

Rhode Island Edtech Feasibility Study and Cluster Strategy

Produced for EduvateRI
by Fourth Economy Consulting

RI

JANUARY 2017



About this Study

This study was supported by an Industry Cluster Grant from Commerce RI.

The study is based on input from 30 people (listed below), research on other education innovation clusters (gathered from the EdClusters Summit, an interview with Digital Promise, and desktop research), and desktop market research to determine the size of the opportunity.

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**Rhode Island Edtech
Feasibility Study
and Cluster Strategy**

Executive Summary



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Executive Summary

Our 21st century teaching and learning system is evolving to respond to global challenges of economic competitiveness, greater focus on educational equity, and a demand for enhanced return on investment. This field is generally called education innovation and requires a broad ecosystem of administrators, teachers, researchers, private companies, nonprofit groups and others to work collaboratively to create a framework for better outcomes.

Education technology (edtech) refers to the technology-based products, and related services, used to support students, educators, and administrators, often in implementing innovative ways to teach and learn. There are products designed to support learning across grade levels, learning environments, student type, subject area, and learning style.

Edtech companies are often unique in their origination and in their needs. It is not uncommon for an edtech company to be founded by a former educator looking to solve a problem they encountered. If a company was not founded by an educator, they are often looking to hire former educators for their perspective on product design and sales. Edtech companies are working in a complex environment related to regulations and standards, sales cycles, and privacy concerns, among other variables. In particular, for edtech companies working in K-12, navigating the unique culture of each school or district, in terms of technology adoption, is a barrier to scaling. For these reasons, and others, edtech-specific programs and support systems are necessary for growing and attracting edtech companies.

The Market Opportunity

The global edtech and smart classroom market is expected to reach \$93.76 billion in 2020 from \$43.27 billion in 2015 at a compound annual growth rate of 16.72%, according to Markets & Markets. In the U.S., many edtech companies are located in the Bay Area for the typical reasons of access to talent and capital. However, there is little in the way of an ecosystem tailored to the unique needs of edtech companies.

Efforts to support edtech companies are springing up across the country (profiled later in this report), but with the exception of Boston, most are centered around a single accelerator program and relatively new. Boston is an exception due largely to being home to the LearnLaunch accelerator and education publishing giants such as Pearson and McGraw-Hill Education, who are driving activity in the edtech sector. A recent report from LearnLaunch estimated as many as 25,000 people are employed in edtech in Massachusetts and that there are approximately 430 active edtech companies.

Rhode Island's Opportunity

Rhode Island is very well situated to grow and attract edtech companies. Over the past four years, the Highlander Institute EdTechRI program has already engaged 90 edtech companies from across the country. Given the dearth of established edtech hubs, and the state's proximity to Boston, Rhode Island has an opportunity to grow a cluster based on both its own assets and being a complementary piece of a regional ecosystem. With the Highlander Institute and EduvateRI, Rhode Island certainly is a leader nationally in the maturity and sophistication of its education innovation intermediary and cluster organization respectively. The Highlander Institute and EduvateRI can provide edtech companies with access to schools and engagement with educators and administrators in a way that few other edtech clusters can boast. Finally, Governor Raimondo's clear support for education innovation, as indicated in part by her appointment of the former Director of the Office of Educational Technology for the U.S. Department of Education as the State's Chief Innovation Officer, provides a one-of-a-kind asset that can help jumpstart its edtech cluster efforts.

In order to make these parts equal something greater than their sum, some additional infrastructure and capacity will need to be built around them. Leadership, in addition to both a physical and virtual home, will be necessary to tie these efforts together and ensure that they reach their intended audience.

- EduvateRI should hire an "Executive in Residence" to manage its programs focused on edtech. This person should be someone with direct experience in, and therefore connections to, edtech.
- Many of the strategies discussed here would benefit from an online component, including a membership directory, facilitating internships and part-time hiring, links to technical training resources, and a listing of housing and quality of life amenities. The EduvateRI website should be built to support these strategies as they are implemented.
- Finally, as discussed within, EduvateRI should consider utilizing the Rising Sun Mills space for all of their programming and activities, to help create a central, physical edtech hub.

In addition to this capacity, Rhode Island should ensure that a financing continuum exists that supports a paced growth of edtech companies. This can include:

- Continue to host a Startup Weekend EDU program as a collaboration between EduvateRI, Social Enterprise Greenhouse, and Commerce RI. This effort is already starting to build the edtech startup ecosystem and exposing those with an interest in launching a company to the resources, including mentors, that are available.
- Create an edtech focused business plan competition or partner with the existing Rhode Island Business Plan competition to create an edtech track similar to the MedTech award offered in 2016.
- Include a member of the Commerce RI financing team in EduvateRI events to allow them to develop an enhanced understanding of the business opportunities and exposure to companies that may need more traditional capital to expand.

The following chart summarizes the strategies that Rhode Island can employ to build their edtech cluster. The strategies are organized in order of priority, based upon an estimation of level of resources required, potential impact, and appropriate phasing.

What	Considerations
Continue to host and strengthen EdTechRI	Core, existing activity to build upon
Formalize EduvateRI membership via application	Easy win to demonstrate interest and impact
Connect educators to existing software development resources	Early win; will support Startup Weekend participants
Increase opportunities to broker relationships through events	Important early to build reputation and networks
Develop a physical edtech hub	Start with small steps now and build over time
Engage and partner with colleges & universities	Start building relationships now, but may not be many partnership opportunities at first
Coordinate interns for edtech companies	May not be much activity early, but basic infrastructure needs to be in place
Create a pool of part-time education and technical talent	May not be much activity early, but basic infrastructure needs to be in place
Help connect entrepreneurs to investors	Will want to see talent initiatives in place first, but start building relationships early
Continue/ build on Startup Weekend EDU	Wait until previous recommendations are underway to be able to support companies
Partner with existing accelerators to support edtech startups	Lower because need to be able to support companies coming out first
Connect entrepreneurs to housing and quality of life amenities	Once there are more entrepreneurs to support, this will be relatively easy
Utilize professional development training to broker relationships	Could be helpful earlier to build reputation, but depending on ease may not be most valuable
Partner with accelerators to pilot products in RI schools	Based on existing activity and important to build reputation
Create a cross-disciplinary program to train educators to work in edtech	Could be big impact, but level of effort makes it lower priority
Offer fee-for-service implementation and evaluation services	Less demand now, complex to navigate, and high effort
Create a cross-disciplinary computer science-focused program	Could be big impact (though maybe less than educator program), but level of effort makes it lower priority
Offer a fee-for-service piloting program to companies and/or districts	Same as implementation and evaluation services, but less aligned with current interest

Overview of Potential Impact

As is the case in other industry clusters, edtech companies are a range of sizes and years in business. The “2016 Massachusetts EdTech Workforce Report” noted as many as 25,000 people are employed in edtech in the state and they found approximately 430 active companies. As this is still an emerging industry, the majority are small companies, 225 with less than 5 employees and categorized as ‘pre-revenue startup companies’. While these are still relatively small numbers they do illustrate the depth of the startup potential and the reality is that some of these companies will realize rapid growth and job creation. Leaders in New York City have begun, starting in 2015, to consider edtech as an economic development opportunity and is in its early phases of organizing.

As the edtech ecosystem matures in Rhode Island, the following economic benefits will be demonstrated:

- Increase in active edtech startup companies operating from a Rhode Island base.
- Increase in companies visiting and possibly establishing a basecamp for their edtech pursuits.
- Increase in research and development partnership opportunities with the state’s colleges and universities. These partnerships often translate into new employment opportunities at the host institutions.
- Opportunities for Rhode Island faculty and administrative innovators to launch and/or advise startup companies. This will benefit the overall education innovation focus of the state by creating a more welcoming climate for tackling educational challenges.
- As Rhode Island’s educational system continues to adopt a focus on innovation it will support enhanced student outcomes and ROI. The direct benefit will be a more prepared workforce which can impact all other economic clusters in the state. Indirectly, this action will send a strong signal of the seriousness of the state in supporting new economy opportunities.

While these benefits are measured in small increments to start, they will be the sparks that allow Rhode Island to be a leader in an exclusive field of edtech economic development locations. Currently, large edtech companies make location decisions similar to any other large company, e.g. business climate, access to talent, etc. While Rhode Island is not particularly situated to attract large edtech companies at this point, building the ecosystem through these recommendations will build the pool of talent that can help attract larger companies.

