Pool Technology Audits: Points to Ponder

The Need for External Review of Pool Technology
Even if you have robust and respected technology resources in-house, regular external review of your pool's technology systems, staffing, and security is a wise investment. Technology advances rapidly, as do technology-related skills and threats. The only way to assure you have full perspective on your technology needs and resources is to test them against a broad array of best-practices – and maintaining such depth of skill in-house is next to impossible for any organization regardless of size or business model. In-house technology staff, both tactical and strategic, should help guide an outside review of the pool's technology efforts. External evaluation is not a challenge to in-house resources, but rather a supportive mechanism designed to help the pool as a whole appreciate technology needs and trends.

Planning the Scope of a Technology Assessment or Audit
There are many aspects of a pool's technology appropriate for regular outside review, assessment or audit work. Consider what sorts of technology infrastructure or processes you are most interested in having reviewed, keeping in mind that while many technology needs are interrelated you will probably want to be as specific and targeted as possible in your evaluation efforts. It might be better to conduct several smaller review engagements than try to plan one big review of all your technology efforts. Some fairly common areas of technology reviews or audits include:

- Hardware and software infrastructure, investments, policies, practices or protocols
- Bandwidth or other capacity
- Data collection or storage
- Security – including physical, network, application, social, and operational
- Technology workflow
- Integration of technology and business process, prioritization process for technology initiatives, and holistic organizational technology strategy
- Project management methodology
- Technology staff resources and vendor evaluation
- ROI evaluation or long-term budget planning for technology investments

One of the difficulties in planning your assessment scope and choosing a service provider is the rapid pace at which technology is evolving. There is no ready standard of technology assessment or audit to use as a benchmark and no universal measure by which to evaluate audit or assessment firms. The evolution of this field means there is a wide array of firms who will respond to conduct a "technology assessment"— but the assessment scope and quality could be very different from one provider to the next. It's important for a pool to completely understand the qualifications of a responding technology firm, the scope and method of any proposed assessments.

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Frequency
Technology systems and needs change quickly and dramatically. As a result, pools should anticipate regular review and updates to any technology-related plans, policies, or practices. The rapid pace of technology advances also suggests that audit or assessment practices should be repeated at regular intervals.

It may be wise, however, to change audit or assessment firms with some regularity. The key to technology audits is to have as wide a perspective as possible and to test systems from many different approaches. In the case of a technology assessment or audit, too great of a degree of organizational familiarity can be detrimental.

Cost
Cost will most certainly be a factor in the type of technology review conducted, as well as the timeline and other resource needs of any assessment. The more detailed and rigorous the assessment, the more it will cost. You might consider setting a budget within which you are willing to work, asking service providers to scope the depth of proposed assessment to fit within your budget.

Internal Resource Needs
There are few technology audits or assessments that can be completed without some engagement by a pool's in-house technology staff and related resources. Even if you plan to outsource assessment or audit work, be sure to adequately plan for time to prepare, oversee, assist, and review the evaluation work. You might think about a technology assessment the same way you would a financial audit – you're going to have to prepare in advance, allocate time during onsite work, handle follow-up questions, and spend time in review of recommendations.

Think, too, about whether all resources needed as part of the technology assessment or audit are the pool's, or whether you also need to engage third-party administrators, website hosts, or other technology contractors also engaged to provide you services. It may be that a thorough assessment requires review of pool and contracted technology services.

Implementation of Recommendations
You might be seeking a technology assessment or audit because you already have preliminary thoughts about things you'd like to change, enhance, or otherwise improve – or because you believe it is a good management practice to routinely test technology systems. Either way, you should expect the assessment to result in recommendations with associated costs, both direct and indirect. It's best to be prepared for how recommendations will be reviewed for implementation, and to what degree you are able and willing to make additional investments (in hardware, software, systems, people, or further assessment) if needed.

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<u>Questions to Ask</u>
The first step in soliciting any proposal or work statement is to clearly define your goals, the engagement parameters, and any other details about what technology or related efforts your pool is – or is not – looking to have assessed. You might seek input from other pools you know and trust, or use AGRiP's Cybrary to search for similar technology efforts that may have been published by other pools. You can also use AGRiP's starting list of technology assessment resources to begin solicitation of proposals.

As you consider technology assessment firms and their responses to your inquiry, you might ask the following questions, whether formally or in conversation:

- What specific steps will be involved in this assessment or audit engagement?
- What are optional steps, stages, or work efforts associated with this engagement that we should consider? What would be the benefits of including these additional steps?
- What will be tested, evaluated, or measured in this assessment? Upon what metrics?
- What will be the resulting deliverable – a report, a plan of action, specific action step recommendations?
- What are the estimated costs by deliverable? Are costs generated on an hours-of-work basis, a project basis, or by some other means? What is the pricing guarantee (or high/low)?
- How will we measure "success" of the audit or assessment – how will we know you've done the appropriate degree of inquiry and what will the successful outcome be?
- How will you relate business needs and relevance to your findings?
- How will you prioritize your recommendations to us for implementation or correction?
- How will you communicate your overall findings to us?
- What responsibilities will our own staff (and/or third party administrators) have as part of the assessment project, including technology staff and other business units?
- What inputs or deliverables are we specifically responsible for, or will need to substantially contribute to?
- What are your firm's specific qualifications to perform this sort of audit or assessment? How many similar projects have you completed? What are the qualifications of the people who will be working on this project?
- How does your firm stay up-to-date in the area of this planned technology audit or assessment? What qualifications, methods, or practices make your firm right for this work?
- Do you have specific experience with public entity pools? Small, boutique or specialty insurers? Public sector entities?
- What referrals or testimonials from past clients can you share? What references may we contact?
- Do you have a client who was less-than-fully satisfied with your work whom we can contact?
- What would you do if you discovered a fatal flaw at any point during your audit or assessment work?
- Is there any particular equipment, software, or infrastructure affinity that you have? Why?

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- Are there any absolutes in terms of equipment, software, or infrastructure you will not recommend? Why?
- On what recurring cycle should we complete this kind of assessment or audit work – how frequently should we seek to repeat this engagement?

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Pool Technology Audits: Known Firms

This is merely a list of technology audit and assessment firms of which AGRiP is aware. The list was created as of August 2015 and is listed in alphabetical order. AGRiP has not vetted these firms or their qualifications, and of course there may be other firms not on this list. Each firm listed provided the information for inclusion on this list. Pools are encouraged to conduct their own evaluation of the firm most qualified to meet their specific needs.

Firm	Notes
	Provided by Partner *Noted by AGRiP*
AGIO Randall Bennett, Managing Director 909 Aviation Parkway #600 Morrisville, NC 27560 919-380-7979 Randall.bennett@agio.com	
Bickmore 1750 Creekside Oaks Drive Suite 200 Sacramento, CA 95833 www.bickmore.net *General Inquiries* Rick Brush, Director, Business Development 916-244-1154 rbrush@bickmore.net *For RMIS or Claims System Consulting* Dave Tweedy, Director, Risk Management Information Systems 916-244-1137 dtweedy@bickmore.net *For Claims & Audit Consulting* Jo Ann Wood, Manager, Claims Consulting Services 714-426-8509 jwood@bickmore.net	*AGRiP QEI Patron* Contract administrators of several pools.

Cherry Bekaert Scott M. McKary, CPA, CFE, CIA, CCSA National Leader, Risk Advisory Services 919-985-6801 smckay@cbh.com www.cbh.com	
Coalfire Public Sector 877-224-8077 www.coalfirepublicsector.com	Specializes in cloud solutions.
Deloitte Michael Juergens Principal, Information Technology Internal Audit 555 West 5th Street Suite 2700 Los Angeles, CA 213-688-5338 michaelj@deloitte.com www2.deloitte.com/us/en/pages/risk/solutions/internal-audit-transformation.html	
Electrical Alchemy, LLC 200 Union Blvd. Suite 232 Lakewood, CO 80228 303-578-6796 contact@electricalchemy.net electricalchemy.net	Specializes in full scope penetration testing, vulnerability assessments, compliance consulting, and virtual CSO services.
Ellipsis Partners LLC Moira Edwards, President 2607 Ogden Street Falls Church, VA 22043 571-236-0234 medwards@ellipsispartners.com www.EllipsisPartners.com	Specializes in strategic technology assessments, staffing reviews, systems, infrastructure, and support to ensure technology supports and advances business objectives.

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Future Point of View (FPOV) Andrew Ranson, Consultant 5904 Lakewood Ridge Rd Edmond, OK 73013 (C) 405.388.1964 (O) 405.359.3910 aranson@fpov.com www.fpov.com	Offerings include: • Technology audits/gap analysis • Enterprise architecture and technology governance • Security testing • Technology staff resources and vendor evaluation • Technology investment planning and budgeting
Greycastle Security Mike Stamas, Business Development 500 Federal Street Suite 540 Troy, NY 12180 518-274-7233 mstamas@greycastlesecurity.com www.greycastlesecurity.com	Focused on risk management, awareness and operational security.
Johnson Lambert One Lawson Lane P.O. Box 525 Burlington, VT 05402 www.johnsonlambert.com Carrie Rice, Principal crice@johnsonlambert.com Magali L. Welch, Partner mwelch@johnsonlambert.com	*AGRiP QEI Patron* Specializes in customizable assessments that focus on technical, financial, operational and risk management areas.
McGladrey Michael J. Harbut, Business Development Director 1185 Avenue of the Americas, Suite 500 New York, NY 10036 212-372-1764 mike.harbut@mcgladrey.com	

Protiviti David Brand, Managing Director Offices across country 404-443-8204 david.brand@protiviti.com www.protiviti.com/en-US/Pages/IT-Audit-Services.aspx	Has standardized, streamlined audits for the small business market.
PwC Kevin Wick 1420 Fifth Avenue, Suite 2800 Seattle, WA 98101 206-398-3518 kevin.l.wick@us.pwc.com www.pwc.com	*AGRiP QEI Patron*