (In other ecosystem frameworks, this entity may be called the backbone, anchor, steward, or convener.) The harbormaster may be an individual, though at a later stage it may be a single organization, and in a mature stage it may be a council or coalition that represents a number of organizations and individuals.

The harbormaster's primary responsibility was to pull together, catalyze, and coordinate the activities of the various organizations within the cluster. The harbormaster needed to have both credibility and capacity to lead among a range of key stakeholders in the region. In a more established EdCluster, the harbormaster engaged key supporters to influence practice and broader policy goals and helped secure public and private financial support.

"There's an energy and pieces needed to pull together the ecosystem. The most successful EdClusters efforts were those around a project that gave people a reason to work together. In Baltimore, a number of interactions happened because of that bringing together—edtech companies getting started and moving to the region, contracts for the region through hosting summits, etc. And it showed educators that they could be part of that process."

-Katrina Stevens, Chan Zuckerberg Initiative

While partnerships and community engagement have always been at the foundation of transformative approaches to education, EdClusters seek to expand and deepen those collaborations in innovation ways. Appendix E shares examples of how traditional, dyad partnerships can be reconceived as robust, multi-partner collaborations in an EdClusters ecosystem.

From our early understanding of these ecosystems, we saw that EdClusters generally evolved across four key areas—**the Elements of an Effective EdCluster**.

Engaged Stakeholders, with Shared Vision

Diverse, representative participation aligned around impact and local needs



Supportive Infrastructure

Governance and partnership model that fits participant needs and defines a harbormaster role



Compelling Communications

Storytelling content and tactics that reach varied audiences



Sustainable Operations

Funding and operational models that leverage a range of assets, resources, and human capital



These four elements were found in the most effective EdClusters and guided early tools, technical assistance, and best practices for supporting them. A full rubric for gauging EdCluster maturation in these areas can be found in Appendix F and [here](#).

<p>Strong Stakeholder Engagement</p>	<p>Supportive Infrastructure</p>
<ul style="list-style-type: none"> • Includes voices from across the community, leveraging the unique strengths of each stakeholder group to bolster the entire field • Has a shared vision for student learning that is grounded in equity and inclusion • Designates clear roles toward realizing that vision 	<ul style="list-style-type: none"> • Promotes collaborative behaviors across its cross-sector participants • Delivers coordinated and cooperative programming toward a common goal • Results in community impact greater than that of any one participant • Embeds a research and evaluation mindset and capacity in all projects
<p>Sustainable Operations</p>	<p>Compelling Communications</p>
<ul style="list-style-type: none"> • Aligns its activities and potential sources of funding to its vision • Identifies stakeholders with the capacity and inclination to support its vision • Adapts its funding strategy to meet its evolving needs and beneficiaries 	<ul style="list-style-type: none"> • Demonstrates the value and impact of its activities on its community • Adapts its message and mode of communication to meet the needs of different audiences • Seeks out feedback from its members and users

Stakeholders

Through Digital Promise’s work with Education Innovation Clusters across the country, we have observed a range of collaborations among public and private sector partners. Appendix G includes an expanded list of regional EdCluster partners (also linked [here](#)). To identify stakeholders, EdClusters leveraged existing connections, but expanded them through activities such as community asset mapping. This often required EdClusters to consider community assets through a more equitable lens, identifying the wealth of innovation, community trust, and leadership in places that might not have traditionally shown up on an “education innovation” map—places like churches, rec centers, and barbershops.

“Clusters create opportunity for people to integrate into a community [and] create social capital and knowledge for people. Networks, or clusters, should exist to nurture talented people in the work and offer them a diversity of opportunities and an ability to draw on a more diverse network. Clusters can develop talent to operate at the intersections.”

-Ajoy Vase, Chan Zuckerberg Initiative

EdClusters also benefited from considering the capacity, commitment, and influence of key stakeholders. Different kinds of voices need different entry points and may be involved in different ways. Identifying how EdClusters participants can contribute in ways that benefit the collective effort, is manageable for them, and aligns with their own incentives is critical. While there are many benefits to collaborations both for organizations (competition for resources) and their beneficiaries (reducing fragmentation of services), incentives must be matched to sustain engagement.

Defining that value proposition often meant identifying the challenges that an EdCluster ecosystem has the unique opportunity to solve. Engaging key stakeholders at the outset of a change initiative and employing inclusive problem-solving approaches was often a powerful way to align disparate groups around the EdCluster concept.

Challenges

A lack of awareness creates duplication. Organizations don’t know what their peers are working on, creating redundancies and inefficiencies in research, product development, and programming..

Opportunities

EdClusters can increase awareness and alignment. In bringing providers together, their services can be coordinated to better meet the unique needs of their users and reach more users by leveraging the networks of each organization. Effective EdClusters put the user at the center of their work, helping to ensure their activities complement those of their partners rather than compete.

Regions experience “initiative overload” and lack a clear rallying cry. Mixed messages can cause community members to tune out calls to action or spread their actions too diffusely for meaningful impact.

EdClusters can elevate a unified, compelling message. The voice of individual organizations and individuals is amplified when they are joined by one another, as well as groups across the community. Common messaging consistently communicated by both public and private sector partners can facilitate both broader public awareness as well as policy in key areas.

Resources are not always used/coordinated efficiently. Coordination gaps often allow impact to fall through the cracks, preventing resources from reaching the beneficiaries.

EdClusters can effectively coordinate resources. When cooperation exists among providers, funding proposals can be consolidated to incorporate a comprehensive set of activities around a specific goal rather than a single organizational mission. When funders are given a voice in the planning, they can help guide the design in alignment with their goals and support impact measurement.

Institutions and individuals with credibility in schools and community were best poised to take on the initial harbormaster role in convening stakeholders. Top-down organizers like a governor or board of regents or institutional funder may have the convening power to bring stakeholders together, but top-down efforts run the risk of excluding the grassroots buy-in often needed to sustain these diffuse networks over time. To be sure, traditional or institutional power-holders in a region bring influence, reach, resources, and capacity that are vital to catalyzing and sustaining EdClusters efforts. But those EdClusters that have been most impactful and sustained over time are those that centered the voice of community either from the onset of their collective work or course-corrected to more radically include and amplify under-represented voices as their work continued.

See a 2016 toolkit for EdClusters on Stakeholder Engagement [here](#) for more information.

Partnership Models

Once stakeholders were engaged, EdClusters needed to develop infrastructure for sustaining those collaborations. An Education Innovation Cluster with a supportive infrastructure is one that:

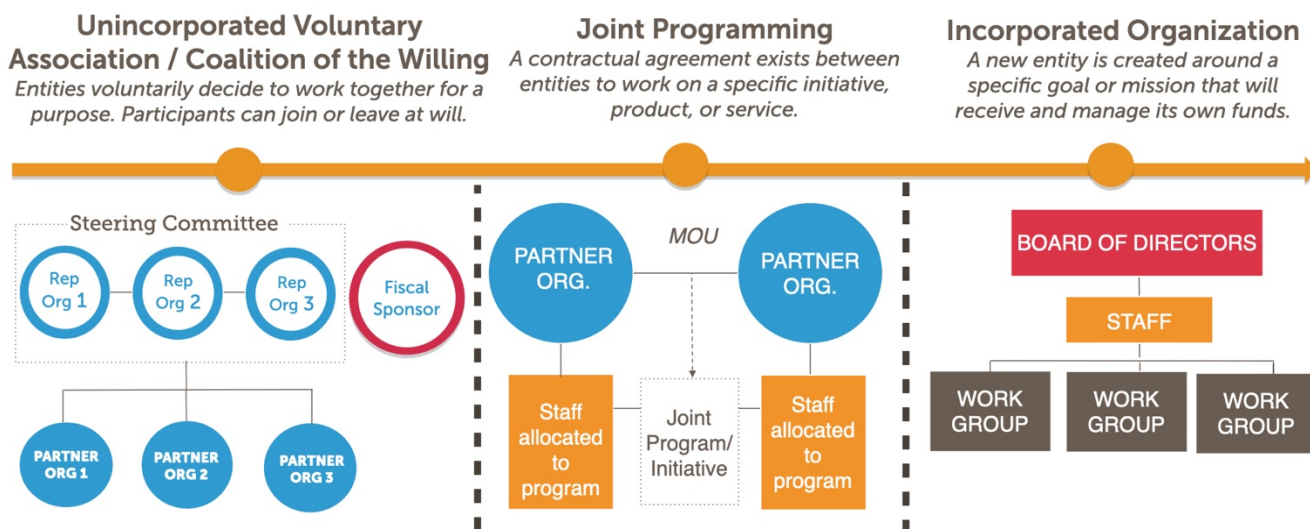
- Promotes collaborative behaviors across its cross-sector participants
- Delivers coordinated and cooperative programming in service of a common goal
- Results in community impact greater than any one entity could achieve on its own
- Embeds a research and evaluation mindset and capacity in all projects

Governance or organizational structure that defined how participants work together were largely informal across EdClusters networks. The complexities of organizing new entities made more formal structures challenging, but also unnecessary, in many cases. EdClusters that were most impactful built a supportive infrastructure—formal or informal—whether just beginning to explore partnership opportunities or looking to formalize their ad-hoc governance structures and expand their work.

