Turning Paper into Platforms

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How to launch a technology-based Quality Rating and Improvement System

ABSTRACT

This paper provides guidance for states that are moving from a paper-based Quality Rating Improvement System (QRIS) to a technology-based platform. Interviews were conducted with state leaders that had implemented a data system for QRIS through various models: building in-house, contracting with a vendor or a hybrid model. Steps to engaging in this work are provided from assessing the state's internal capacity, engaging stakeholders to launching the system. The authors offer insights and recommendations on how to implement a technology-based Quality Rating Improvement System, and make the experience cost-effective and gain buy-in from all types of system users.

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Executive Summary

The number of states that are planning or implementing a Quality Rating Improvement System (QRIS) has increased steadily over the last decade. Federal and state financial support for these efforts, such as Race to the Top–Early Learning Challenge funds accelerated the momentum for creating systems for quality improvement in early care and education. Many states have moved from a paper-based QRIS to a technology-based platform to better facilitate data collection and reporting requirements. Using information gathered from interviews with state leaders in thirteen states that have built a QRIS platform, this article presents lessons learned on the transition from paper to technology, and provides practical suggestions for states embarking on a technology-based QRIS platform..

We summarize the guidance and lessons learned from these state leaders through numerous steps states ought to consider when building a technology-based platform. Critical to this process is an assessment of the state's internal capacity and budget for engaging in this work. Whether a state builds in-house, hires a vendor, or pursues a hybrid of these two approaches depends on its past experiences with data systems and support they will have from their IT team and stakeholders throughout the process. Cost and timing are other factors that impact decisions surrounding how to approach building a system. State early childhood program licensing agency data systems often precede the QRIS build and can be accomplished with few resources, such as requiring providers to have email addresses and use an online system for registration and payment.

Bringing a diverse group of stakeholders to the table early on to be involved in planning result in better initial buy-in, utilization and long-term commitment to the data and reporting requirements. These partnerships also help with establishing data sharing agreements across agencies and programs. Although negotiating priorities can be challenging for the agencies involved, it is important to keep in mind that all stakeholders will ultimately benefit from the system.

Many states start with a needs assessment to inform the process by identifying all current data collection efforts and assessing workflow. Provider surveys were also used to estimate technology capacity and needs. Once a vision for the data system is established, work on the configuration of the system can commence. This is often led by the vendor and the IT team to ensure timelines, milestones and release cycles are clear, and user types and workflows are correct. Developing a communication and training plan are fundamental to ensuring implementation is successful.

Finally, building the technology platform, while a substantial effort, is only one part of the process. How the system is launched, and maintained over time determines the overall validity of the information that will be available. For the majority of system users the launch date will be the first opportunity to interact with the new technology platform, and sufficient training and support is vital to making that experience a positive one.

Introduction

Quality Rating and Improvement Systems (QRIS) originated in Oklahoma and North Carolina in the 1990s as an effort to systemically improve the quality of early care and education (ECE). A recent update from the QRIS National Learning Network indicates that today 38 states are now operating or piloting a statewide QRIS. Expansion of QRIS accelerated with increased state and federal investments in early childhood programs, particularly the Race to the Top–Early Learning Challenge (RTT-ELC) that began in 2010. Most states included a plan for implementing or expanding QRIS in their RTT application. Even for states that did not receive an award, the planning process helped to lay the foundation for their QRIS efforts.

Along with new sources of government funds, reporting requirements have increased and require states to tackle data integration issues. Most states house early childhood services in various agencies, and even those with a centralized office of early childhood have been challenged to make sense of data coming from separate data systems such as licensing, child care subsidies, and workforce registries. As states begin implementing QRIS, new accountability measures are required to validate the quality ratings and their impact on child outcomes. To effectively respond to these reporting requirements, state leaders are turning to technology-based platforms that can easily integrate data from various sources.

Additional advantages to using a technology-based system demonstrate its benefits far outweigh the effort. First, efficiency results from the ability to submit and examine multiple records without reproduction. Paper QRIS applications may seem overwhelming at first glance, while a technology system guides users through the required steps using a workflow that directs where to provide evidence and upload documents. In addition to efficiency and automation, technology-based QRIS systems offer a degree of impartiality in the rating review process. Further, data is more easily collected, filtered and exported, and data points such as assessments can be tracked over time to show improvements in quality. Finally, overall management of technical assistance and staffing can be overseen through the data system, including the assignment of coaches to assist field staff in completing Quality Improvement Plans. These online documents are more likely to be updated frequently rather than become an item that gets shelved after printing.

