

**Action Learning Scenario #2
Room 108**

**Change Management: Enabling a Culture of Ownership
for Quality Management within the USGS**

ELT Champion: Cindy Lodge, Acting Deputy Director

Sponsor: Walter Guidroz, Program Coordinator, Energy Resources Program

Issue/Challenge

Heraclitus, a Greek philosopher, has been quoted as saying “change is the only constant in life.” If that is true, then why is it met with so much resistance? Why is it so hard? The USGS is developing and implementing a new systematic approach to quality management in its laboratories by implementing a Quality Management System (QMS) across the Bureau, which requires adjusting long-established laboratory practices to enable greater transparency and traceability. Change of this magnitude has required a paradigm shift in how work is performed in USGS laboratories, sometimes creating resistance within laboratory personnel. While the baseline culture of the USGS is focused on quality and pride in the scientific work produced, localized resistance towards embracing a QMS within parts of the USGS, and recently within the Energy Resources Program (ERP), has threatened progress toward implementing this new system and has introduced a level of risk that must be successfully managed. ERP (and, by extension, the USGS) must find ways to ensure that staff feel their expertise and history of quality work is respected, all while engaging and inspiring employees to adopt new processes to protect the Bureau’s reputation so that the USGS remains the ‘gold standard’ of science. When achieved, scientists can embrace a culture of ownership around QMS so that it is recognized as a benefit to their science and to the Bureau as a whole.

Background

ERP is housed within the Energy & Minerals Mission Area (EM), which funds 61 laboratories in six Science Centers in four Regions across the USGS. In May 2015 the Department of the Interior’s **Office of the Inspector General (OIG)** issued a series of recommendations in the wake of a series of decades-long data manipulation incidents that took place at ERP’s inorganic laboratory in Lakewood, Colorado. The incidents received wide Congressional and media exposure, culminating in then-Deputy USGS Director William Werkheiser being called to testify before the U.S. House of Representatives Subcommittee on Oversight and Investigations in December 2016 (C-SPAN, 2016). In that testimony, Werkheiser committed that a QMS would be implemented in all USGS laboratories. One of the recommendations in the OIG report stated that ERP should expedite completion of a QMS across all the laboratories that it funded. ERP immediately expedited implementation a newly designed QMS standard built upon international quality standards and working QMS programs in other parts of the USGS. A QMS Development Team was created within ERP, which began developing new practices while also training and providing support to laboratory staff. Laboratories began working under the new QMS in May 2017.

An effective QMS can be described as a structured system that describes the objectives and principles for ensuring quality in an organization’s laboratory work processes. For example, an effective QMS contains established Standard Operating Procedures that outline specifically how scientific work should be conducted in a laboratory. ERP embarked on a two-year QMS implementation timeline, which culminated in ERP officially responding to the OIG in June 2018 that it had complied with all the OIG recommendations and that it had successfully implemented a new QMS across all its laboratories (U.S. Geological Survey, 2018).

However, **ERP's QMS implementation** was less than smooth. Even after its implementation, localized resistance among laboratory staff to the new QMS standard remained. A complicating factor was that ERP merely funds energy-related research in its affiliated Science Centers (via the USGS matrix structure). ERP therefore has no direct supervisory chain of command over Science Center staff involved in laboratory work that falls under QMS even though it was charged with developing and implementing a QMS in all its laboratories. Lessons learned from ERP's QMS implementation are now being used in the USGS Minerals Resources Program (MRP), ERP's sister program within EM, as it moves towards implementing a QMS in the laboratories it funds. Therefore, a culture of ownership in both ERP and MRP, driven by a robust program of change management, is required as is a solid understanding of the risks in failing to adopt this new system.

Change Management is often defined as how we prepare, equip and support individuals to successfully adopt change to drive organizational success and outcomes (Prosci, 2019). Additionally, Peacock (2017) states that the ability to successfully implement change involves recognizing, anticipating, responding to, and valuing reactions to proposed modifications. Simply put, nothing will be changed if the people involved in, or affected by, the modifications do not take ownership over the change. Cases exist where leaders who have tackled cultural shifts within government have undertaken reform so comprehensively that resistance cannot subvert it (Ostroff, 2006). However, only about 30% of 'change programs' are successful (Kotter, 1995), so the risk of failing to embed a culture that enables and supports a sustainable QMS within ERP laboratories remains high.

Although no system is fool-proof, the **risk** of undetected falsification or fabrication of data remains. Such a scenario could serve as the basis for faulty policy decisions, which would result in dire consequences for the reputation and reliability of USGS science. These consequences include outcomes up to and including the loss of Congressional funding and subsequent closure of ERP-funded laboratories. Therefore, it is critical that ERP, EM and the Bureau understand how to manage change to mitigate the risk of quality incidents while working to implement a Bureau-wide QMS.

Questions to Consider

1. Considering the commitments made to those who oversee the USGS (e.g., the OIG and Congress), what practices could be implemented to cement an open culture of ownership around QMS and therefore decrease the risk of additional negative incidents?
2. What are the consequences of a failure to embrace a cultural paradigm shift around QMS to the reputation of the USGS, its science, and even its funding?
3. What should the USGS do if QMS implementation fails? Put another way, what worries you most and how can those worries be mitigated?
4. How do you define success? What specific milestones, characteristics or metrics help support your definition?
5. Finally, how do you ensure sustainable success given potential leadership changes, retirements, and reorganization? Put another way, how can the USGS support these transformational efforts and therefore create a durable legacy?

Challenges and Expectations

You should develop and articulate thoughtful solutions to address the bureau's need for the cultural ownership of QMS-related change, which includes widespread buy-in and organizational pride. You should identify the inherent risks of what may happen should efforts towards change management fail. You should detail what responsibilities leaders have in implementing changes (cultural and otherwise) that benefit all key stakeholders – Congress, the USGS, Mission Areas, Programs, Regions, and local Science Centers and their staff. Above all, how do you use risk management in planning for a future where QMS is an integral, sustainable part of everyone's workday?

Resources

C-SPAN, 2016. *Examining Decades of Data Manipulation at the United States Geological Survey*. U.S. House of Representatives, Oversight and Investigations Subcommittee, Committee of Natural Resources. Online video (accessed in June 2019) at: <https://www.c-span.org/video/?419628-1/william-werkheiser-testifies-falsified-geological-data>.

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Ostroff, F., 2006. Change Management in Government. *Harvard Business Review*, 84(5), 141-147.

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U.S. Geological Survey, 2018. *Transmittal of Closure Memorandum for the Department of the Interior, Office of Inspector General Final Evaluation Report "Energy Resources Program, U.S. Geological Survey," No. CR-EV-GSV-0003-2014*, 6 pp.