Staying power matters. People get excited about new ideas—but if you are looking for strong buy-in and membership engagement, people need to know you’re going to be there for them when they come back. And you need to be really clear in communicating what you’ve done and how you’ve engaged partners. You always need to elevate your partners.

-Daniela Fairchild, R.I. Office of Innovation

There are three main partnership models that existing EdClusters have commonly used to formalize their collaborations. The models differ primarily in the types of participants, the level of integration among them, and their legal incorporation. Most EdClusters operated as “coalitions of the willing” (unincorporated voluntary associations) or engaged in “joint programming.”



Regardless of the technical partnership structures EdClusters pursue, the value of defining an infrastructure (formal or informal) for collaboration remains critical. Sherman Whites, director in Education at the Ewing Marion Kauffman Foundation, put it this way in a 2017 reflection: “We want to bring together various stakeholders to identify what’s out there and then fill in gaps and start to pilot innovations where those opportunities lie.”

See a 2016 toolkit for EdClusters on Partnership and Governance Models, including practice profiles and examples, [here](#).

Funding Approaches

Funding and sustaining EdClusters work can be challenging. EdClusters were sometimes able to find funding for initial convening activities or for strategic planning at the early stages of their collective work. Securing funding to support general EdClusters operations (network management and convening) was more difficult for most regions. Those with a dedicated funder or group of funders who saw the benefit of a coordinated network to support education innovation in the region were able to deepen and expand the infrastructure for network management itself—not just programming across a region.

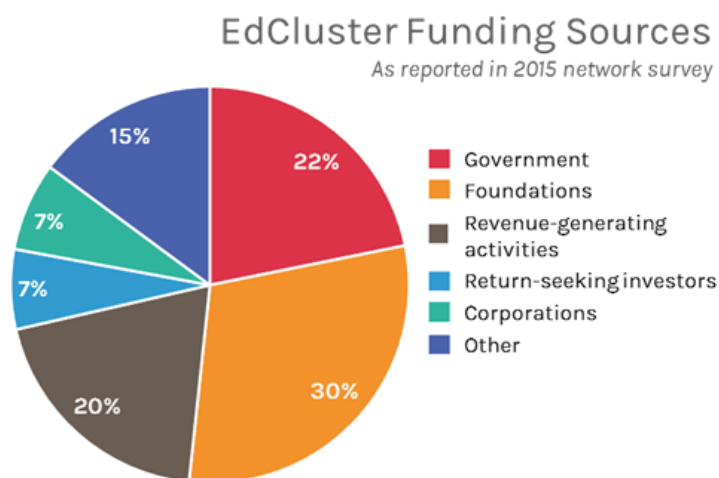
“Network-sharing and relationship-building is a goal in and of itself. There’s something very important about bringing people and cities together for that common peer learning. That’s the most important lesson—that the year-in and year-out, unsexy investments in intermediary and field building organizations are so important and pay off. That speaks to philanthropy, not to get distracted by the next shiny thing.”

-Gregg Behr, The Grable Foundation

We found that an Education Innovation Cluster with sustainable operations is one that:

- Aligns its activities and potential sources of funding to its vision;
- Identifies stakeholders with the capacity and inclination to support its work; and
- Adapts its funding strategy to meet its evolving needs and beneficiaries.

Given the limited resources available in the social impact sector, collaborative endeavors often face tension between sustaining the core activities of individual partners and identifying resources to launch new programming and/or support the collective functions critical to effective collaboration. Those that endured with the most impact leveraged a range of assets, resources, and human capital to sustain their activities.



Historically, EdClusters coalitions and organizations have relied on contributed income to fund their charitable activities, supplemented by fee-for-service. A survey of EdCluster harbormasters shows that foundations (inclusive of community, family, private, and public foundations) provide the majority of support for EdCluster-related activities, followed closely by public sector grants and revenue-generating activities.

EdClusters were most successful in securing funding when clarifying the specific activities in need of support and how they link back to the overarching vision that guides the EdCluster. See Appendix H for a breakdown of those functions and funding approaches, including

specific examples from four EdClusters in Pittsburgh (Remake Learning Network), Massachusetts (LearnLaunch), Rhode Island (EduvateRI), and Tucson (CommunityShare).

Below is a sample of functional areas that EdClusters resourced, the ranger of funders and supporters they engaged, and the kinds of support they leveraged in support of their work.

Functional Areas to Fund	Funders/Supporters	Kinds of Support
<ul style="list-style-type: none"> • Networking • Knowledge Management & Storytelling • Direct Programming • Research and Evaluation • Technical Assistance • Advocacy • Conferences and Events 	<ul style="list-style-type: none"> • Individuals • Foundations (Private, Community, Corporate, Public) • Corporate Sponsors • Organization or Association Sponsors • Government Grants (Municipal, State, Federal) • Investors (Accelerators, Venture Capital, Angels) • Clients/Customers 	<ul style="list-style-type: none"> • Grants • In-Kind Donations (resources, space, expertise, volunteers) • Sponsorship • Return-seeking investments (specific to product development) • Revenue (events, programs, products, services)

Where most EdClusters struggled to secure ongoing funding to support network management itself, they sustained their work through three key approaches:

1. **Funding for multi-partner projects:** EdClusters sought funding for specific programs that brought partners in the ecosystem together (e.g., a grant-funded initiative to bring three organizations together—a school, an educational service provider, and a research university—to develop STEAM programming for marginalized learners in a specific neighborhood).
2. **Funding for a convening organization’s central activities:** Many harbormasters were organizations whose essential work and mission were to bring multiple partners together, whether through their programs or other activities. These EdCluster organizations continued to find funding to support these central “convening” and collaboration activities as part of their regular programming. (e.g., funding for an annual local conference, funding for running a leadership development cohort for educators across a region, etc.).
3. **In-kind contributions and complementary activities:** Particularly in the early stages of work, organizations work together by contributing their time and resources (staff time, space, supplies, etc.) in service of the collective work. A range of stakeholders can offer in-kind contributions, even if they are not leading work consistently, providing opportunities to engage a range of organizations across a region. Organizations engaged in an informal EdCluster network often promote and support each other’s activities. Their efforts and program are complementary, even if not formally coordinated.

See a 2016 toolkit for EdClusters on Funding and Sustainable Operations [here](#).

Principles for Building a Learning Ecosystem

The past six years have illuminated a set of key principles for inclusive, impactful ecosystems, informed by the experience of EdClusters and the best knowledge from entrepreneurial ecosystems and network researchers. These have been codified in various forms, but we believe they can be boiled down to a set of nine practices, detailed on the next page.

Remake Learning, convener of the Pittsburgh EdCluster has developed a set of five ecosystem-building principles that are highly relevant to education-

focused networks—represented in the first five of our nine principles. Their Network Support Strategies synthesize a decade of work convening more than 200 organizations to support education in the Pittsburgh region and are codified in the [Remake Learning Playbook](#), which also draws lessons from the EdClusters movement as a whole. Early stewardship of the Remake Learning network was led by the [Sprout Fund](#), which published the playbook in 2015. EdClusters across the country have looked to the Playbook for a framework (with examples) for how to catalyze and grow “cluster” work.

In 2016, Sunanna Chand, then director of Remake Learning, reflected on the work it takes to build a diverse, vibrant network, affirming, “It takes a lot of stakeholder engagement, it takes a lot of community organizing, it takes a lot of on-the-ground work to get a lot of diverse stakeholders involved.”

Drawing on leadership insights like those and our work around the country, Digital Promise codified **nine principles for building an EdCluster learning ecosystem**. The principles pull from the Remake Learning Playbook’s framework, the activities and learnings of EdClusters around the country, and the Ewing Marion Kauffman Foundation’s Seven Principles for Building Ecosystems (see an updated version of Kauffman’s Entrepreneurial Ecosystem Building Playbook [here](#)). These principles are spelled out in our [2018 case study](#) focusing on CommunityShare and the Tucson region, with lessons from Rhode Island’s EduvateRI, Kansas City’s LEANLab and Kauffman Foundation, Pittsburgh’s Remake Learning Network, the University of San Diego, and the Kentucky Valley Educational Cooperative.