**Rhode Island Edtech
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Full Report

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About Education Innovation

Defining Educational Innovation

Educational Innovation is a broad term that refers to all types of new approaches to helping students learn. This runs the gamut from how classrooms are designed, to how grades are (or are not) assigned, to new teaching pedagogies. And the list goes on. In Rhode Island, the primary focus within the broad realm of innovation has been on personalized learning.

Personalized learning is a student experience where the pace of learning and the instructional approach are optimized for the needs of each student. Standards-aligned learning objectives, instructional approaches, and instructional content (and its sequencing) may all vary based on learner needs and interests. Learning activities are meaningful and relevant to learners, driven by their interests and past performance and are often self-initiated or self-selected.

Blended learning means using a combination of face-to-face and online learning opportunities as appropriate. While many models of personalized learning also incorporate a blended approach, simply providing a student with online and face-to-face learning opportunities does not ensure that those learning opportunities are tailored to student needs, interests, and strengths.

About Ed Innovation Clusters

Education Innovation Clusters (EdClusters) are local communities of practice that bring together educators, entrepreneurs, funders, researchers, and other community stakeholders (families, local government, non-profits) to support innovative teaching and learning in their region. By working together, these partners form a network that is uniquely positioned to design, launch, iterate on, and disseminate breakthrough learning practices and tools.

Created with support from the U.S. Department of Education, Digital Promise is working to catalyze, support, and scale individual EdClusters, stand up a national network of these regional ecosystems, and continue convening stakeholders to share best practices.

EduvateRI is Rhode Island's EdCluster. EduvateRI brings people together around education, research, philanthropic, government and commercial partners to collectively surface and solve persistent problems in education, develop and test effective education tools and technologies, and nurture breakthrough, authentic learning practices. Through organized, integrated, and coordinated efforts, the EduvateRI cluster seeks to close opportunity gaps for students, improve the national competitiveness of Rhode Island, and drive economic growth through new and existing education-related business. EduvateRI will set the bar for education innovation nationally, acting as a model for other clusters as a research and design hub and drawing attention to RI's work as the nation's first personalized learning lab state.

About EdTech

Defining EdTech

The Association for Educational Communication and Technology defines Educational Technology as “the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources.” In general educational technology refers to the use of both physical tools and educational theory.

For purposes of this feasibility study we have further defined the categories of educational technology (edtech) as hardware, software, classroom furnishings and other components. The feasibility study has noted a significant growth in the edtech market including these highlights:

Overall Market

- The global edtech and smart classroom market is expected to reach \$93.76 billion in 2020 from \$43.27 billion in 2015 at a compound annual growth rate (CAGR) of 16.72%. (Markets & Markets)

Software and Digital Content

- A 2015 report noted that the K-12 educational software and digital content market reached \$8.38 billion dollars. (SIIA)
- The worldwide market for Self-Paced E-Learning reached \$35.6 billion in 2011. The five-year compound annual growth rate is estimated at around 7.6% so revenues should reach some \$51.5 billion by 2016. (Docebo)

Investment

- By 2015, global edtech companies received \$2.98 billion in venture and equity financing. The same source estimated \$1.87 billion in 2014. Two interesting contributions to this increase include:
 - Increased investor interest in continuing education and professional development, and
 - Rapid growth in funding to edtech companies based in China the same year.
- Education technology firms centered around professional development received \$220 million in investments in 2014 -- the largest share of investment outside of more traditional K-12 and higher education “eLearning”-focused firms.

Buyer-side

- According to EdSurge, in 2015, 46% of districts reported a larger budget for hardware, and 27% for software. Over half (54 percent) of districts administered summative assessments for core subjects online.
- In August, Massachusetts created \$38 million matching grant to help K-12 schools build the wireless infrastructure needed to support student and teacher use of edtech tools which improve student engagement and achievement.

Even with these impressive figures, the industry is still considered to be in an early phase of growth, as the needed ecosystem specialization and infrastructure continues to evolve. Like many other innovation and technology-driven sectors, the edtech sector will experience the challenges of launching new companies and deftly acquiring the capital and talent needed to scale. While many companies will not survive, it is interesting to note that a 2016 report on startup failure rates by the Statistic Brain Research Institute found that Education and Healthcare related startups have a survival rate of 56% after four years in existence.¹ While this figure is better than the rates of comparative sectors, it also illustrates the need to be cautious in setting economic development expectations for any technology sectors.

How EdClusters Are Supporting EdTech

While some EdClusters are certainly more advanced in engaging and supporting edtech companies, it is important to recognize that even the most advanced clusters are still relatively young. Therefore, while the examples below are informative, Rhode Island stakeholders should not be limited by these models.

Kansas City

The LeanLab is an education innovation accelerator/incubator that usually works with companies developing technology products, but sometimes includes school design, curriculum, and other opportunities not anchored in a technology. LeanLab pilots and incubates companies within Kansas City schools. Most of the entrepreneurs are former teachers. A certain percent of the companies are local, while others are national, but the goal is for companies to stay in Kansas City. LeanLab is backed by the Kauffman Foundation and is slowly creating a cohesive nexus between the education innovation sector and the traditional entrepreneurship and technology sector.

Austin

Austin's cluster work driven by two individuals and anchored at the Capital Factory. The EdTech Austin Meetup is the hub for speakers, panel discussions, edtech mixers, member spotlights, and hands-on learning experiences. The Capital Factory also provides additional services to edtech companies through their Edtech Action program, including: a pipeline to potential customers; demo days for education that include education institution stakeholders and investors; feedback from educators to edtech companies; and a network of practicing educational decision-makers to define the problems they want solved and matching them with companies working on those solutions.

Chicago

LEAP Innovations is a more nationally-focused edtech support organization, as demonstrated by the fact that they are spearheading the Gates Foundation Test Bed program. LEAP Innovations is housed in the 1871 accelerator. LEAP Collaboratory is a physical space where they host networking events for educators to share about their favorite edtech tools, apps and strategies, to connect to innovative in-school and out-of-school learning organizations and get hands-on experience with project-based learning tools, and to learn about and give feedback to promising edtech tools.

¹<http://tech.co/startup-failure-rates-industry-2016-01>

New Orleans

4.0 Schools is another national organization, based in New Orleans and also with local programming there. 4.0 Schools is a non-profit incubator that runs four-day intensives, book clubs, unconferences, and other programs to turn teachers and others with a passion for education into for-profit or nonprofit entrepreneurs. Other programs include Essentials and the Tiny Fellowship. Essentials is a three-day program that provides coaching from experienced entrepreneurs, feedback from real users, and a community of peers to help entrepreneurs move their idea forward. Tiny Fellowship helps entrepreneurs test their ideas for schools, educational programs, and edtech tools through coaching from experts, equity-free capital, and a community of peers. The fellowship is part-time and includes virtual and in-person programming for entrepreneurs regardless of where they live.

New York City

Not surprisingly, New York City is home to many organizations and initiatives aimed at supporting education innovation and edtech. As such, it's difficult to attribute successes to one effort or another. In 2010, the NYC Department of Education established the iZone, an office to support a community of schools in personalizing learning environments. Their Innovate NYC School program supports schools by connecting educators and students with edtech companies through Shark Tank-type events and short-cycle evaluations. InnovateEDU is another example of a NYC-based education innovation organization. They are in the process of starting an ed-tech accelerator to co-locate with Brooklyn Laboratory Charter School, with entrepreneurs and designers working on K-12 digital tools to serve, inform, and enhance teaching and learning.

Pittsburgh

Remake Learning is a network of educators and innovators in the Greater Pittsburgh Region. The network acts as a largely informal means of connecting edtech companies with relevant programs at Carnegie Mellon University and the University of Pittsburgh, with the Idea Foundry accelerator, and other resources. There is also a regular EdTech Meetup. In early 2016, with support from the Sprout Fund, the network ran an Ed-Tech Refinery program. The program offered grants for partners to provide support services at no cost for up to 2 edtech companies to enhance the applicability and usability of their products in a variety of education settings.