Background and State Context

The purpose of this paper is to outline the steps states ought to consider when moving toward a technology-based QRIS platform. Interviews with 13 state-level QRIS or regional administrators were conducted in states where a technology platform for QRIS has already been developed and implemented. These systems were either provided by an external vendor or built in-house. In order to provide a comprehensive view of best practices when transitioning from a paper-based QRIS to a technology-based QRIS platform, the focus of the interviews was to answer some overarching questions on how states ought to move from paper to technology.

These questions are the following:

1) Should a state buy a QRIS data system from a vendor or build one in-house?

2) How should stakeholders be engaged in the process?

3) How do you establish a common vision for the platform?

4) How do you conduct a needs assessment and document current workflow?

5) What is the value in piloting the system before the launch?

6) What are the steps in building and launching the system?

7) What is required for monitoring, validation and maintenance after the launch?

Steps to Building a Technology-Based QRIS

Step 1: Build, Buy, or Hybrid

"What legacy systems exist, and what data integration considerations inform decisions on how to move ahead"

Factors that states should consider when deciding whether to build a data system internally or externally are capacity, cost and prior experience with data systems, both in-house and vendor. States must look at the types of systems they currently have, for example, licensing, professional development registries, and child care subsidy, and determine how these might be best integrated with a QRIS database. How quickly a state can build an in-house system, capacity to house data and who will have access to the data play also need consideration. Obviously, there are advantages and disadvantages to each of these options. For example, states with an on-site IT department that has experience with building early childhood systems such as licensing may be more likely to take the next step and build a QRIS system. Keeping data centralized within the oversight agency's database might be important to some states. Often it is more cost-effective to modify existing platforms to meet future QRIS needs than starting over with a vendor. States might become partners with a vendor, using its IT and design expertise. One alternative for states choosing this type of hybrid model is to allow vendors to lead the work with in-house developers that could later support system requirements and ongoing maintenance.

Step 2: Stakeholder Engagement and Planning

"Get the right people on the team and at the table. Varied backgrounds help people look at things from a different lens."

From the onset, a diverse group of stakeholders ought to be involved in planning for a technology-based system. Not only can this strengthen cross-agency and sector collaboration, but it will result in more buy-in once the system launches. Further, collaborative efforts provide for a stronger foundation to negotiate future data sharing agreements across agencies and programs. Paying attention to these upfront planning meetings and letting everyone weigh-in to decision-making can have long-term impacts on the overall user experience.

Based on our research with the states and our own successful implementations of statewide QRIS systems, we offer the following recommendations:

A. Cast a Wide Net—Involve a Variety of Stakeholders

While many states noted that stakeholder collaboration was at times trying, they unanimously agreed that having a collective process to determine the vision for the QRIS platform and obtain buy-in from all users paid off in the end. In fact, when asked "what were the biggest successes encountered as you moved towards a full system rollout", seven of the 13 states first noted the positive impact of stakeholder engagement.

Getting the right people to the table to examine issues through different lenses creates an opportunity to learn from one another and the respective needs for data. Further, it helps to foster partnerships that are essential for future data sharing agreements and system linkages. System users who are engaged early on will help to drive the work even after the system is built.

Distinguishing between the different types of users and ultimately beneficiaries of the data system is important to the process. For example, among agencies leading the QRIS process common users might include:

- **The Implementing QRIS Agency: often the Departments of Education, Children, Youth and Families, and Health and Human Services.**

- **The Funding QRIS Agency: often the implementing and funding agencies are the same; however it is not uncommon for them to be different. Along with providing a primary funding source, funding agencies often guide policy and implementation decisions that support a state or regional QRIS initiative. If the funding agency is different from the implementing agency it is critical to maintain clear communication channels to ensure expectations and timelines are managed well.**

- **Reporting Stakeholders: depending on the initiative, this can represent numerous oversight agencies, such as the Regional Child Care Resource and Referral Agency, Early Learning Commission and state and federal departments.**

- **Integrated Systems: these commonly include state licensing, childcare subsidy, professional development registries, K-12 longitudinal systems etc.**

- **Website for Provider Rating Publication: sometimes supported through state departments, resource and referral websites, or vendor websites designed for the QRIS initiative**

Among providers and those supporting them in the QRIS effort, common stakeholders might include:

- **QRIS Administrators: typically staff members of the implementing agency**

- **Assessment Specialists: the individuals responsible for conducting quality level validations. Occasionally there can be further differentiation between quality level validators and those responsible for conducting additional rating assessments like ERS, CLASS, and PQA.**