Together, these nine principles curate an expanded framework that merges strategies from EdClusters networks across the country and represents the diversity of EdClusters work.

We need to search for solutions that develop resilient students, teachers, and communities as we weave learning ecosystems together. We need to search for solutions that create value for many stakeholder by “stacking functions” (a principle from the world of permaculture). Throughout this work we have been encouraging educators and others to engage student voice. Students are not just the leaders of tomorrow, they need to be the pioneers and change agents of today.

- Josh Schachter, CommunityShare

Nine Principles for Building a Learning Ecosystem



1. **Convene a community of practice.** Bring people from the network together for events or meetings. Provide training and professional development opportunities.

2. **Catalyze innovative learning projects.** Empower the network through financial support and other types of support like mentoring, workspaces, or workshops.



3. **Communicate within and outside the network.** Share information about what is happening in the network, and build a shared identity and vision. Develop a home for network resources.

4. **Coordinate network members to maximize impact.** Organize network strategy, membership, and roles. Make plans for the future of the network.



Champion the network's accomplishments. Build public awareness of the network, and showcase the work of network members.

5. **Connect members in all directions.** Bring network members together outside of events and meetings. Develop a process or database for making connections.



Collaborate across sectors. Find ways to work together as a network. Minimize duplicated work and competition for resources.

6. **Concentrate on common values.** Build on your shared values, and use those values to bring the network together.



Cultivate membership. Invite other people and organizations into the network. Create a pathway for participation. Make sure the network includes diverse members and organizations.

Profiles and Stories

Over the years, Digital Promise and others have profiled a number of EdClusters. You can find detailed profiles of key EdClusters on our [Innovation Portfolios platform](#) and stories of their work chronicled on [our blog](#). Insights are also captured in videos [here](#).

These stories and profiles represent the breadth and depth of EdClusters work and their variety of forms and initiatives. In Appendix I are profiles of six EdClusters from around the country who have long been part of the network and have served as diverse models for other regions. A preview:

- **EduvateRI (Rhode Island):** a statewide initiative to “develop and test effective education tools and technologies”
- **LearnLaunch and the MAPLE Consortium (Massachusetts):** a public-private partnership focused on “building public will and connecting schools with necessary resources” to catalyze personalized learning across the state
- **LEANLab Education (Kansas City):** reshaping how communities and entrepreneurs work together to support educational equity across the Kansas City metro region
- **Kentucky Valley Educational Cooperative (southeastern Kentucky):** a consortium of school districts partnering with stakeholders across the region to transform education and build a brighter future for rural Appalachian communities
- **Remake Learning Network (southwestern Pennsylvania and northern West Virginia):** an interconnected group of more than 500 people and organizations that “ignites engaging, relevant, and equitable learning practices in support of young people navigating rapid social and technological change”
- **CommunityShare (Tucson and southern Arizona):** breaking down walls between school and community through a digital match-making platform that connects teachers and students with real-world learning opportunities and experts in their community

Lessons Learned

As education ecosystems and network-building evolve, the lessons from the EdClusters movement are critical. Over the past six years, we’ve drawn some larger takeaways on both pitfalls and successful strategies of EdClusters. These lessons have been deepened and informed by reflections and conversations with leaders across the field who have supported or led EdClusters efforts.

Network weaving activities are essential.

Networks require cultivation. The activities of network weaving, such as convenings and working groups, are vital for network health. Intentional weaving is especially vital for creating more diverse and equitable networks. Strong network programming and relationships helps them to self-sustain.

Dedicated stewardship is required. The coordinating activities of network leadership (especially if distributed) are essential to network health and require ongoing support. Stewarding an inclusive network requires time, money, and human capital to nurture partnerships, convene participants, and share information across the network.

Establish responsive, reflective infrastructure. EdClusters need cultures and processes for sharing information and resources, inviting participation, seeking feedback, and shifting strategy. The most impactful and longstanding EdClusters had channels for listening to community—and responding. This course correction was most vital in addressing inequity.

Dedicated resources make a difference. Securing funding for network stewardship was challenging for most EdClusters. Those with dedicated resources for full-time employees and network management were best able to grow and sustain their work. Funders who support this network building (including incentivizing collaboration) see its impact on programs and scale in a region.

Define multiple entry points for participation. Stakeholders need multiple ways to contribute and be engaged in the network—with a value proposition matched to their needs and goals. Be flexible in your models for participation and partnership. The strongest EdClusters had lots of doors for entering the network and kept them wide open most of the time.

Find a champion, but don't depend on them. Championing leadership is essential to rally resources and support. Champions are committed, respected, visible leaders who can bring clout to an effort. But depending too much on their backing poses risks: too centralized influence; lack of diffuse leadership and support; and challenges around turnover and sustainability.

Leadership must be local. Vision and leadership must come from within a region. External groups must be careful not to appoint a leader without local credibility. Outside entities may bring support or expertise to EdCluster efforts, but they are not equipped to fully catalyze or advance them. Sustaining the work requires ongoing local buy-in and investment.

Make the vision broad and the activities specific. EdClusters were most effective when they defined a mission and vision that galvanized a range of partners, linked to local needs and opportunities. Under that north star, it is important to define specific activities that allow different partners to engage deeply on specific work. Concrete initiatives show the unifying vision at work.

Leverage connections, but don't be exclusive. Networks often develop organically around existing relationships. This connective tissue is important and helps build buy-in for the work. But “who you know” groups tend to look alike and exclude vital voices. Building networks requires cultivating collaboration with diverse and under-represented groups.

Tell your story, but make it about others. Having a brand and story makes EdClusters work real and recognizable, showcasing its value and impact. But storytelling that self-promotes, without amplifying others, will alienate partners. EdClusters that built trust and value used their platform to showcase a range of partners, especially those that are traditionally under-represented.

Be intentional about equity. EdClusters were situated in cultures and contexts that had historically marginalized people, organizations, and communities—chiefly those who are Black, Brown, Indigenous, people of color, and people experiencing poverty. Those equity gaps were often compounded and perpetuated by early EdCluster leadership and activities. Many saw that advancing equity meant designing and redesigning for it with intention through ongoing commitment. Doing so requires listening to community, naming inequities, acknowledging harm, and making real changes—across partnerships, leadership, events, communications, culture, funding, and programming. At the #EdClusters16 convening, **Fatima Jibril**, then a senior fellow with the U.S. Department of Education, put it this way: **“Don't just bring people to the table, bring the table to the people.”** Doing this may mean rebuilding or moving the table altogether, or recognizing and championing a table already built. The more intentional and bold EdClusters are in this work, the better they can build more inclusive, equitable networks.

Deepening the Work

Building broad networks and coalitions across stakeholders and organizations is complex but necessary work. Regional, cross-sector partnerships remain key for education innovation.

“This work continues to be about pushing teaching and learning into the center of our economies and social structures. We like to make children the key health indicator in that ecosystem. Cross-sector work is the only way we further that way of thinking and being. We're also having a real reckoning with the way we apply and use our resources in this space. Whose knowledge is valued? Identity matters. Social capital matters.”

-Ani Martinez, Remake Learning Network

Across the country, we see a focus on deepening place-based, multi-partner work around key projects and initiatives as well as on ensuring that work is more equitable—in design, leadership, and impact. The past several years have taught us how impactful these kinds of focused initiatives can be. Building broad networks proves its value time and again, often seen in the ability to rapidly create partnerships to support needs or opportunities. But we increasingly see the greatest impact of “clusters” in the specific initiatives that galvanize specific stakeholders around key goals.

Looking forward, we see the EdClusters field focusing in several key directions:

- **Specialization.** As organizations and EdClusters develop expertise, they are beginning to more clearly focus their efforts. Where many EdClusters once convened stakeholders and supported programming around a range of initiatives, most have honed the scope of their work to match their capacity, expertise, and community needs. For example, Boston’s MAPLE network, supported by LearnLaunch, is focused on supporting a collaborative of districts in digital learning. LEAP Innovations in Chicago is focusing its work on frameworks and research for personalized learning.

Mindcatcher in the Bay Area is supporting student voice in schools. These organizations still convene a range of partners and leverage connections across sectors to support their work, but a focus on broader network-building efforts has shifted to more specialized programs and partnerships.