EdTech in RI

Existing Assets/ positioning

Rhode Island is well positioned to support the growth and attraction of edtech companies. The Highlander Institute was an early leader in the broader education innovation space and thus has created a highly engaged and innovation-friendly ecosystem of educators, schools, and policy-makers. They have attracted national funding to support this work, including funding from the Bill & Melinda Gates Foundation, the Nellie Mae Education Foundation, and the Overdeck Family Foundation. This work has resulted in Rhode Island being:

A “Best Practice” EdCluster

According to Digital Promise, the steward of all education innovation clusters nationally, Rhode Island is among the most cohesive of all EdClusters. While other EdClusters may be stronger in certain areas, e.g. university partnerships or edtech support, Rhode Island’s EdCluster is the strongest network of diverse partners, working in an organized and collaborative fashion. In fact, EduvateRI is positioned to be a formal partner of Digital Promise in supporting EdClusters nationally. EduvateRI is comprised of roughly 80 active partners, including educators, educational nonprofits/org, government agencies, researchers, edtech companies, designers, and others. In 2016, Rhode Island took an additional step in formalizing its cluster, launching the EduvateRI brand and website, as well as hiring dedicated staff. They also hosted the national convening of EdClusters.

What this means for edtech companies? An edtech company in Rhode Island has a single point of connection to all of the educators, education-related nonprofits, and government partners who are working to create a cultural and policy environment that supports the use of edtech products. Companies can be an active part of that network, helping to ensure that EduvateRI’s work is informed by the needs and perspectives of edtech companies.

A Supportive Policy Environment (and Home to a Rockstar CIO)

As indicated above, the work of the Highlander Institute and the EduvateRI cluster is a large part of why Rhode Island boasts such a supportive policy environment for edtech. However, Governor Raimondo’s administration, and two public sector offices in particular, is playing an important role in carrying out this work. The Rhode Island Department of Education the Rhode Island Office of Innovation are aligning their efforts to remove barriers, create clarity, and drive innovation in ways that will support the use of edtech as a tool for personalized learning. For example, RIDE, the Rhode Island Office of Innovation, Rhode Island Mayoral Academies, Highlander Institute and other partners launched the RI Personalized Learning Initiative in September 2016 to support personalized learning statewide. The initiative aims to support educators and administrators to develop, pilot, and grow new models for personalized learning, and to facilitate the sharing of lessons learned and best practices.

What this means for edtech companies? In addition to decreasing barriers to edtech adoption, having Richard Culatta as the State’s Chief Innovation Officer means more than meets the eye. Richard was formerly the Director of the Office of Educational Technology for the US Department of Education where he focused on using technology to close equity gaps in schools across the country. The ability to work with Mr. Culatta would be a big draw for many companies. While the recommendations outlined in this strategy could attract companies regardless of Mr. Culatta, his presence can be leveraged to help jumpstart the cluster.

A Place for Companies to Test Their Products

Rhode Island is one of eight testbed sites funded by the Bill & Melinda Gates Foundation to test blended learning products in classrooms using a short-cycle research model. The goal is to design a process by which edtech companies and district purchasers can receive feedback from edtech trials lasting between 10 and 20 weeks, rather than the traditional two-year studies that currently exist. Rhode Island is the only state (versus city) participating in the program, and aside from Boston, the only participant in the Northeast. This experience gives Rhode Island a unique advantage nationally in having the expertise to conduct these trials and it is unlikely that other organizations will step into this space given the deep relationships with schools and companies that are required to be successful.

Furthermore, the Test Bed builds upon the Highlander Institute's years of experience running EdTechRI. Nearly every month, EdTechRI invites up to six companies to present their product in front of Rhode Island educators to receive feedback on how it would best support them in the classroom. Over four years, this program has engaged 90 edtech companies. This program draws companies from Boston and New York and is offered virtually to companies on the West Coast.

What this means for edtech companies? Access to services like EdTechRI and those being piloted as part of the Test Bed program not only help companies improve and demonstrate the value of their products, they also help companies build relationships with potential customers. Rhode Island offers access to 66 districts representing a diversity of students, sizes, and learning environments, all within close proximity to each other.

Proximity to Boston

As always, Rhode Island's proximity to Boston is both an asset and a liability when it comes to the feasibility of the edtech sector. Boston is undeniably an edtech powerhouse. While many edtech companies are located in the tech capital of Silicon Valley, Boston has an equally weighty position as an education capital and thus is also home to many edtech companies. Not only is Boston an education capital for its prestigious and numerous higher education institutions and history in K-12 public school, it's also home to education publishing giants such as Pearson and McGraw-Hill Education, who are driving activity in the edtech sector. Boston is also home to LearnLaunch, an edtech accelerator and coworking space. A recent report issued by LearnLaunch estimated that there are over 430 edtech companies in Massachusetts and 20,000 - 25,000 employees working in the sector.

On one hand, establishing an edtech sector in the shadow of Boston's could be an uphill battle. On the other hand, it offers the opportunity to build partnerships, recruit from a large pool of entrepreneurs and companies, and build on Rhode Island's assets in a way that complements, rather than competes with, Boston. As will be described below, initial conversations are already underway with LearnLaunch about potential partnerships. With rising rents in Boston and a quick train ride to Providence, startups will increasingly be looking for an affordable alternative (2010 - 2014 Median Rent in Providence was \$885 compared to \$1,298 in Boston). One of the top edtech investors in the U.S. rejected the notion that proximity to the investor was as critical as some may claim and suggested that Providence is viewed as part of the Greater Boston ecosystem. Finally, the assets listed

above make Rhode Island unique, even in comparison to Boston. While a strong “cluster” of companies has developed around LearnLaunch, the engagement of educators, policy makers, and other education organizations in EduvateRI provides a unique opportunity for companies to get feedback and build relationships with potential customers. Assets such as this can be built on to complement Boston’s ecosystem and will be further described below.

Strategies to Grow & Attract EdTech Companies

While the strengths of EduvateRI, the supportive policy environment, and the access to programs to help improve and test products are all strong starting points for an edtech sector, a more robust and holistic strategy will be necessary to see growth in the number of edtech companies in Rhode Island. Rhode Island stakeholders have been focusing largely on creating educators and classrooms ready to use technology in support of personalized learning; however, as demonstrated above, other communities have been focusing more on supporting the companies themselves. Rhode Island’s work has created a fertile ground for edtech products to be successful, now it’s just a matter of ensuring that the entrepreneurs and companies will be successful.

Creating Educator Entrepreneurs

A common theme in talking to edtech entrepreneurs is that they used to be (or sometimes still are) educators. If an edtech company wasn’t founded by a former educator, then they regularly hire former educators to support product development and sales. A company founded by a former educator tends to be more likely to stay where it was founded than a company founded by a recent grad, or attracted for a short-term accelerator program; educator entrepreneurs are already rooted in the community, with connections to schools that will be critical for testing and selling their product, not to mention more firmly established networks of friends and family.

The Highlander Institute has already been engaging educators in the development and implementation of edtech products. Fuse RI selects fellows from a pool of statewide applicants and trains them to become blended learning change agents. Fellows are paired and mobilized for a two-year consultancy engagement in a Fuse RI district or charter that is not their own. Through the EdTechRI program, the Highlander Institute has been engaging educators in the development of edtech businesses for five years, engaging over 300 unique educators. Furthermore, the recent inaugural Startup Weekend EDU event attracted 40 - 50 educators interested in forming teams to design edtech products with culturally relevant content. This event was hosted by Highlander Institute in partnership with the Social Enterprise Greenhouse (SEG). Five winning companies were awarded coworking space at SEG for the year and will attend a 4.0 Schools workshop to further develop their ideas.

These programs have formed a strong basis upon which to build additional programming to support educators who want to create or work for an edtech company. Startup Weekend EDU is used by other edtech clusters around the country; at the EdClusters Summit, one Startup Weekend EDU organizer estimated that in their city, after three years of hosting the program 40 - 60% of participants ended up starting or working for an edtech company.

The strategies below offer a continuum of how EduvateRI could grow Rhode Island’s ability to support educators who want to become edtech entrepreneurs. One risk to note that applies to all of the strategies below is that they can be perceived as taking good teachers out of the classroom. In most cases an entrepreneur is not financially able to work full-time on their business; therefore, programs should be designed assuming that educators will continue to teach and be working on an edtech business part-time.

Strategies

1. Continue / Build on Startup Weekend EDU

Startup Weekend EDU is used across the country to seed edtech startups and was successfully piloted in Rhode Island. This program should continue to be implemented and developed.