- **Quality Improvement Coaches: commonly includes individuals responsible for individual program coaching, quality improvement planning and technical assistance. Often these stakeholders are responsible for an assigned caseload of early childhood programs.**

- **Program Managers: are usually responsible for the oversight of one or more of the above-mentioned stakeholders, i.e. Assessment Specialists or Quality Improvement Coaches.**

- **Program Participants: licensed ECE providers by license type, and regional location. Occasionally this group can also include school-aged programs, and be represented by resource and referral agencies and advocacy groups such as the local AEYC affiliate.**

- **Parents and Families: vital members of the stakeholder group, parents bring invaluable information on what resources are important to them.**

B. Get Good Advice—Form an Advisory Group

Establish an advisory group with representatives from each participant type as early in the QRIS process as possible. In addition, bring in experts from the field, including those with state-level experience building a QRIS data system.

C. Divide and Conquer—Form Separate Workgroups

In many initiatives, work-groups are an effective way of focusing participant expertise and dividing tasks. Using facilitators such as technology vendors, leadership in early childhood or experts from the BUILD QRIS network can help guide discussions. Facilitators allow stakeholder agencies

to attend as participants and contributors, relieving any burden to lead or design the meeting agenda. Additionally, group roles and responsibilities are established that ultimately provide a clear pathway into data system user roles down the road.

D. Get Technical—Include Technology Experts from the Beginning

One final note is to include technology personnel responsible for the building of the system, be it vendor or in-house IT staff because so many of the policy decisions made during advisory meetings have a direct impact on the design of a technology system and its implementation. While some policy decisions can sound good, when translated into technological specifications they become problematic. Technological insight can flag those components that may be complicated to build in the system.

Step 3: Establishing a Vision, Goals and Future Direction: Strategic Planning

"Think beyond year 2, 3, 4 and 5."

With large reaching QRIS initiatives, it can be challenging to identify long-term goals because more often than not, the immediate needs dominate the conversation and work energy. Regardless, there is much to be gained and saved (in terms of dollars and time) by being proactive early in the transition process.

For some implementation efforts, this may require strategic meetings with all stakeholders to keep the engagement level high and create a shared vision and goals. Determining a future direction, benchmarks and metrics will create a solid foundation from which to build a technology-based QRIS system.

Examples of QRIS strategic goals include one or more of the following:

- **Reach a certain number of programs and children,**

- **Bring the implementation to scale, i.e. expanding statewide or engaging all licensed programs,**

- **Bring participating programs to a certain quality level,**

- **Increase staff resources to achieve higher credentials and degrees, and**

- **Increase overall QRIS funding**

Negotiating priorities can be challenging, as everyone wants the system that best meets their needs. There is often little agreement on what the system should include. It is important to keep in mind which stakeholder will ultimately benefit the most from the system. Further, from sheer numbers alone states need to keep early childhood providers at the forefront when making policy decisions. The amount of data that will be collected and analyzed in the system, and how it is accounted for during the build can impact long-term performance. At the start, the greater the understanding of the types of data to export from the system and how to use it, the less redesign will be needed later to meet stakeholder expectations. Without proper foresight, both development timelines and system optimization will be negatively impacted.

Step 4: Document Review and Data Planning

"If I could cast a vote between paper or technology, I'd vote for technology every day of the year."

Whether building a system in-house or through a vendor, it is important to conduct a thorough review of all existing documentation, both hard and soft copies. Conduct a needs assessment to assess all current data collection efforts and workflow. Staff from the development team or vendor agencies should be included in this process, as they will likely have recommendations for which forms will easily transition into the platform. The goal is to keep only the forms that are gathering information critical to answering your states key data and reporting questions, and remove any repetitive fields.

The first step in this process is for the team experts to review all material and suggest any modifications to workflow. In many ways, document review creates the tangible foundation for system design, as it highlights the required and desired data collection components. Results of these needs assessments often show points of duplicate data gathering, across one or more forms and stakeholder agencies. The goal of the platform will be to streamline this information flow, where users are not required to re-enter data already gathered in separate areas of the platform or stakeholder systems. Since many QRIS initiatives rely heavily on paper applications and other paper-based data collection methods, new workflows for the technology process will likely be required. If portals are to be built for providers to enter data directly proper documentation is critical. For example, licensing data that is properly integrated with the QRIS platform will not require a provider to re-enter their site address when responding to fields that gather their contact details.