- **Reimagining learning.** EdClusters continue to lead the way in the powerful development and integration of technology to support learning in school. But they're increasingly focused on supporting a vision for learning that draws on the full toolbox of experiential, hands-on, project-based, personalized, competency-based, civically engaged, equity-centered, real-world learning opportunities for students. The national support and momentum for this deeper, future-facing learning continues to swell, and Digital Promise joins in several national coalitions to support this work. While EdClusters continue to lead in supporting computer science, STEM, maker, and learning approaches, many of them are moving beyond a particular programmatic emphasis to re-envision and reinvent teaching and learning as a whole. They will continue to forge stronger, deeper connections between school and community. They will continue to support models that disrupt the broken industrial model of school. They will continue to leverage the best of learning science and the digital tools and partnerships to not just improve learning but redefine it. They will put design and innovation in the hands of students, making them creators, not just consumers.
- **Responsive collaborations.** As EdClusters shift from broad-based network convening and building activities to more focused initiatives, they're likely to form a series of time-bound, project-specific partnerships. Those kinds of responsive collaborations will arise to meet specific needs, leveraging the connective tissue of the network to assemble key partners based on the project. These kinds of focused initiatives bring specificity and urgency to the work. The challenges of COVID-19 for schools and communities have brought out the best in EdCluster networks in just this way. (Read our blog series on their responses [here](#).)
- **Deepening specific projects.** EdClusters are increasingly focused on key initiatives that can be built over time, leveraging multiple partners. Some of those initiatives may be oriented around a collective impact model. Others may focus on a specific topic or partnership. For example, the EdCluster in Madison, Wisconsin, has focused its efforts around supporting the LRNG platform across the region as a way to build learning pathways for students outside of school. In Philadelphia, the ExCITe Center

A crisis is when innovative efforts can truly take hold—but only if they have been well seeded prior. [Our COVID-19 response] is a perfect example of this and of the networked approach to supporting education for all our students. This kind of thing doesn't happen in a place without trust, collaborative mindset, and a collective-is-greater-than-the-sum-of-all-parts mentality.

-Dana Borrelli-Murray, The Highlander Institute

at Drexel University is focused on supporting STEAM professional development for teachers. They are also deepening work around culturally responsive making (see their [report on Making Culture](#)). Initiatives like this may evolve over time, but specific programs will likely provide the anchor for EdClusters work going forward.

In Philadelphia, the [ExCITe Center at Drexel University](#) is redefining civic engagement as part of a U.S. Department of Education Promise Neighborhood award, supporting a cradle to career learning vision to change education and career outcomes for the community. This includes culturally responsive maker and STEAM programs and that connect participants across the community.

- **R&D infrastructure.** EdClusters will continue to build infrastructure to support education innovation R&D work. These deep collaborations require research capacity and partnerships, schools and district collaborations, design and development expertise, and community leadership. Key EdClusters are deepening and expanding their approach to R&D, as the original and ultimate goal of EdClusters. The investment in these kinds of collaborations is significant. EdClusters—and the funders who are supporting this work—are learning a lot about the technical and relationship infrastructure that must be built or leveraged to make these R&D collaborations work. Challenges remain around how best to share leadership, center equity, and scale learnings, but the promise and momentum of R&D partnerships in the EdClusters ecosystem is growing.
- **Reengaging the role of government.** Policymakers who pioneered the EdClusters initiative always envisioned federal funding to support and seed regional ecosystems and their R&D initiatives. That large-scale investment didn't come to fruition in the early stages of this work, but government can play a critical role in future iterations of the "clusters" effort. Several regions are already building deep engagements with state and local lawmakers and state agencies. With shifts in policy and administrations, the field is poised to better partner with government at the federal, state, and local level. And government has the opportunity to invest in ecosystem-building (and listen to ecosystem-builders) at a time when the "cluster" approach is critically needed.

"Governments aren't doing enough to incentivize these sort of collaborations across regional groups. That's a key role of the federal government, even within existing priorities for funding, to encourage people to work in collaboration in clusters." – **Richard Culatta**

"I would also love to see state and city governments support these cluster efforts. They're close enough to better steward this work." – **Joseph South**

Richard Culatta and Joseph South each served as Director of the Office of Educational Technology at the U.S. Department of Education during the Obama administration and recently reflected on their hopes for the future "clusters" work.



- **Centering equity.** EdClusters are deepening their understanding of diversity, equity, and inclusion and the necessity of building equity with intention into every aspect of their work and leadership. Leaders in their organizations and networks, like many entities in the education field, are taking a hard look at patterns of inequity in their staff, culture, activities, partnerships, and programming. They are increasingly committed to amplifying marginalized voices and advancing anti-racist practices throughout their work. These efforts have a long way to go, but there is a stronger recognition of where EdClusters must do better. We urge decisionmakers and funders to align their investments of time, capacity, and resources with those commitments. **If things aren't equitable, they aren't innovative.**

Josiah Gilliam, My Brother's Keeper coordinator for the City of Pittsburgh, observed at the #EdClusters16 convening:

You can't just have a one-size-fits all or silver bullet approach to any complicated situation. There has to be an accurate assessment of the disparities and challenges that are facing marginalized communities—communities that have faced decades of disinvestment, discrimination, toxic exposures—to look at what are ways that a community can move forward. That takes honesty and vulnerability.

In 2017, with support from the Kauffman Foundation, Digital Promise and LEANLAB Education hosted an annual convening of education innovation clusters. We engaged the [Equity X Design](#) collaborative to lead attendees through a process of examining the systemic, historic, and enduring inequities that have characterized the U.S. education system and the culture of "innovation" around it. Then, these regional leaders considered a project or initiative in their work and where it could be reoriented or redesigned to address inherent gaps in equity. In the words of Equity X Design's co-founder Caroline Hill, "Racism and inequity are products of design. They can be redesigned."

While much work remains to be done, EdClusters are steadily re-envisioning the role of communities not as recipients, but co-designers, of advancements in teaching and learning. This means championing the voices of the most marginalized students, schools, and families as experts on their needs and possibilities for the future. At the center are students, whose voices are too often only engaged in the work as "tokens" or "afterthoughts." Several EdCluster organizations have been working to center student voice at the beginning of any conversation or collaboration.

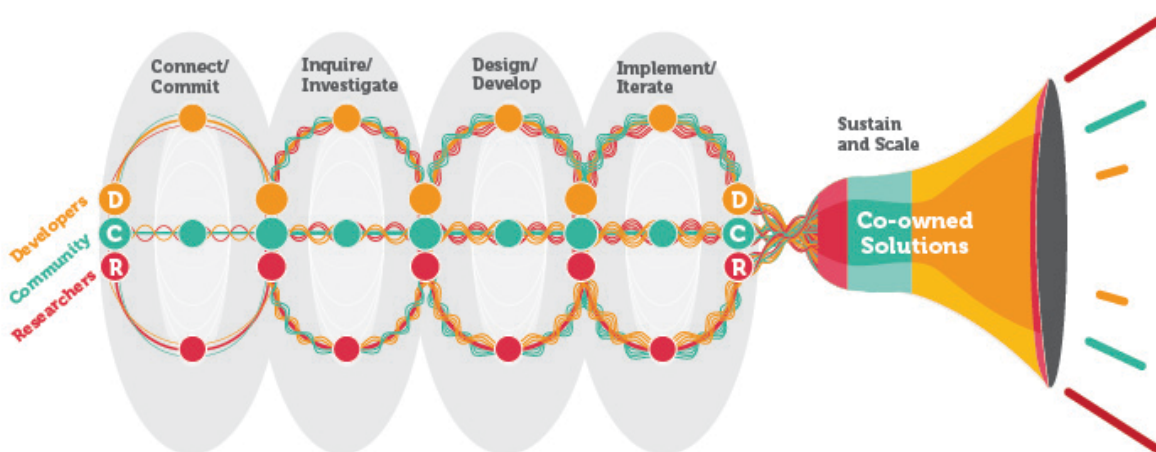
The #EdClusters19 convening workshopped tools on student voice from organizations around the country, including: the [Spectrum of Youth Engagement](#) adapted and shared by Mindcatcher founder Nakeyshia Kendall and

In the Bay Area, [Mindcatcher](#) developed a framework for centering student voice in their work with educators in schools. Their work shifted from supporting educators in better incorporating youth voice to fostering true collaboration between teachers and students on teaching, learning, culture, and more.

the [Youth Voice Best Practices: A Toolkit for Centering Youth Voices in Educational](#), shepherded and shared by Carlow University and Remake Learning's [Youth Voice working group](#).