Who: Highlander Institute, Social Enterprise Greenhouse

How: Build on lessons learned from the inaugural weekend and consider a few modifications:

- Identify market needs or focus to guide the teams; consider expanding beyond K-12.
- Encourage people to think about content through workshop before the Startup Weekend event.
- Engage more designers, developers, and business stakeholders.
- Engage investors in the process to receive their real time feedback and network building.
- Provide guidance on the structure of the organization developing the edtech solution. Many teachers want to start a non-profit because that seems more comfortable and an easier path to partnership with schools. The weekend can get them to think about “productizing” and illustrate that the schools don’t care that the business is for-profit.
- Develop capacity to support additional companies that may not be selected to the next round.
- Ideally, Highlander Institute should support companies in ways related to understanding and engaging with the education sector; while Social Enterprise Greenhouse or another economic development organization should support companies in technical issues related to establishing and growing a business.

When: Immediate

Risks: As suggested above, capacity needs to exist to support the companies that result from the Startup Weekend. This includes space and mentorship at a minimum. Access to additional incubator-type services and funding should also be considered.

Alignment: There is very strong alignment with this activity as it supports the overall startup ecosystem.

Supply / Demand: High initial turn-out from the pilot is a positive indicator of demand.

Potential: Relatively low-cost, high-reward as demonstrated by other cities. Five companies were created from the inaugural event, which also had a narrow theme of culturally relevant content.

2. Connect Educators to Existing Software Development Resources

Based on observations and interviews with edtech experts, former educators are often the ones starting edtech companies. Educators may have an idea for an edtech product, but lack the basic software development skills to build an initial site, communicate with developers, or otherwise take the first step in creating their product. EduvateRI can act as a central resource, connecting educators to existing training programs and/or actual developers who are looking for freelance work.

Who: EduvateRI, TechCollective

How:

- Identify all existing resources, from online programs, to short-term bootcamps, to university degree programs.
- Create an online directory as part of the EduvateRI website. To ensure viability, develop this with input from potential users. Conduct focus groups to determine how they might find out about, access, and use the directory.
- Provide support services to help educators choose the right program.
- Partner with TechCollective to identify part-time software developers interested in supporting edtech start-ups. Host speed-dating events for software developers and educators.
- There is a cost to identify the information discussed and it is unclear how much of this is readily available with the work that Real Jobs has supported within the IT sector. However, the cost is relatively small and this could be a quick and visible “win”.

When: Due to transformation at the TechCollective this would need to be aligned to their pace. Information on existing resources could begin to be gathered and shared via regular communications with EduvateRI members and other stakeholders; click rates and sharing data can be tracked to gauge interest.

Risks: If EduvateRI is just providing the information no clear risk to the initiative is identified. In order to be useful, resources must be dedicated to ongoing maintenance of the directory.

Supply / Demand: As demonstrated by the Startup Weekend EDU event there are a number of people in RI interested in launching edtech companies.

Potential: This type of activity would support the earliest of the startup activities.

3. Create a cross-disciplinary program to train educators to work in edtech

There are an abundance of edtech degree programs offered through teachers' colleges and aimed at educators who want to be technology leaders within their schools. However, there are very few programs designed for current educators who want to work for or start their own edtech company. Though an education background provides the critical knowledge and skills to identify and design a solution, translating that solution into a digital product and running a business require very different skills. A program that provides basic computer science and business knowledge could be a differentiator for Rhode Island and be effective in spurring educator entrepreneurs. Because this would be targeted to existing educators, it would likely be structured as a continuing education or master's level program.

Who: An existing college or university is the most-likely lead. Initial conversations with Roger Williams University Department of Continuing Education were positive. EduvateRI would likely provide guidance on content and format and could help to promote and recruit participants.

How:

- While some initial research into similar programs was done as part of this study, additional research should be conducted to better understand similar programs.
- Additional data points for demand will need to be collected to demonstrate demand
- Additional discussions and negotiations with an institutional partner will be necessary

When: Longer-term, once more demand is evidenced

Risks: This program could be perceived as taking good teachers of the classroom; the program should be designed so that participants can still teach.

Supply / Demand: As mentioned above, there do not seem to be many programs like this nationally, which could build Rhode Island's reputation for supporting edtech. While demand from educators to work in edtech is starting to be evidenced through events such as Startup Weekend EDU and programs such as FUSE RI, whether or not that translates into actual demand for a continuing education or master's program is yet to be identified.

Potential: In other cities, edtech-related programs at Carnegie Mellon University and Columbia University have helped to bolster those cities' reputations as edtech hubs. In addition to a reputational impact, this program would directly support the creation of entrepreneurs and edtech workforce, a critical component to any growth and attraction strategy.

Brokering Relationships

The Highlander Institute already provides a valuable service to both companies and educators by being a trusted third party to broker relationships. Companies are looking to better understand the local market and make connections to potential customers. This is especially critical for companies in the K-12 market, which presents often insurmountable bureaucratic challenges for small companies. Furthermore, companies want to better understand the unique conditions of schools and markets, but don't know how to do that, aside from identifying individual teacher advocates. Educators want to know which products are best for their classroom and how to use them. For instance, EduvateRI has created a matrix highlighting personalized learning platforms vetted by the RI Personalized Learning Initiative. School leaders can use this matrix to get an initial understanding of tools' capabilities and requirements, before scheduling a demo. The Highlander Institute has been careful, though, not to put their stamp of approval on specific companies and products in an effort to remain a neutral third party. With that said, the Highlander Institute is in a unique position as a convener and can build on the current experiences.

At least initially, nearly all of these strategies would be providing benefit to out-of-state firms. However, they will help Rhode Island to build a reputation as the place to come to be an active and engaged part of the education innovation and technology network. Companies will come to Rhode Island to participate in these programs and build relationships with support organizations and potential customers. As it pertains to economic impact, these strategies are recommended with the assumption that companies will eventually view Rhode Island as a good place to start and grow an edtech business. Furthermore, out-of-state companies could also pay higher fees to participate in EduvateRI events and utilize services.

Strategies

1. Continue to Host and Strengthen EdTechRI

EdTechRI is the Highlander Institute's signature program for connecting companies and educators. Once every month or two, five or six companies are invited to participate. Overall the program has engaged 90 edtech companies in four years. The CEOs and/or co-founders participate, rather than sales representatives, and the focus is on how the product can be improved based on feedback from educators. While the program originally targeted companies within the region - and still does - it has begun to pull from a national, and sometimes international, pool of companies, often using virtual meet-ups. Graduating cohorts from accelerators such as LearnLaunch, StartEd, and Imagine K-12 regularly participate. These companies are potential attraction targets, and creating relationships with RI educators and organizations is an important piece of that strategy. Highlander Institute should continue to strengthen EdTechRI by deepening relationships with existing edtech incubators and accelerators, as well as increasing connection points for those companies to RI.

Who: Highlander Institute

How: This is currently done on a monthly or bi-monthly basis and scaling will require a more strategic approach to building additional relationships.

- A recent EdTechRI was hosted at Social Enterprise Greenhouse; EdTechRI should help connect participating companies to other startup resources in Rhode Island, like Social Enterprise Greenhouse.
- After the meetup, most follow-up is left to the educators and entrepreneurs to coordinate. EdTechRI could facilitate additional follow-up where desired, such as conducting a pilot or re-engaging educators once feedback has been incorporated.
- Companies currently pay a nominal fee to participate. Demand is clearly strong and the Highlander Institute should consider increasing the fee for companies to participate.
- To enhance the attraction potential the Highlander Institute can work with Commerce RI to develop a promotional piece regarding the opportunities to locate in the state.

When: This is an ongoing activity.

Risks: If volume or level of activity increases this could put the Highlander Institute at risk of not having the resources to be successful.

Supply/ Demand: There continues to be demand from companies to participate and opportunities to expand the partnerships with other edtech incubators and accelerators.

Potential: This activity is already bringing dozens of companies into the state and building relationships and reputation. To date, this work has been largely unfunded, with funding the impact of this program could be exponentially larger.

2. Increase Opportunities to Broker Relationships Through Events

Edtech companies have expressed interest in more national-level events that provide opportunities for thought leadership, best practice sharing, business-to-business connections, policymaker connections, and other opportunities to build relationships. Currently, EdSurge Summits come the closest to that, but other events, such as the Digital Promise EdClusters Summit don't include companies.