- **Strong historical context of the initiative,**

- **Identification of information gaps and recommendations,**

- **Translation of project documentation in the context of a technology-driven process,**

- **Data dictionary,**

- **Understanding of what programs needs to move forward, and**

- **User workflows**

Technologies are at the point where most paper forms and reports can be easily recreated in your online platform. Once the needs assessment has concluded states will be able to identify key forms, applications, and reports that should transition into the technology platform.

Step 5: Creating a System Plan & Starting the Build

"Sit program people next to programmers. That's the magic!"

With the completion of the document review phase, an outline for the system plan can be developed. Ideally this plan is the culmination of the first three steps: creating a shared vision, identifying current needs and forecasting future growth. The IT staff responsible for the system build directs this work. In team scenarios, QRIS program staff from the implementing agency can work closely with IT on the following activities:

- **Establishing timelines, milestones, and release cycles**

- **Choosing system components, i.e. modules and organization, aesthetics, access points and so forth**

- **Identifying specific configurations and customizations: built in user instructions, terminology, and resources**

- **Applying user type workflows**

- **Training (both internal and external)**

- **Develop a communication plan**

In many states, the system build was an iterative process, which required time for review and testing, and flexibility to adjust for feedback and shifting decisions. Most states reported that this process lasted about one full calendar year and required a large amount of time specifically allocated for extensive testing and design review. Many states chose to pilot the system to targeted providers before full system launch, and built-in time to review feedback and apply system adjustments.

Step 6: Launch, Maintain and Enhance

"Keep it simple and stay flexible."

Often state administrators are apprehensive about moving to a technology platform due to beliefs that ECE providers have limited access to the Internet, computers and document scanners, and lack technology skills. Surveys are one way to assess technology capacity in the field. Some of our own experience has shown that now more than ever, ECE providers have access to the Internet, smartphones, computers and tablets. Where the gap remains is predominantly within home-based settings and with providers operating dial-up Internet and using outdated versions of software.

- **Group participating programs into cohorts to provide technical assistance and training,**

- **Make the system available across multiple devices and specifically enabled access through smartphones, although consideration should be given to limitations to extensive data entry on these devices,**

- **Partner with public education institutions and libraries to create open computer lab sessions for participating providers,**

- **Create online training videos that also provide instruction on general computer use and best practices, and**

- **Equip QRIS field staff with portable scanners to assist with documents uploads while visiting on-site.**

Release

Building the technology platform, while substantial, is only one part of the process. How the system is launched and maintained over time will in many ways determine the overall success of a QRIS initiative. For the majority of system users, the launch date will be the first opportunity to interact with the new technology platform, and as such it is vital that the first impression and experience working within it is a good one. There are a few different ways states may choose to move through the system release process in order to increase early user buy-in and to ensure positive first impressions, including limited pilot release, rolling release, and focus groups.

During the pilot release, key users are selected in cooperation with the implementing agency and given training and access to the system so that they can test out its features and tools. Pilot users are encouraged to provide feedback regarding their system experience so that the implementing agency can use this information to refine the final system. Not only is important feedback at the start helpful to the overall success of the data system, it establishes a solid group of early adopters and foundational wins in the field.

Another approach is a phased system release. The rolling release method has three primary benefits. First, it reduces the training burden and establishes phases for structured training so that users will only experience one or two parts of the system or steps of the process with each release. Second, it increases user understanding as they are gradually eased into the new QRIS process, making it both tangible and not overwhelming. And third, a rolling release focuses technical assistance, ensuring that all users are completing the same steps at the same time.

Focus groups ought to occur both prior to and post system release, and are a great method to gain information on data requirements and feedback on user experience. Typically, a facilitator brings diverse groups of system users across one or more locations together. In this controlled setting, important feedback on the system, state QRIS policy and communication practices can be gathered and analyzed to identify trends and areas for improvement. Focus groups help to guide training needs and the state's ability to address the real fears on the ground. Additionally, wish list items can are captured and incorporated into future system enhancements.

Maintain

Our experience and information provided by state leaders suggest that participants are the most positive when they know the following: what to expect, what the process entails, and what results or benefits it will yield. With these factors in mind, maintaining a successful QRIS technology platform is primarily centered on (1) ease of use, (2) user experience, and (3) worry-free operations.

The importance of communication cannot be over emphasized, both in respect to the system users and QRIS initiative stakeholders. Using email, mail, and website communication campaigns can provide clear and informative messaging. Early childhood programs have expressed unanimously that it is vital in the QRIS process to know what's coming, and when and what resources will be available. Knowing what to expect helps to relieve fears and improves stakeholder buy-in to the planning process.