At Digital Promise, equity-centered, community-embedded R&D represents the future of our EdClusters work. Under the traditional model of education R&D, solutions to the pressing challenges facing schools and districts across the country often fail to meet the needs of those who need them most: historically marginalized populations such as Black and Latino students and students living in poverty.

To deepen this work, Digital Promise is launching The Center for Inclusive Innovation, which will partner with districts and communities to pilot an R&D model radically centered in amplifying marginalized voices as co-experts and co-designers alongside researchers, entrepreneurs, and educators in addressing a community's priority education challenges. Inclusive Innovation creates and catalyzes equitable opportunities for individuals, groups, and regions that are underrepresented in the education innovation ecosystem to successfully lead, participate in, and benefit from innovation.



Inclusive Innovation

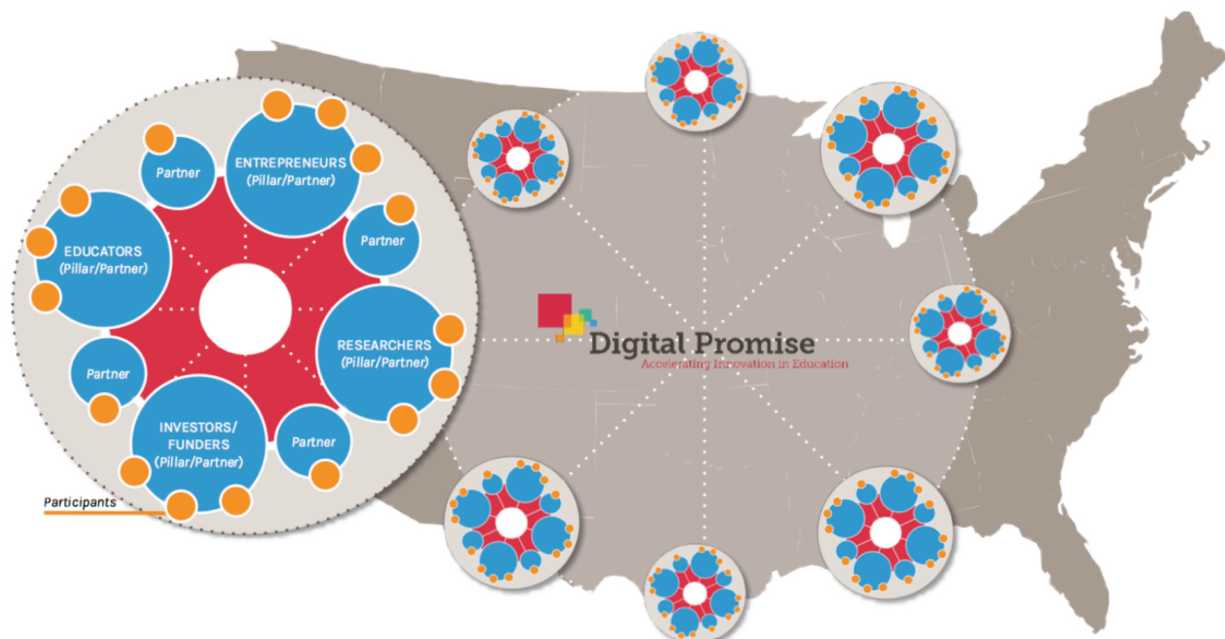
[Inclusive Innovation](#) draws on our deep learnings from research-practice partnerships and R&D work through our [Challenge Collaboratives initiative](#). Inclusive Innovation also draws on the best of human-centered design models, community engagement, and adjacencies in the healthcare, defense, and other industries.

The value of sharing knowledge in this space remains. Networks have the power to diffuse information and innovation and scale promising tools and practices—even when organic and informal. The EdClusters connections will undoubtedly continue in that vein. The spaces and opportunities for these kinds of connections have only grown, both at larger education innovation convenings and in the virtual communities so many education leadership cultivate—from Twitter to Slack to the virtual-only convenings that have become the norm

amid the challenges of COVID-19. We look forward to building and continuing those connections across a range of modes and networks. Much of our Inclusive Innovation work will focus initially on community partnerships in our League of Innovative Schools network of more than 100 public school districts across the country. Many of the districts in that network were deeply connected to the EdClusters work and carry it on in their community.

As we move forward on the vision of EdClusters to address inequities in education, we acknowledge that communities possess tremendous expertise. Disenfranchised groups in education R&D—particularly Black and Brown parents, students, and community members—hold invaluable context expertise that is often either excluded or underrepresented in collaborations to address a community’s pressing educational challenges. Centering their voices is the only way forward.

The EdClusters initiative has laid the foundation for this next phase of work. It has seeded powerful connections and incubated key projects. The lessons learned remain embedded in the field, and EdClusters leaders continue at the forefront of systems change on a local and national level. We have been honored to convene and support this network and are committed to sharing outputs, learnings, and partnerships as we continue in our individual and collective work.



Appendix

Appendix A - Theoretical Underpinnings for EdClusters.....	31
Appendix B - EdClusters Funders.....	32
Appendix C - EdClusters Participants	33
Steering Committee	33
EdClusters Around the Country	34
Appendix D - EdClusters Convenings.....	35
Appendix E – Expansive Collaboration Examples for EdClusters.....	36
Appendix F - Maturity Rubric For Education Innovation Clusters	37
Appendix G - EdClusters Stakeholders and Partners Across Sectors.....	38
Appendix H - EdClusters Funding Functions and Approaches	39
Appendix I - EdClusters Snapshots and Stories	41
EduvateRI - Rhode Island	41
LearnLaunch and the MAPLE Consortium - Massachusetts	41
LEANLAB Education - Kansas City.....	42
Kentucky Valley Educational Cooperative - Southeastern Kentucky	42
Remake Learning Network - Pittsburgh, Western Pennsylvania, and West Virginia	43
CommunityShare - Tucson, Arizona	45
Appendix J - Acknowledgements.....	46

Appendix A - Theoretical Underpinnings for EdClusters



A large body of work supports the guiding principles upon which EdClusters were designed and implemented. In 2016, Digital Promise conducted a landscape scan of education and adjacent innovation movements to summarize key concepts and supporting research that provide the basis for EdClusters principles. This point-in-time review is not an exhaustive summary of research, nor does it include all the influences that have informed EdClusters work. But these key ideas reflect the strong theoretical and practical foundation upon which the EdClusters movement built and evolved.

A link to this “literature” scan can be found [here](#). It covers the following topics:

Impact of Collaboration on Innovation

[Diffusion of Innovation](#)
[Social Network Theory](#)
[Spread of Social Capital](#)

Engineering Effective Collaboration

[Social Physics](#)
[Emergence](#)
[Design-Based Implementation Research](#)
[Start Up Communities + Civic Innovation](#)

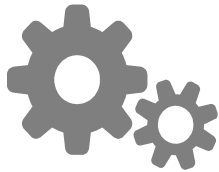
Models of Collaboration

[Innovation Clusters](#)
[Networked Improvement Communities](#)
[Communities of Practice](#)
[Formal/Informal Learning Ecosystems](#)
[Collective Impact](#)
[Community Schools](#)

New Learning Models

[Funds of Knowledge](#)
[Connected Learning](#)
[Placed-Based Learning](#)
[Project-Based Learning](#)

Appendix B - EdClusters Funders



This work has been sustained over the years by a range of funders at the national and regional level who supported convenings, programs, research, and resource-development and dissemination that has resulted in regional ecosystems with national impact.

At the national level, Digital Promise's work on EdClusters and related initiatives was primarily supported by:

- Carnegie Corporation of New York
- Chan Zuckerberg Initiative
- Ewing and Marion Kauffman Foundation
- The Grable Foundation
- Bill and Melinda Gates Foundation

In addition, organizations in EdClusters across the country received support for their work from state and federal grants and numerous corporate and philanthropic funders at the national and regional level, including those listed above. Other funders include:

- 4.0 Schools
- Chevron
- Claude Worthington Benedum Foundation
- Comcast NBCUniversal
- Donnell-Kay Foundation
- Ember at Springpoint
- Full Circle Fund
- Google
- The Heinz Endowments
- Helios Education Foundation
- The Malcolm Jenkins Foundation
- Nellie Mae Education Foundation
- New Profit
- New Schools Venture Fund
- Overdeck Family Foundation
- Schmidt Futures
- William and Flora Hewlett Foundation

Appendix C - EdClusters Participants

Steering Committee

Digital Promise and the EdClusters network were grateful for the leadership of a key group of leaders and organizations convened as a Steering Committee.