Furthermore, when companies are involved, they are often positioned more as vendors, rather than partners. The Highlander Institute is in a position to fill that gap through expanding its Blended and Personalized Learning Conference. Now in it's 7th year, the Conference is expected to attract 900 - 1000 attendees from across the region in April 2017. While companies have participated as sponsors, their products sometimes being demonstrated by teachers or in a model classroom display, they have yet to be more fully engaged, in part due to perceived risk in endorsing companies. If the process by which companies apply to exhibit or be involved is clear, it should limit the perception of endorsement.

Who: Highlander Institute, the Clayton Christensen Institute, the Learning Accelerator

How:

- The 'exhibit' component can be expanded and can be held on the first day of the conference, which would be an invite-only discussion for a small number of participants. Hosting a larger exhibit space may encourage additional participants to come into town early (a small but positive economic impact).
- Companies could be also offered a 'rapid pitch' opportunity. This would be a chance for companies to give a pitch like those done at the EdTechRI events. They could get 3-5 minutes to explain the problem they are working to solve, how their product works and what results they have seen to date and what they are looking for from the audience.

When: A small scale pilot could be launched as part of the 2017 conference. The services of a group who supports at least smaller trade show exhibition should be secured.

Risks: The biggest risk is that conference attendees are not interested and then do not visit the exhibitors or the event. As a pilot, the pricing structure should be made conducive to not create a high risk situation.

Supply/ Demand: Companies contacted during the feasibility study noted that the MassCUE (Computer Using Educators) conference is one that supports networking between companies and educators.

Potential: By allowing companies to participate, the Highlander Institute will be exposing more to the opportunities of RI. In addition their fees to participate can support other EdTech cluster activities.

3. Utilize Professional Development Training to Broker Relationships

Edtech companies regularly provide professional development services to their existing customers in order to ensure successful implementation. They are interested in expanding their reach and ability to influence professional development, but the sales-based nature of the relationship often puts educators and administrators on guard. Furthermore, many education-related associations in the state provide tech-based professional development to their members. These associations may benefit from additional expertise and capacity to provide this training. As a trusted third party, the Highlander Institute is in a position to better align existing professional development and engage edtech companies to help inform and deliver the training. The Highlander Institute could vet and invite companies representing a variety of products and services to provide more generalized training in response to the interests and needs of educators and administrators. Companies have expressed interest in participating in these programs, as it offers them an opportunity to build relationships with and better understand the needs of potential customers.

Who: Highlander Institute and Eduvate RI partners

How:

- Highlander Institute would work with professional development partners to identify top professional development needs.
- EduvateRI would release an application for interested companies to participate.
- Though companies typically get paid to provide professional development relative to the use of their specific product, this could be a more general edtech/blended learning professional development series that a company would pay to help develop and implement.
- This program may be eligible for state workforce development training funds.

When: This program should be piloted initially and could be implemented at any time.

Risks: Requires a level of due diligence and research to ensure that companies are a good fit. Parameters will need to be established to create a balance between using their products for professional development and sales.

Supply/ Demand: Companies interviewed as part of this study expressed an interest in being more involved in professional development for educators. There are currently many professional associations providing training, but these programs are not aligned or coordinated around standards related to edtech and blended learning.

Potential: This would not directly contribute to company growth or attraction, but would provide companies the opportunity to be more engaged in EduvateRI and build relationships with potential customers - a key consideration, especially for young companies, in where to establish their business.

4. Formalize Membership Within EduvateRI

To date, EduvateRI has attracted participation of roughly 80 educators, administrators, companies and others. However, there is no clear designation of an EduvateRI member, making it challenging to demonstrate scale and impact to prospective companies, funders, etc. The timing is now or soon for the Highlander Institute, the Office of Innovation and their partners in EduvateRI to consider and possibly implement a membership model to provide additional validation of the level of engagement desired by individuals in the current loose network. Most other industry sectors have a recognized trade association that is organized to serve its members.

At first, membership could simply take the form of filling out an application. This could feed into a web directory of individuals and groups from within the state and beyond who are interested in edtech and education innovation. One benefit of an online directory is that it could help alleviate some of the tension that Highlander Institute feels when playing the broker role. A directory could allow companies to create profiles and respond to specific questions and criteria, as well as allowing for educators and administrators to leave reviews of those companies. The Highlander Institute would still create the infrastructure to broker those relationships, but would leave the vetting to companies and users.

So far, this does not seem to be a trend in the edtech sector, though the EdTechReview, based in India, provides an example - edtechreview.in/membership.

Who: Highlander Institute, Office of Innovation, and Eduvate RI partners

How:

- Benchmark other industry membership models
- Develop and vet application process
- Outside expertise may be required to create an online directory
- Would require staff capacity to manage membership registry
- Eventually, consider a dues and/or sponsorship-based structure

When: The primary timeline barrier for this activity is raising the funds to create an online directory; otherwise this should begin immediately.

Risks: While a formalized membership structure is valuable in demonstrating participation and creating a more stand-alone organization (even if not technically), creating a dues-based model provides some initial risks. There are currently many dues-based membership organizations in Rhode Island, many of which are not providing true value to their membership. Therefore, EduvateRI should focus first and foremost on providing value, and then explore a dues-based model further into the future.

Supply / Demand: Between in-state and out-of-state participating educators, administrators, companies, researchers and more there seems to be an adequate number of people and organizations that would be interested in supporting the effort.

Potential: It is expected that over 200 individuals and 3 dozen organizations/ companies would be interested based on initial analysis of past participation in Highlander Institute events.

Supporting User and Evaluation Research, and Implementation

Three types of research can contribute to the development of an edtech product. Often resulting from university research, scientific research on how people learn can be used to inform product design. Primarily taking the form of pilots, user research gathers information about how people are interacting with their product. Evaluation research helps developers determine whether a product contributes to solving a problem in education. All three of these activities should be present in a high-performing cluster. While EduvateRI has been leading piloting and evaluation activities, university-led learning research is lacking. EduvateRI is partnering with the RI Association of Independent Colleges and Universities' Collaborative program to try and fill that gap through the RI-Education Innovation Research Network, to be launched in mid-February 2017

To date, most of the Highlander Institute's work has been in conducting user research. There is an opportunity to expand this work beyond the current Bill & Melinda Gates Foundation Test Bed program, as well as to support both learning and evaluation research. However, all of this work requires navigating a high degree of complexity and keeping up with fast-moving progress across the country. Furthermore, while companies recognize the value of creating products that are informed by learning research, having been piloted with diverse populations, and having a method for ongoing evaluation, the pressure from government, customers, and funders to hold their products to such high standards isn't yet strong.

Strategies

1. Offer a Fee-For-Service Piloting Program to Companies and/or Districts

Pilot programs are valuable for young companies in particular, as they offer the opportunity to test their products with users and receive valuable feedback. They also help companies establish relationships with prospective clients. Often times, educator entrepreneurs use their own networks to test their products. More established edtech companies also have an established network of existing customers and partners with whom they can test new products. Therefore, the companies that tend to benefit most from third party pilot programs are young companies formed by more traditional entrepreneurs.

The Highlander Institute could create a program that companies pay for, where the Highlander Institute does the legwork of matching the company with a school, collecting data, and doing the analysis. This could include an Entrepreneur-in-Residence component, whereby an entrepreneur is placed in a school (or other learning environment) for a set period of time to learn more about various learning environments, styles, or other considerations. Some benefit to the school should be determined in exchange. Alternatively, a District could hire the Highlander Institute to manage a pilot for a product that they are considering adopting.

Who: Highlander Institute

How:

- Protocols should be developed to guide what companies can participate.
- Companies or districts should pay to participate in piloting, but Commerce RI could subsidize participation for in-state companies.
- Legal support should be engaged to address liability concerns.
- This program could be paired with additional services offered through an accelerator program (see Creating an EdTech Entrepreneurs Support System). Though there is a significant emphasis on the need for companies to pilot their products, those pilots don't reflect overall product demand. A differentiator for EduvateRI could be to combine piloting services with assistance identifying market demand and developing a sustainable business model.
- Guidance from the U.S. Department of Education on using evidence to strengthen edtech investments has been an important step in increasing demand for these services. Some sort of state policy to encourage or require districts to use more evidence in procurement and purchasing would create more momentum for these services.
- An Entrepreneur-in-Residence program should be modeled, vetted, and piloted in partnership with both entrepreneurs and educators/administrators.