Maintaining system access and user support is accomplished through one or more of the following activities:

- **Proactive User Support,**

- **Webinar training sessions and resources as the initiative evolves,**

- **Train-the-trainer for on-the-ground user assistance,**

- **Periodic feedback gathering,**

- **Continuous user support via phone, email and in-person sessions**

Often there is a negative connotation surrounding "user support," as it is linked with a high number of support requests that are the result of a poor technology platform. Reviewing support requests as a group allows the implementing agency to understand and determine whether they are due to user error that may mandate further training or are bugs in the system. This type of analysis should occur on an ongoing basis, flagging common issues and identifying areas for improvement.

Enhance

As feedback and enhancement requests accumulate it is important to capture specifics about which user type(s) it impacts, change or additions to be make, location in the system, and which parts of the QRIS process is affected. Review the list in accordance with the project timeline, and include two distinct areas of analysis: 1) the necessity, impact, and feasibility of the request and 2) whether to include it with one or more similar tasks into a development cycle. Once this review has been completed a separate analysis should take place to assess the impact on the overall QRIS process and user workflow. A thorough assessment includes identifying any changes that may require system shutdown time, the resetting of any historical data, and workflow changes.

While an extended review and analysis process can be strenuous, it yields important cost returns once development and testing occur. Regardless of the QRIS initiative, it is recommended to time enhancements no closer than six month to a year apart. This timeline is intended primarily to maintain optimal usability of the system, which requires the user process and technological framework to stay as stable as possible. Applying changes to the system at any shorter frequency increases the likelihood for system bugs and user errors.

Beyond Star Ratings

States can improve upon QRIS by making connections across numerous program areas and supports that impact child and family outcomes. The use of multiple benchmarks and indicators can inform progress along the continuum of continuous quality improvement (CQI). Technology platforms can be configured to make use of CQI tools much like data integration across agencies. Essentially it is a way to manage identified benchmarks and indicators by pulling data and analyzing at periodic intervals. Simply put, CQI is about improving workflow processes to create an environment where an organization is constantly improving quality. Creating a feedback loop that involves a plan, implementation, reflection and correction enhances information management, tracking and documentation for greater efficiency. Assessment built into the QRIS framework and platform, such as the Environment Rating Survey and CLASS are effective and widely used; however, there are many more that are useful in providing a comprehensive view of CQI in the early childhood systems framework. These options should be evaluated and incorporated during the build or through future enhancements.

Conclusion

*"There are few investments as smart as data systems."*

Building a QRIS platform is a process that often encounters many hurdles along the way. Although there are many steps to follow when navigating the paper to platform transition, state leaders can address common challenges and achieve success across numerous stakeholders and environments through a few best practices.

1) Bring stakeholders together early on in the process.

2) Develop strong partnerships with technical team, whether in-house IT staff or a vendor.

3) Establish reciprocity agreements for data collection, particularly for data that must be sent to federal partners.

4) Invest time in user acceptance testing.

5) Provide opportunities for providers to engage with technology through on-site trainings and support lines.

6) Provide incentives for providers to upgrade their technology and skills as part of their professional development or business planning.

7) Monitor data consistently for accuracy, particularly during periods of scaling.

8) Plan for entering data on mobile devices, as that is the technology most used by providers.

9) Plan for a contingency in case of potential delays and needed enhancements.

Appendix I: State Context

The graphics and table below show the states sampled for interviews and the following details on how they built a technology-based QRIS data system: 1) whether the system was piloted, 2) whether a paper-based QRIS was used prior to implementing a technology-based system, 3) how many years QRIS had been in effect in the state, 4) whether a paper process is still allowed, and 5) their approach to building the system.
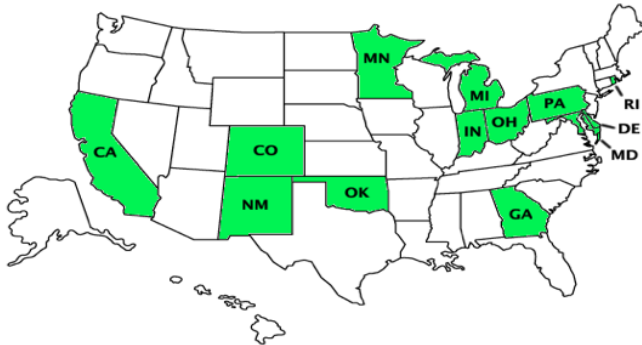
Number of states of those represented in sample (n=13)	Yes	No
Piloted the QRIS data system before the launch	12	1
Used paper before technology-based QRIS	12	1
Has operated QRIS for more than five years	11	2
Still allows paper processes as part of the QRIS platform	9	4