EdClusters Steering Committee (2019 - 2020)	
<ul style="list-style-type: none">• LearnLaunch/MAPLE (Boston)<ul style="list-style-type: none">○ Leadership from: Eileen Rudden, Ann Koufman-Frederick, David O'Connor• UVA (Charlottesville)<ul style="list-style-type: none">○ Leadership from: Matthew Wheelock• LeanLab (Kansas City)<ul style="list-style-type: none">○ Leadership from: Katie Boody• LEAP Innovations (Chicago)<ul style="list-style-type: none">○ Leadership from: Courtney Reilly, Jessica Bee	<ul style="list-style-type: none">• EduvateRI (Rhode Island)<ul style="list-style-type: none">○ Leadership from: Daniela Fairchild (RI Office of Innovation), Dana Borrelli-Murray (Highlander Institute)• Remake Learning (Pittsburgh)<ul style="list-style-type: none">○ Leadership from: Sunanna Chand, Ani Martinez• ExCITe Center at Drexel University (Philadelphia)<ul style="list-style-type: none">○ Leadership from: Youngmoo Kim, Andy Stutzman

A variety of regions and organizations have engaged in EdClusters efforts and the national network since 2015. The list on the following page includes most active EdClusters.



EdClusters Around the Country

This represents regions across the country with EdClusters efforts that have engaged with the Digital Promise network. It does not include all the organizations that have participated in the network nor does it provide a complete landscape of “cluster” work across the country, but it provides a key snapshot of those that have pioneered the EdClusters work with us.

Region	State	Harbormaster(s) and Key Players
Atlanta	GA	CommunityGuilds
Austin, TX	TX	EdTech Austin, EdTech Action
Baltimore, MD	MD	Formerly EdTech Maryland, Towson University, Baltimore County Public Schools
Chattanooga	TN	Public Education Foundation, Hamilton County Schools
Madison, WI	WI	WeThinkBig Inc., Wisconsin Center for Education Products & Services
Willamette, OR	OR	The Oregon Digital Promise initiative through Oregon Dept of Ed and Computer Science Teachers' Association
Research Triangle, NC	NC	Triangle Learning Network, UNC Chapel Hill Library
Bay Area/Silicon Valley	CA	Mindcatcher, #SFEDU, ALearn SVEF's iHub
Charlottesville, VA	VA	UVA Curry School of Education, Jefferson Education Exchange, ReinventED Lab, Charlottesville and Albemarle Public Schools
Connecticut	CT	Connecticut Commission for Educational Technology
Kansas City	KS	Lean Lab Education, The Kauffman Foundation, KCedu, SchoolSmartKC
Philadelphia, PA	PA	ExCITE Center at Drexel University; University of Pennsylvania Graduate School of Education
San Diego, CA	CA	University of San Diego, VISTA Unified School District, and Cajon Valley Schools, San Diego County Office of Education
Boston, MA	MA	LearnLaunch Accelerator and Institute, MAPLE Consortium
Chicago, IL	IL	LEAP Innovations, Chicago Learning Exchange
New Orleans, LA	LA	4.0 Schools
New York, NY	NY	New York City iZone, InnovateEDU, #NYCEDU
Tucson, AZ	AZ	CommunityShare
Northern NJ	NJ	Northern Ignite Cluster, Bergen County Superintendents' Association
Oakland, CA	CA	OAKEDU.org / #OAKEDU
Pittsburgh, PA	PA, WV	Remake Learning Network
Portland, OR	OR	Education Northwest, NW Education Cluster
Providence, RI	RI	EduvateRI / Highlander Institute / RI Office of Innovation
Southeastern Kentucky	KY	Kentucky Valley Educational Cooperative
Twin Cities, Minnesota	MN	Educelerate North
Phoenix, AZ	AZ	Center for the Future of Arizona, Arizona State University

Appendix D - EdClusters Convenings

<p>#EdClusters14</p>  <i>Pittsburgh, PA</i>	<p>Local Co-Host: The Sprout Fund Funders: The Grable Foundation</p>  Agenda	<ul style="list-style-type: none"> • 50 attendees • 15 regions • 31 organizations
<p>#EdClusters15</p>  <i>Chicago, IL</i>	<p>Local Co-Host: LEAP Innovations Funders: Carnegie Corporation of New York (CCNY), Ewing Marion Kauffman Foundation</p>  Agenda Convening highlights and video	<ul style="list-style-type: none"> • 110 attendees • 93 organizations • 34 regions
<p>#EdClusters16</p>  <i>Providence, RI</i>	<p>Local Co-Host: Highlander Institute, RI Office of Innovation, EduvateRI Funders: CCNY, Kauffman Foundation, Office of the Governor of State of RI</p>  Agenda Convening highlights and video	<ul style="list-style-type: none"> • 140 attendees • 92 organizations • 22 regions
<p>#EdClusters17</p>  <i>Kansas City</i>	<p>Local Co-Host: LEANLab Education, Ewing Marion Kauffman Foundation Funders: CCNY, Kauffman Foundation</p>  Agenda Convening highlights and video	<ul style="list-style-type: none"> • 100 attendees • 52 organizations • 21 regions
<p>#EdClusters18</p>  <i>Philadelphia, PA</i>	<p>Co-Host: ExCITe Center at Drexel University Funders: CCNY, Drexel University, Barra Foundation, ember at Springpoint</p>  Agenda Convening highlights	<ul style="list-style-type: none"> • 100 attendees • 20 regions • 48 organizations
<p>#EdClusters19</p>  <i>Pittsburgh, PA</i>	<p>Co-Host: Remake Learning Funders: CCNY, The Grable Foundation</p>  Agenda Convening highlights	<ul style="list-style-type: none"> • 100 attendees • 20 regions • 62 organizations

Appendix E – Expansive Collaboration Examples for EdClusters

Traditional / Dyad Partnerships



Robust Multi-Participant Collaborations

A **district** and **ed-tech company** work together to procure and implement a product. (*vendor/customer dynamic*)

A **university's education school** offers a state-mandated teaching licensure program for **educators**. (*compliance mode*)

A **foundation** supports a local **non-profit** to run after school academic remediation programs. (*traditional, dyad partnership*)

Local **companies** provide volunteers to clean up a **school's** playground during a community service day. (*one-off, silo-ed work*)

A **district, ed-tech company**, and **researcher** work together to do a rapid-cycle evaluation of a product. (*peer/collaborator dynamic*)

A **university education program** works with **district leaders** and the university **business school** to create a self-paced leadership credential program for **school leaders**. (*capacity building mode*)

A **foundation** recruits other funders to support a cohort of **districts, non-profits, museums, libraries, and rec. centers** that will collaborate on scaling maker education through in- and out-of-school programming. (*innovative, multi-member partnership*)

Local companies, in collaboration with a **non-profit** program, sponsor employees to collaborate with **teachers** on "real world" learning projects. (*ongoing, shared work*)

Appendix F - Maturity Rubric For Education Innovation Clusters

	NASCENT	DEVELOPING	OPERATIONAL	ESTABLISHED
Strong Stakeholder Engagement	<ul style="list-style-type: none"> Individuals/organizations representing key stakeholders are identified and invited to engage in collaboration to advance learning innovation in community Potential priorities and overarching vision identified 	<ul style="list-style-type: none"> Stakeholder analysis conducted to determine alignment and differences Participants coalesce around shared priorities Partners represent 3+ pillars (educators, entrepreneurs, researchers, funders) 	<ul style="list-style-type: none"> Partners implement activities aligned with common vision Impact metrics are established as appropriate New participants join (levels of participation may range) 	<ul style="list-style-type: none"> Impact metrics inform continuous improvement and evolution of priorities Robust representation from all pillar sectors
Supportive Infrastructure	<ul style="list-style-type: none"> Individual(s) or entity with credibility, clout, and convening power is identified 	<ul style="list-style-type: none"> Entity accepts harbormaster responsibilities Governance determined (e.g. consortium, 501c3) Additional roles identified 	<ul style="list-style-type: none"> Partners have clear sense roles and responsibilities Organizational chart formalizes roles across multiple partners 	<ul style="list-style-type: none"> Long-term role of central body is determined or evolved to meet needs Advisory council is established
Compelling Communications	<ul style="list-style-type: none"> Outreach done to engage and convene multi-sector stakeholders, influencers, and community leaders to form a collaborative partnership Stakeholders leverage common vision to brainstorm the stories they would want to tell as a testament to their work 	<ul style="list-style-type: none"> Inventory of potential stories and existing storytelling assets conducted Vision and goals communicated to broader community Regular internal communications established 	<ul style="list-style-type: none"> Key storytelling content curated, planned, and produced across different media (video, text, etc.) Public awareness of cluster is cultivated through varied communications strategy to multiple key audiences through targeted dissemination channels 	<ul style="list-style-type: none"> Robust body of stories, documentation, and communication assets are established and disseminated regularly Coalition moves to advance policy agenda where appropriate
Sustainable Operations	<ul style="list-style-type: none"> Resource needs (human capital, financial, and otherwise) and potential sources identified for planning 	<ul style="list-style-type: none"> Planning resources committed Funding models explored 	<ul style="list-style-type: none"> Commitments secured to support and fund cluster coordination in short-term 	<ul style="list-style-type: none"> Long-term sustainability planning underway, anticipating ongoing capacity and funding needs

Appendix G - EdClusters Stakeholders and Partners Across Sectors



EdClusters bring together a range of [partners](#) and [participants](#) who want to impact learning opportunities and spur education innovation in a region. **Partners** are key participants—organizations or individuals who take a **leadership role** in organizing EdCluster activities. EdClusters have representation from four key [pillar](#) sectors ([Educators](#), [Entrepreneurs](#), [Funders](#), and [Researchers](#)).