When: Implementation of this strategy may depend on if funding continues from Gates for the test bed program.

Risks: There is little (though growing) pressure to invest the amount of time and money in this research and piloting. Furthermore, piloting products presents challenges for teachers and students. Teachers prefer year-long pilots to provide enough time to fully learn and integrate a product (while companies prefer short-cycle pilots). There is also an on-going risk in piloting unproven products with students. The Highlander Institute would incur some degree of liability in regards to the outcome of the pilot.

Supply / Demand: Based on their experience with the Gates Test Bed, the Highlander Institute has seen a fair amount of interest from companies to participate. Companies participating in EdTechRI have also expressed interest in the ability to work in RI schools. Competition from other organizations supporting edtech pilots in RI and the region is limited; however, increasingly online tools such as the Federal Department of Education's EdTech CRE Coach and Digital Promise's EdTech Pilot Framework are providing digital assistance to schools who want to run pilots. Still, in-person support is always valuable and the Highlander Institute could utilize these online tools in its work.

Potential: Highlander Institute could potentially pilot 5 companies at a time.

2. Partner with Accelerators to Pilot Products in RI Schools

Though most accelerator programs offer some sort of engagement with educators and end users, it is still a rare and desirable opportunity for a young company to pilot their product in a school, let alone in several, diverse schools. Edtech companies report that strong relationships with schools and good pilots are an important “sticking point” for where they ultimately decide to locate. A variation on the above recommendation is to develop partnerships with accelerator programs to allow companies to pilot their products in RI.

Who: Highlander Institute

How:

- Initial conversations are underway with LearnLaunch about various partnership opportunities and LearnLaunch companies have already been participating in EdTechRI. A pilot of this program should be explored with LearnLaunch.
- Clearly the Highlander Institute couldn't facilitate pilots for all companies exiting partner accelerators - qualifications and an application process would need to be developed consistent with the above recommendation.
- The program could be structured to work with a pool of accelerators. Schools could determine their particular needs and applications could be shared with all participating accelerators to identify edtech products that meet the schools' needs.
- Roshni Lakhi, who runs EdTechRI and is based in NYC, has connections to other accelerators that can be leveraged and expanded.

When: It may be best to develop the base program described above before announcing a partnership with an accelerator; this way glitches can be addressed in a more low-profile manner.

Risks: As with any piloting, there continues to be a risk associated with testing unproven technologies with students. A pilot program with the express (though not sole) intent of attracting companies to RI could be viewed negatively.

Supply/ Demand: Highlander Institute's Roshni Lakhi reports strong interest from the young companies she works with in NYC. Though accelerators in other cities offer opportunities for companies to connect with schools, there are many limitations including, those opportunities tend to be more self-guided, and/or opportunities to work with large districts such as NYC or Boston come with bureaucratic obstacles for startups.

Potential: This could be a high-impact opportunity to attract new companies to locate in Rhode Island. Companies recently existing accelerators are in a stage where they are likely to chose a location to establish themselves - pilots offer them the opportunity to build valuable connections.

3. Engage and Partner with Colleges & Universities

Related to research, colleges and universities play important roles by conducting learning research that can be commercialized into edtech products and by supporting research and evaluation related to the effectiveness of specific products. The Collaborative (a program of the RI Association of Independent Colleges and Universities) recently convened professors from across higher education institutions with an interest in education innovation. Though their initial research is likely to be focused more on researching and measuring personalized learning, there may be an opportunity to use this group to support the research and evaluation of edtech products. In particular, the Highlander Institute faces challenges in implementing piloting and evaluation services as they are not typically viewed by schools as researchers. A college or university partner would lend credibility. However, beyond that tactical role, colleges and universities are simply a critical part of any cluster, and engaging interested stakeholders in EduvateRI will undoubtedly open up many other opportunities for partnering.

Who: EduvateRI, The Collaborative

How:

- Further understanding of how colleges and universities are partnering with other clusters and/or playing a role in supporting edtech companies in other communities - e.g. Columbia University Teacher's College EdLab, John Hopkins Center for Research and Reform in Education, Evaluation Services, and the Towson University Incubator
- Identify professors interested in edtech through the Collaborative and other outreach, e.g. Startup Weekend EDU
- EduvateRI will need to develop specific programming and partnership opportunities depending on number and interest of college and university partners

When: Given that the initial focus of this work is not on edtech and that there are not any clear edtech champions identified through this process, this is a longer-term strategy

Risks: Though colleges and universities are critical partners in any cluster, working with them often requires dealing with bureaucratic barriers.

Supply/ Demand: There is neither a clear supply of professors interested in supporting EduvateRI, nor is there a clear demand from EduvateRI members. However, participation of colleges and universities bring many diverse benefits to an industry cluster and should be pursued.

Potential: Combined with efforts to work with colleges and universities on talent-related strategies, their participation is critical to the growth of an industry cluster.

4. Offer Fee-for-Service Implementation and Evaluation Services

These services could run the gamut, to include:

- Consulting for companies developing their own evaluation tools on how those tools align with existing efforts in RI schools, as well as on related privacy and child protection laws.
- Consulting for companies to help implement and evaluate their product once it's already been adopted by a school. The Highlander Institute is uniquely positioned because they are already working in so many schools and can be more hands-on than the typical success staff working for a company.
- Consulting for a district to evaluate the effectiveness of a product they are currently using.

Who: The Highlander Institute would likely need to hire additional staff to build out capacity to provide these services. Despite its work with the Gates Test Bed project, the Highlander Institute does not have a strongly established reputation in this area; it would likely help with capacity and reputation to have a university partner.

How:

- To provide any of the three services above, a more detailed business plan would need to be developed.
- As part of that process, the Highlander Institute should conduct additional engagement with potential users to inform the model.
- The Highlander Institute should also conduct additional research on existing service models being used across the country to inform their model and better understand competition.
- A marketing and communications plan would need to be developed to reach target customers.

When: This strategy aligns with where the Highlander Institute is already working; however, it will take some time to create a business plan and add capacity. Therefore, this is likely a mid-term strategy.

Risks: Like other strategies in this area, primary risks include liability and working in a complex and constantly changing environment.

Supply/ Demand: There are no other organizations or companies providing these types of services in Rhode Island. Competition from Boston should be considered. Demand is anticipated to grow, driven by purchasers of edtech products, state and federal education agencies, as well as private investors.

Potential: This strategy will not directly contribute to the creation of new companies and likely will be a limited factor in attraction. However, it could be very valuable to helping existing RI-based companies grow. Furthermore, it could generate revenue from out-of-state companies that could help to fund other EduvateRI activities.

Developing the EdTech Talent Pool

Edtech companies have struggles similar to other tech companies in finding software developers and other technical talent, such as data scientists. In fact, they may face greater challenges because they can pay less than other tech start-ups. Furthermore, many companies face the unique challenge of finding people with an education background who are interested in working in edtech. Building the edtech talent pool is a critical issue for Rhode Island's ability to grow and attract edtech companies, and do so with RI-based talent. Not only are companies locating in proximity to talent, investors care more about a company's access to talent than their proximity to the investor.

Though RI struggles to attract tech talent given the pull and strength of Boston, many initiatives are underway to build the pipeline, including PTECH schools, CS4RI, TechHire, LaunchCode, General Assembly, Skills for RI's Future, and the creation of new computer and data science minors at URI, RIC, JWU and Bryant. Furthermore, libraries are playing a growing and critical role in connecting adult learners to these opportunities. Therefore, the role of Eduvate RI will be less about creating new programs to develop edtech talent, and more about creating connections to help companies, technical talent, and education talent find each other.



Strategies

1. Coordinate Interns for Edtech Companies

EduvateRI could act as an intermediary for connecting university students with an interest in edtech to companies for internships or job placements. As most companies looking for university interns know, navigating how and where to look for interns is time-consuming and confusing. Furthermore, large companies often have ongoing and easy access to certain departments and schools. If EduvateRI could help connect companies to design, computer science, education, and other related interns, that would help to support edtech companies and to uncover a currently hidden edtech talent pool.

Who: Social Enterprise Greenhouse already provides a Talent Matchmaking service. However, at least initially, this will require additional capacity from Eduvate RI.