Educators	Entrepreneurs	Researchers	Funders
<ul style="list-style-type: none"> • Districts and charters • After school organizations • Institutions of higher ed • Educational services delivery organizations • Local education non-profits • Informal/out-of-school learning institutions (e.g. libraries, museums) 	<ul style="list-style-type: none"> • Ed-tech developers (startup, established, nonprofit) • Educational service companies/orgs • Accelerators/incubators • Other private sector companies (non-education) • Business associations or networks 	<ul style="list-style-type: none"> • Think-tank, research, or policy organization • Government • Public foundation • Private foundation • Company or consultancy • Higher education institution 	<ul style="list-style-type: none"> • Individual supporters (funding and in-kind) • Private foundations • Public charities or non-profits • Social impact investors • Government • Companies (sponsorship, in-kind) • Ed-tech investors (venture capital, angel investors, incubators/accelerators)
Government & Policymakers		Community Groups	
<ul style="list-style-type: none"> • Mayor's office • State Department of Education • Governing bodies (local and regional) • School board • Municipal or county agencies (dept. of transportation, housing, health and human services, police and fire, etc.) 		<ul style="list-style-type: none"> • Community based organizations and non-profits • Member organizations or associations (i.e. Chamber of Commerce, Rotary Club, Tech Network) • Community development groups, neighborhood associations • Hospitals and community health organizations • Parent groups (PTOs, PTAs) • Churches and religious centers • Community centers, rec centers, youth groups, after school programs 	

Appendix H - EdClusters Funding Functions and Approaches

The following are examples of how EdClusters funded their efforts:

- Leveraged national grant funding to work with EdCluster partners on grant initiative
- Formed consortium with public-private partners to receive state funding
- Received state funding for commerce and innovation
- Worked with districts to creatively use federal education funding for partnerships and innovation
- Used federal research grants to engage multiple partners on research/innovation development
- Received grants from regional foundations
- Held conferences that brought in earned revenue to support programs
- Developed corporate sponsors to support specific initiatives and events
- Organizations contribute time and resources as part of their existing mission and mandates
- Leveraged in-kind contributions from volunteers and corporations
- Earned revenue for professional services (corporate trainings, storytelling workshops, professional development for educators)
- Formed a local coalition of philanthropies and corporate donors to support network
- Made EdCluster convening work part of “day job” and mandate of existing organizations and funded initiatives



Examples of funding sources from key EdClusters show the range of approaches taken:

Region	Funding Sources and Approach
Boston (LearnLaunch)	<ul style="list-style-type: none"> • LearnLaunch non-profit leveraged grant funding to work with schools and researchers on evaluating edtech • Formed MAPLE consortium with public-private partners, received state funding and grant from regional foundation • LearnLaunch conference brings in earned revenue to support programs • Corporate sponsors support specific initiatives and events
Rhode Island (EduvateRI, Highlander Institute)	<ul style="list-style-type: none"> • Highlander Institute uses philanthropic funding to collaborate with schools, researchers, and other organizations • Funding from RI Dept. of Commerce and Governor’s Office of Innovation to fund FTE to direct EIC (goals of workforce development and growth of edtech industry) • Orgs contribute time and resources as part of their existing mission and mandates

**Tucson
(CommunityShare)**

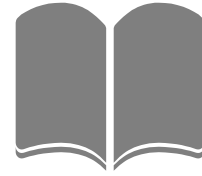
- Philanthropic grants from regional foundations
- In-kind contributions from volunteers and corporations
- Subscription “fees” for use of platform (for certain groups)
- Fees for services (corporate trainings, storytelling workshops, professional development for educators)

**Pittsburgh
(Remake Learning
Network)**

- Funding from regional philanthropies, corporate donors, national funders, and federal grants
- The Grable Foundation has helped lead a coalition philanthropies and corporate donors which together have invested more than \$80 million in learning innovation across the region
- In-kind contributions/participation from leading businesses, school districts and intermediate units, governments, foundations, and non- profits (including museum and library systems)

Appendix I - EdClusters Snapshots and Stories

- EduvateRI - Rhode Island
- LearnLaunch and the MAPLE Consortium - Massachusetts
- LEANLAB Education - Kansas City
- Kentucky Valley Educational Cooperative - Southeastern Kentucky
- Remake Learning Network - Pittsburgh, Southwestern Pennsylvania, and West Virginia
- CommunityShare - Tucson, Arizona



EduvateRI - Rhode Island

[EduvateRI](#) brings together education, research, philanthropic, government, and commercial partners in Rhode Island to “surface and solve persistent problems in education collectively.” When Richard Culatta, who first began working on education innovation clusters at the U.S. Department of Education, returned to his home state of Rhode Island in 2016, he and other leaders saw a need to build a better connective tissue for education stakeholders across the small state. [The Highlander Institute](#) had long been building networks of educators across the state, supporting them in redesigning schools and personalizing learning. In 2016, they decided to formalize the cluster infrastructure. The governor’s [Office of Innovation](#), Highlander, and others formed EduvateRI to “develop and test effective education tools and technologies” and “nurture breakthrough, authentic learning practices” to “close opportunity gaps for students.” Now, they’re supporting a statewide initiative around personalized learning and have built a network of researchers to support the design and evaluation of education initiatives across the state. The network was essential in responding to COVID-19 needs.



LearnLaunch and the MAPLE Consortium - Massachusetts

The non-profit [LearnLaunch Institute](#) formed a public-private partnership with the [Massachusetts Department of Elementary and Secondary Education](#) to form the [MAPLE Consortium](#) to catalyze personalized learning and better prepare students for their future.



MAPLE works to ensure student access to personalized learning across the state by “building public will and connecting schools with necessary resources—professional learning, digital tools, funding strategies, and a rich evidence base.” MAPLE connects more than 50 school districts across the state—rural, urban, and suburban, from the most well-resourced to the highest need—to learn from each other, provide “resources that strengthen local models,” and nurture “the discovery of new ideas.” MAPLE is housed within LearnLaunch, a Boston-based

education innovation hub that has run a variety of programs and convenings through its non-profit arm, LearnLaunch Institute. The other arm of its work is LearnLaunch Accelerator, an incubator for promising edtech. The early collaborations between edtech entrepreneurs, researchers, and educators that LearnLaunch and others championed are at the heart of the powerful legacy of education innovation clusters.

LEANLAB Education - Kansas City

In Kansas City, [LEANLAB Education](#) is reshaping how communities and entrepreneurs work together. Their accelerator programs welcome companies and organizations who are committed to engaging with schools and communities to pilot, iterate on, and research their innovation, for the betterment of the education community in Kansas City. Their “visionary



school network” gives educators the opportunity to give direct feedback on the development of cutting-edge technologies, services, and curricula. As LEANLAB explains, “We believe the most transformational education innovations are born when they are developed in true partnership with those most impacted by education—parents,

students, administrators, and teachers. LEANLAB founder Katie Boody sees the ecosystem they are supporting as not just launching transformative tools and practices for education but as building community.

Kentucky Valley Educational Cooperative - Southeastern Kentucky

In rural southeastern Kentucky, in the heart of Appalachia, a consortium of more than 20 school districts serving more than 40,000 students have banded together with local businesses, universities, and community health organizations to transform educational outcomes but also the economic future of their entire region. It includes some of the poorest counties in America and has long been the stereotypical emblem for rural poverty, opioid addiction, and economic downturn as coal and other industries have declined. But it’s a picture that educators across the region are fighting to change with a sense of urgency few can rival.