How:

- LearnLaunch does already have a job/internship board; understand better if that can serve RI students and companies or if a unique solution should be developed
- Identify appropriate department contacts in all colleges and universities
- Determine how internship opportunities are currently advertised and coordinated
- Interview companies to determine how they currently sources interns and how they would potentially use a coordination service
- Internship coordination services could be provided for free to member companies; others and/or out-of-state companies could pay a fee

When: Like all talent-related strategies, timing presents a bit of a “chicken or the egg” scenario. There are currently not many edtech companies located in RI, but for new companies to grow and move here, ready access to talent will be key. Piloting this service with those companies that are already located in RI, as well as one or two key departments, could be done in the near-term.

Risks: So long as the program is developed with a clear understanding of similar services and of the needs of both companies and students, there are not apparent risks.

Supply/ Demand: As noted above, both Social Enterprise Greenhouse and LearnLaunch provide services that could be built off of. Access to talent is one of the top concerns for companies, so demand should be plentiful.

Potential: Taking some step to help identify RI students interested in edtech internship and connecting them with companies is a necessary strategy for developing the edtech sector.

2. Create a Pool of Part-Time Education and Technical Talent

As suggested under “Creating Educator Entrepreneurs”, creating a pool of part-time technical talent could be a resource for new educator entrepreneurs. However, this concept and its related benefit can be expanded to include any potential edtech employee and to benefit any edtech company. EduvateRI can be a flagpole under which part-time educators, designers, data scientists, developers, and other professionals can find each other. As an extension of this concept, EduvateRI can run a Teacher-in-Residence program, whereby teachers are placed with edtech companies to work with them for a few hours per week providing feedback on product design.

Who: EduvateRI would lead this strategy, but it would require support from many other organizations, as described below.

How:

- Identify and engage sources of possible part-time talent, to include: university career services, related higher education departments, technical training programs, TechCollective, DESIGNxRI, Providence Geeks, Founder’s League, and other tech-based networking events.
- Many Teach for America graduates have backgrounds in fields other than education and go on to become entrepreneurs. Working with Teach for America to connect graduates to this talent pool could be a differentiator.
- Highlander Institute already has access to a large pool of educators from which to recruit those who may be interested in part-time work with edtech companies
- Several components of an online registry/database have already been discussed in other strategies, including membership, training resources, and internships. This should also be considered as part of that work.
- Host matchmaking events.
- Create an application process for companies to apply for a Teacher-in-Residence; companies should pay a fee for the service as well as a stipend for the participating educator.
- Only RI-based companies who are members of EduvateRI should have access to this service.

When: Planning and development for this strategy should begin in the short-term.

Risks: The program could fail if the supply of talent does not meet the demand for talent. It will also require ongoing programming and events - so capacity must be dedicated.

Supply/ Demand: Aside from traditional job boards, there is no service like this in the edtech space that we are aware of. There was substantial interest from edtech companies interviewed in a service like this. It could be a valuable differentiator for Rhode Island.

Potential: Access to talent is a driving force in where companies locate and grow; therefore, this strategy should have high impact.

3. Create a Cross-Disciplinary Degree Program

The recommendation under “Creating Educator Entrepreneurs” suggested the creation of a continuing education or master’s level program designed for educators interested in pursuing a career in edtech. Similarly, a cross-disciplinary degree program could be developed for computer science majors with an interest in edtech. At Carnegie Mellon University, for example, the Masters of Educational Technology and Applied Learning Science (METALS) program is an intense one-year, interdisciplinary master’s program that trains graduate students to apply evidence-based research in learning to create effective instruction and educational technologies within formal and informal settings. The METALS program is jointly taught between the Human-Computer Interaction Institute and Carnegie Mellon’s Department of Psychology.

Who: This program would most likely be within one college or university, but could be a partnership between two based on their unique strengths. The New England Institute of Technology has recently applied to create a computer science-focused teacher prep program. Opportunity @ Work should also be engaged given their work in this area.

How:

- Initial research into similar programs was conducted as part of this study, but additional research may be required to help identify what programs already exist.
- A survey via EdSurge or some other forum to reach a large number of edtech companies would provide insight into the most in-demand skills and competencies.
- Based on demand, consider the strengths of existing RI-based programs. Begin engaging potential higher education partners based on that assessment.

When: The development of a new degree program would be a long-term strategy.

Risks: The time and cost of creating a new degree program present many risks. Therefore, careful research and planning upfront would be required.

Supply/ Demand: That we know of, very few programs of this kind exist. Researching the number of applications received by similar programs would be a good indicator of demand. Given the growth of the edtech industry and limited number of programs, we assume that there would be sufficient demand and that a program of this sort would be a highly visible differentiator for RI.

Potential: The presence of a strong, related university program is a driver of economic growth for that region in nearly every industry.

Creating an EdTech Entrepreneur Support System

Rhode Island already has many resources and organizations to support entrepreneurs. The strategies below aim to leverage existing resources and tailor programs to the unique needs of edtech companies where necessary. Though it isn't recommended that Rhode Island create an edtech-specific accelerator, building a cohesive program around existing resources will be critical to gaining a reputation as an edtech hub. The ability to participate in these programs is a main driver for startups to relocate.

Strategies

1. Partner With Existing Accelerators To Support Edtech Startups

Rhode Island is home to Social Enterprise Greenhouse (SEG), a non-profit supporting the growth of social enterprises through a variety of services, including an accelerator. A short train ride north, LearnLaunch is an edtech accelerator based in Boston. As part of this feasibility study, several initial conversations have taken place to explore ways in which the two could partner to support edtech companies in Rhode Island. EdTechRI already works with graduates of LearnLaunch; however, there are additional opportunities to partner. Furthermore, Social Enterprise Greenhouse has already partnered with Highlander Institute in support of Startup Weekend EDU and is offering free co-working space to the five winners.

Who: EduvateRI, SEG, LearnLaunch

How:

- SEG will partner with EduvateRI on events, will recruit mentors with education experience, and market to edtech companies.
- As part of an accelerator program, Highlander Institute could provide companies with information on school policies, what tools schools are already using, and other pertinent information about market conditions based on their work.
- Though SEG would not initially run an edtech-only cohort, a marketing strategy should be developed to target edtech companies.
- If, as described below, a physical edtech hub is developed, consideration will have to be given to where programming related to an SEG accelerator program takes place.

When: An SEG partnership is already in place for 2017. A LearnLaunch partnership will require additional development in 2017.

Risks: While SEG is a non-profit, LearnLaunch is a for-profit organization, which may present a risk if the state is going to support any of this programming.

Supply/ Demand: Highlander Institute's deep connections to schools and educators provides an important differentiator from other similar programs. Accelerator-type programming, paired with Highlander Institute's ability to broker relationships and run pilots, as described above, provide value for small companies that can be hard to find in similar programs. Edtech companies interviewed as part of this study expressed an interest in this holistic approach.

Potential: Accelerator programs are a main driver of relocation for young firms and therefore have a high potential for attracting companies. Careful thought will need to be given to how EduvateRI keeps those companies in RI after the accelerator program ends. This relates to many of the other recommendations, i.e. building a dynamic ecosystem that provides a variety of services to companies throughout their life.

2. Help Connect Entrepreneurs to Investors, Including Through a Business Plan Competition

Access to capital is undeniably a critical factor when trying to grow or support edtech companies. While Rhode Island isn't home to many potential investors, it is part of the Greater Boston market and has a key asset in Chief Innovation Officer, Richard Culatta. The number of investors who are working in edtech is still relatively small and personal relationships can go a long way.

Inviting potential investors to judge business plan competitions could also be an impactful strategy. The Rhode Island Business Plan Competition is an existing event supported by private businesses and investors. Last year medtech was one of the focus areas, indicating an interest in partnering with emerging sector organizations.

Who: EduvateRI, Office of Innovation, Rhode Island Business Plan Competition

How:

- Work with existing companies to better understand their needs relative to investment.
- The Office of Innovation should begin to develop relationships with edtech investors who fund in the region to better understand their interests and needs.
- Based on that information, Richard Culatta can invite investors to Rhode Island to meet with edtech companies.
- The Office of Innovation and/or EduvateRI should engage and partner with the Rhode Island Business Plan Competition to host an edtech focused competition and include edtech investors.
- EduvateRI should have a presence in Boston - attending networking events, meeting with investors, etc. - to establish itself as part of the Greater Boston market.
- EduvateRI is positioned to be a formal partner of Digital Promise. EduvateRI could work with Digital Promise to create a portfolio of edtech companies from other smaller markets to shop with potential investors.

When: This work can begin immediately.

Risks: While the CIO has the immediate ability to make connections, those relationships should be transferred to others in RI to ensure sustainability.

Supply/ Demand: This will be at the top of the list for any edtech company starting in or moving to Rhode Island. There are currently few resources in RI to help connect startups to investors.

Potential: This strategy is necessary to attract and grow edtech companies.

3. Connect Entrepreneurs to Housing and Quality of Life Amenities

As real estate prices in Boston continue to grow, Providence will increase its viability as a place for entrepreneurs to live and work. Helping entrepreneurs to identify housing and get to know the community as part of a more comprehensive program can increase the chances that they will stay in Rhode Island.

Who: This is an issue that is true of all entrepreneurs and small businesses and should be done in coordination with organizations such as TechCollective.

How:

- Engage entrepreneurs to better understand their needs and interests relative to housing and quality of life amenities
- Work with organizations who coordinate cultural and recreational opportunities to understand how they advertise and how best to connect entrepreneurs to their resources
- Include this information on the EduvateRI website
- Identify alternative housing opportunities, e.g. student housing during the summer, cooperative housing models
- Organize programming to encourage entrepreneurs new to RI to access amenities

When: This should be done once an accelerator or other programs are established that are bringing new entrepreneurs to RI.

Risks: There are no clear risks associated with this activity, so long as it's done in coordination with similar organizations and efforts.

Supply/ Demand: There may be other central resources for information on housing and quality of life amenities that can be built off of.

Potential: This is a small but important step to help make RI more attractive for edtech entrepreneurs to permanently relocate.

Developing a Physical EdTech Hub

Nearly all of the previous strategies could benefit from a central, physical hub. Despite all of the ways in which physical proximity no longer matters, it undoubtedly still matters when it comes to building an industry cluster. EduvateRI is already among the most cohesive of the EdClusters, but a physical hub to connect companies, educators and administrators, and other support organizations would catalyze even greater partnerships and collaboration. Access to a holistic and connected ecosystem is important for growing and attracting companies. A physical hub could include space to:

- Demonstrate edtech products - Highlander Institute already creates a classroom of the future during the Personalized and Blended Learning Conference - that concept could be further developed here into a year-round opportunity for educators to test new products
- Host trainings and events described throughout this study, e.g. professional development trainings, Startup Weekend EDU, EdTechRI, Teacher-in-Residence programming, etc.
- Provide co-working space for edtech companies
- Provide office space for related organizations and education-related associations

Two key themes emerged from interviews around what would make a space like this successful. First, that is provide valuable resources to edtech companies. Young companies lose precious time and money dealing with issues such as taxes, packaging, legal assistance, etc. Eduvate RI can identify and vet service providers who could then offer office hours (or some similar arrangement) at the hub. Potentially even more valuable, as discussed above, is Richard Culatta's cache within the edtech community. Having Richard located at the hub would draw companies to locate there.

Second, ensuring that teachers use the space is critical. As has been reiterated many times, Highlander Institute's unique value add is the deep connections it has with educators and administrators. A hub would provide a neutral space for educators and entrepreneurs to get to know each other, and would provide informal opportunities for companies to receive feedback on their products and for educators to explore new tools and improve their ability to use tech in the classroom.

Finally, one idea surfaced through interviews is worth noting. With the growing focus on data science, building a focus on data science into the hub could also be a differentiator. This could include a partnership with Brown's data science division. Data sets could be released on some regular basis and data scientists could be invited to attend a hackathon-style event focused on using that data to develop edtech solutions.

Who: Highlander Institute should lead this activity, but should engage EduvateRI members to understand if and how they may want to be involved. TechCollective has also expressed interest in a similar concept. Furthermore, ensure alignment with related projects being considered by Rocky Hill, Chariho, and potentially other school districts. Though Highlander Institute should help lead this from an edtech perspective, it may ultimately be handed off to or led by another organization.

How:

- Rising Sun Mills is already home to the Highlander Institute and TechCollective; therefore, making it a hub for the edtech sector is a natural fit. It is also home to the Sprout co-working space.
- Ultimately, a plan will need to be developed to further detail the vision, services and functions of the space, stakeholders, cost, and phasing.
- In the meantime, steps can be taken to begin branding Rising Sun Mills as an edtech hub. When possible, all events related to edtech should be hosted at the building.

When: Conversations about the future of the Rising Sun Mills space are underway and this concept should be shared as part of those immediately.

Risks: Risks will naturally increase as investment in building out physical space, e.g. a demonstration area, progress. At this stage, given that the Highlander Institute is already located in the building, the risk is limited.

Supply/ Demand: BetaSpring was critical piece of entrepreneur ecosystem that is missing now. Social Enterprise Greenhouse has expanded its space in recent years and it using it with much success as an entrepreneurship hub. Close collaboration with these organizations is recommended.

Potential: In other communities and sectors, a physical hub has spurred the growth of the sector.

Conclusions: Feasibility & Impact

As noted in the Executive Summary, Rhode Island is very well situated to grow and attract edtech companies. Given the dearth of established edtech hubs, and the state's proximity to Boston, Rhode Island has an opportunity to grow a cluster based on both its own assets and being a complementary piece of a regional ecosystem. With the Highlander Institute and EduvateRI, Rhode Island certainly is a leader nationally in the maturity and sophistication of its education innovation intermediary and cluster organization respectively. The Highlander Institute and EduvateRI can provide edtech companies with access to schools and engagement with educators and administrators in a way that few other edtech clusters can boast.

This feasibility study has documented several strategies for growing the edtech cluster. Some are simply continuations of existing operational activities, while others require significant investment. While the existing activities are currently resourced at levels which allow ongoing support, some concern should be noted in the ability to maintain these activities if existing financial and personnel resources are lessened.



For purposes of estimating economic impact we are looking at traditional economic development measures to suggest the opportunity. The following chart summarizes our analysis:

Action and Investment Needed	Impact Potential
EduvateRI hire an Executive in Residence - \$125,000 annual (salary and expenses)	<p>Will be a core position to catalyze all other activities with a focus on economic impact and bolster existing capacity.</p> <p>Measurable impacts:</p> <ul style="list-style-type: none"> • Overall edtech cluster growth • Connections made resulting in contracts/ partnerships • Attraction of additional resources • Increase in research and development investment
Invest in Startup Weekend EDU - \$20,000 per weekend (\$40,000 annual)	<p>Each weekend is expected to allow for identification of as many as 30 individuals/ teams interested in startup; 4-6 successful applicants will begin the development process following each round.</p> <p>Measurable impacts:</p> <ul style="list-style-type: none"> • # of interested individuals/ teams • Awarded applicants • Positions created by salary/ type
Invest in an edtech business plan competition - \$40,000 annual	<p>Following the growth of the edtech portfolio emanating from Startup Weekend activities it will be important to provide additional investment; the funds highlighted here can support up to 3 companies (expected to be leveraged by other resources).</p> <p>Measurable impacts:</p> <ul style="list-style-type: none"> • # of edtech applications • # of awarded applicants • # of applicants that receive support from other engaged in competition • Positions created by salary/ type
Begin investment in shared space - \$100,000 annual	<p>Utilize existing space and provide rent subsidies via partnership with a local developer; based on expected use and space needs this investment could support a headcount of ~25 or 8-10 companies.</p> <ul style="list-style-type: none"> • Revenue growth of portfolio companies • Positions created by salary/ type

These core activities, if all are pursued, would require an annual \$300,000 investment. The shared space activity is the one that has the most flexibility and could also be phased in late in the first year or second as the edtech pipeline builds. It would be important to understand the current space constraints of the existing edtech company portfolio in the state.

The estimates provided here are considered on an annual basis and should, over the course of a few years, be additive. In other words, after three years the state could expect to realize as many as 18 successful Startup Weekend companies; 9 business plan competition winners; and at least 16-24 companies receiving shared space support. These figures do not include the increased employment from research and development and growth of the existing companies. All told, these impacts will have the ability of securing the edtech cluster reputation of the state and are expected to pay accelerated benefits after this initial phase.



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