With support from federal education grants, the [Kentucky Valley Educational Cooperative](#) launched the Appalachian Renaissance Initiative in 2013 to share resources across the region, personalize student and professional learning, empower leaders, revitalize local communities, and prepare students for next-generation college and career paths. They hope students will forge those pathways and build that future at home, stemming the “brain drain” that has plagued the region’s population for decades.

KVEC Executive Director Jeff Hawkins explained a couple of years ago, “We have traditionally shipped our best natural resources elsewhere. We dug coal and sent it somewhere else, piped oil and sent it somewhere else, educated our kids and sent them somewhere else. Now we want to have a place in our community to have them come back.” In his mind, this group of educators and their partners in other sectors have “an opportunity to revise what this region could be. We don’t focus on scarcity, we try to focus on abundance. We have a resilient group of people. ... This is our home, and we are cultivating and caring for it.”

To get there, KVEC educators and their partners have had to fundamentally rethink what it means to teach and learn, shifting from a compliance mindset to an innovation mindset, which they call a “start-up mentality.” Teachers are encouraged to experiment, and professional learning is no longer about uniform “seat time” but meeting individual needs and scaling good ideas. KVEC is leveraging technology to make student learning personalized and competency based. They are also empowering students to be entrepreneurs and civic activists in their communities through pitch competitions, micro-grants, and advocacy campaigns. They’ve started “[innovation hubs](#)” around growing industries in the region like aerospace and digital media production.

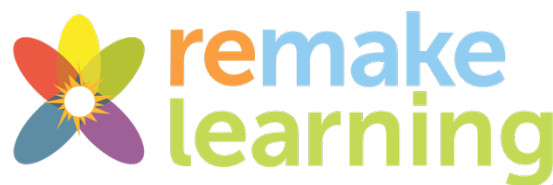
And they’re bringing people together in new and impactful ways. Their FIRE Summits (Forging Innovation in Rural Education) convene thousands of families, community members, students, and educators from across the region and are live-streamed to thousands around the country, and even the world. The Summit “serves as a catalyst for energizing and accelerating strategies to improve the quality of education for learners everywhere.” Over the course of a couple days, educators and students showcase hundreds of new projects and ideas—like students building tiny houses to address housing needs in the community, science classes building prosthetic limbs on 3D printers to support amputees in the community, classes designing digital apps for hikers in the region, or vocational high schools constructing mobile maker studios that travel across the mountains.

Most importantly, KVEC is doing this work across the usual boundaries—both geographic and figurative—that divide sectors and communities. Their digital gathering space, [The Holler](#), showcases a number of stories, conversations, and projects from the region. **Digital Promise produced a series of video stories on their work that can be found [here](#).**

Remake Learning Network - Pittsburgh, Southwestern Pennsylvania, and West Virginia

In the greater Pittsburgh region, the infrastructure for an education innovation cluster has grown over more than 10 years into what is now formally known as the [Remake Learning Network](#). Remake Learning is an open, interconnected group of more than 500 people and organizations across southwestern Pennsylvania and West Virginia that “ignites engaging, relevant, and equitable learning practices in support of young people navigating rapid social and technological change.” Partners in the network collaborate in working groups, grant-funded initiatives, and convenings to spur computer science pathways, reshape state and

local policy, spread maker learning, support personalized learning, improve educator professional learning, understand the future of work in the region, and champion youth voice.



Their purpose is to “spark and share best practices and new ideas, make it easier for neighbors and colleagues to help each other, reduce duplicative efforts in the region, and leverage resources collectively.” The reach of their work over ten years is chronicled compellingly in their [Learning Together](#) impact report.

One of Remake’s most galvanizing programs is a region-wide open house of hands-on learning opportunities for youth and their caregivers called [Remake Learning Days](#). Since 2016, more than 100,000 people have engaged with more than 1,200 events across the region. Other places took note, and in 2019, in a powerful example of how good ideas scale, Remake Learning Days Across America launched across nine new regions, supported by PBS KIDS and Digital Promise.

One of the key network initiatives that has emerged in Pittsburgh as a proof point around EdClusters and R&D is the collaboration between world-class research universities and schools, educators, and communities, especially those who have been most left behind. Research institutions like Carnegie Mellon University and the University of Pittsburgh have collaborated with schools and communities on everything from ways for children in early childhood center to share snapshots of their day directly with their caregivers (see CREATE Lab’s [“Message from Me”](#)) to helping students measure the air quality of heavily polluted neighborhoods.

At the #EdClusters19 convening, attendees saw how university-community divides were being bridged in new ways—not just by bringing people together around a table, or ensuring better community access to university tables, but by moving the table itself. The University of Pittsburgh’s [Community Engagement Center](#) in Homewood sits in the heart of one of the city’s predominantly Black neighborhoods and has been among its most marginalized communities. The center is part of the university’s effort to build stronger communities through long-term place-based partnerships, working with residents to direct investments, programming, staff, and university resources to support shared neighborhood renewal efforts.

The traditional boundaries between research institutions and schools are being dismantled in other ways. The University of Pittsburgh’s [Center for Urban Education](#) is working with Carnegie Mellon University’s [LearnLab](#), alongside students and educators from four area districts, to explore how using educational technology can improve mathematics learning opportunities for students of color and low-income students. The project is called [PL²](#), and it’s an ambitious effort to address the opportunity gap for marginalized students by combining personal mentoring and tutoring with artificial intelligence learning software. It’s also an example of what education innovation clusters at their best can do: activate complementary kinds of expertise across many different stakeholders to tackle complex and stubborn educational inequities.

CommunityShare - Tucson, Arizona

Kate Hodges, a local artist, had lived in the Sunnyside neighborhood in Tucson, Arizona, for years, right down the block from Hollinger Elementary School. But she'd never been inside, and she didn't know anything about what students there were learning or what they and their teachers might need. She was not alone. With the help of the EdCluster ecosystem in the Tucson area, Kate eventually began a multi-year collaboration with students at the school through a program called [CommunityShare](#). CommunityShare acts as a "harbormaster" for the EdClusters and anchors and spurs much of the collaborative education innovation work in the region. It does this through a variety of programs and partnerships, many of which are profiled in our 2018 [case study](#).



At its heart, CommunityShare is breaking down the walls between school and community across southern Arizona through a digital matchmaking platform that connects teachers and students with real-world learning opportunities and experts in their community who have "funds of knowledge" in a range of areas. Its goal is to more equitably recognize and diffuse the social capital at its heart. CommunityShare founder Josh Schachter is a deep student and practitioner of network weaving.

Kate's experience at Hollinger sheds light on the deep inequities in school systems—and the promise that meaningful connections can give students in ways that not simply further their academic learning but affirm and celebrate cultural identities that are too often excluded from the narratives of their schooling. Many of the students at Hollinger had never met an artist before. Their work with Kate broadened their horizons and also introduced them to indigenous artists like Nacho Flores, a Tohono O'odham native artist who brought the heritage of their land and for some of them, their ancestry, into the classroom through hands-on experiences and large-scale community art. Students, communities, and cultures were connected—and celebrated.

CommunityShare has brought this kind of learning to students across the region, connecting them with caring adults—from engineers to glass blowers—who affirm the richness of community assets all around them. For students in primarily low-income and immigrant neighborhoods across the region, these connections expand their social capital and their concept of what's possible in profound ways. CommunityShare has engaged more than 10,000 students in over 400 real-world learning experiences with community partners in the Tucson region. And nearly 700 teachers at over 120 schools are part of CommunityShare's online network.

Appendix J - Acknowledgements



Numerous individuals and organizations have offered leadership and support for the EdClusters work at Digital Promise and across the country. Below are the names of many—though certainly not all—of the people who have provided key contributions to the work over the past six years. We thank them for their collaboration, vision, and efforts.

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Mike Baur	Carly Croman	Breanna Harvey
Austin Beck	Kathe Crowley Conn	Beth Herbert
Paul Beck	Ron Daley	Steven Hodas
Gregg Behr	Elena Damaskos	Malliron Hodge
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Preeti Birla	Cathryn Dhanatya	Amy Huang
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Christina Luke	Shawn Rubin	Ajoy Vase
Greyson Mann	Eileen Rudden	Alyssa Vitale
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Brooke McDonald	Sara Schapiro	Keaton Wadzinski
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Danianne Mizzy	Sam Seidel	Josh Weisgrau
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Erin Mote	Joseph South	Cassandra Woodall
Steve Newton	Daniel Stanhope	Isabelle Yisak
My Nguyen	Karen Stephenson	Andrea Yoder Clark
Amy Nowell	Katrina Stevens	Odelia Younge
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