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**Introduction – Oral Remarks**

Thank you, Mr. Chairman and distinguished members of the Committee. I am Henry Darwin, Director of the Arizona Department of Environmental Quality (ADEQ). I have been director of ADEQ since February 2011, and prior to my appointment as director, I served approximately 15 years in various staff level and management positions throughout the agency, including chief legal counsel and acting director of the Water Quality Division. I am the only director in the agency's 27-year history to have worked in all three of ADEQ's environmental program divisions (Air, Water and Waste.)

As a trained hydrologist and environmental lawyer, as an enforcement officer who has worked to ensure regulated facilities comply with environmental laws, and as a former rank-and-filed staff member who sat long hours for too many days inside a cubicle, I believe I bring a unique perspective to my role as head of the state agency responsible for protecting and enhancing public health and the environment of Arizona.

During my tenure as a state employee, I have heard many times the demand for increased privatization of government services - as if all that ails government could be fixed simply by turning over the keys to the private sector. Roughly 40 percent of ADEQ's annual budget is already allocated to private, outside services. So we readily support privatization as being possible for an organization entrusted with the important responsibility of ensuring preservation of the delicate balance between the natural world and the society that depends on it for sustenance, prosperity and a rewarding quality of life. This does not mean, though, that we support entrusting the private sector with guarding the delicate balance between environmental protection and economic prosperity.

To critics who complain about how poorly government agencies perform, I say, "Amen." Such critics are by and large correct. Most systems of government are indeed a mess, but rather than having government run BY corporations, perhaps we might be better off encouraging agencies to operate more LIKE corporations. The successful corporations, of course, because why would we emulate flops just because they operate in the private sector?

Looking at successful businesses today, we see they have several things in common. First and foremost, they do a very good job listening to their customers. Second, they rapidly adapt their processes to fulfill customer expectations. They are also adept at using technology to deliver better, faster, cheaper service and integrate technology the right way at the right time. We only have to look to the demise of Blockbuster video who used to have stores on virtually every street corner to see the consequence of not keeping up with the American public's increasing expectation that quality products and services be delivered immediately and on-line.

At ADEQ, we have made tremendous strides in the past two years to improve productivity and efficiency for the benefit of our customers and shareholders by looking to the private sector for lessons about how improve our processes and use technology to speed customer transactions. In the written comments I leave you with today, I elaborate on what we're doing, especially to deploy Lean management as a core philosophy and use it instill a culture of continuous improvement throughout our organization. I also touch on a key project we have undertaken, which we call "myDEQ," to leverage e-technology to radically simplify and further speed up operational transactions with our customers.

The point I want to leave you with is this: To be effective in meeting customer expectations, government agencies have much to learn from successful private sector businesses. What business knows, and what government agencies are starting to learn, is that to be successful, organizations must both streamline processes to improve capacity for value added activity AND integrate information technology solutions to accelerate delivery of products and services. But these steps must occur in the proper order: first Lean your systems then integrate e-solutions. Reverse this order and agencies may well lock-in existing burdensome bureaucracy.

### **Ignore Your Customers at Your Peril**

The Arizona Department of Environmental Quality (ADEQ) has been a cabinet level agency since July 1987. I am honored to be one of the privileged few to have served as director of ADEQ, and the only one who joined the agency as a staff-level employee and worked in each of its three environmental program divisions – Air Quality, Water Quality and Waste Programs. As someone who has worked as an enforcement officer, and sat in cubicles alongside other rank-and-file staff, I can say that I absolutely agree with our critics who have taken issue with the way the agency has performed over the years. As an employee, I could see the waste and I could feel the impact it had on both our customers and my coworkers. This experience framed my thinking, and I vowed that if ever came the day I'd be in a position to change how we performed as an agency, I'd make it my personal mission to fix things.

The recession actually gave us the opportunity. Like agencies elsewhere in Arizona and across the country, ADEQ was forced to downsize, losing about a third of our workforce even as new regulatory requirements and initiatives from EPA mounted. We had to find a way to restore capacity. One of our first steps was to take a close, hard look at our ecosystem and its myriad of components that influence our decision-making. In short, we listened to our customers and what they said we must do increase value in delivering our products and services.

Another thing high on the list was to invest time in talking with our own labor force. Using a method of interview known as Appreciative Inquiry, we talked at length with of our staff to find out what brought them to State service in the first place, and to ADEQ specifically. We wanted to learn from each of them what changes they would like to see that could possibly rekindle the magic and make their "dream ADEQ" a reality within the next five years. These interviews were documented and resulted in many of the commitments ADEQ leadership set about achieving in the immediate aftermath of the recession to unleash our human potential within the organization.

In an admittedly bold move, we also worked with our elected leaders to remove ADEQ from the State's General Fund in favor of a fee-for-service model. Today, roughly 85 percent of ADEQ's \$133 million budget comes from fees and other revenue from the regulated community. The shake-up actually gave ADEQ both the freedom and the imperative to begin making changes that our customers – the organizations paying for our products and services – demanded.

As seen from the employee perspective, the changes that need to occur are about building capacity so that we can do more environmental good. We have to stop performing those activities that do not result in value-added benefit for our customers (i.e., the end users of our products and services). As for our customers, they merely expect us to get faster and more efficient at delivering products and services they depend on us to provide. In an age of Netflix and Amazon, people now expect transparent and nearly instantaneous results. A lesson we have learned is that you ignore your customers' wishes and expectations at your peril, because they will invent solutions, and impose changes on you, changes you may not like.

### **Lean Deployment**

We made a conscious choice at ADEQ to deploy Lean as our management philosophy. There are other business methods to choose from, and Lean alone is not the sole answer to all that ails us as an agency. We have other strategies in place to unleash human potential, strengthen core programs and increase outreach as a way to educate and inform citizens about the value ADEQ brings to Arizona.

Lean was our preferred method, in part, because as a science-based agency, it was already familiar to us. In fact, some of our staff had been engaging in what we like to call "guerilla Lean" on their own to make their work easier. Lean's emphasis on process improvement using the Plan-Do-Check-Act model (commonly referred to as the Deming Cycle) is known to the world over as a scientific method. ADEQ is committed to developing a culture of continuous improvement at the very core of our organization. The method by which we are deploying Lean is intended to build a strong foundation of continuous improvement by working iteratively, in stages, so that each unit and team uses the tools and techniques as we roll them out to improve the actual work that they do. Such hands-on learning helps build employee engagement, too, as our processes become faster and more value-added. Time no longer spent on wasteful activity is freed up so staff can focus on doing more environmental good. We also have deployed visual management tools, familiar in many industrial and manufacturing settings, so that staff members may track progress and see how their ideas translate into process improvement projects that tie directly to the outcome based performance measures in the agency's Strategic Plan.

Since beginning its Lean transformation in 2012, ADEQ has completed more than 150 process improvement projects to date. The results have been impressive. For example, we have:

- Reduced by more than 60 percent the average permitting timelines for the most complex permits
- Reduced by more than 50 percent the average time required to return facilities to compliance
- Reduced by more than 70 percent the average time to retrieve public records
- More than doubled the number of state-led underground storage tank cleanups (as compared to 2011)
- Closed two State superfund sites (zero closures in the previous 15+ years)

## MyDEQ

In addition to the results from eliminating waste and streamlining processes to make them more efficient and value-added, customers invariably still expect even faster service. This is true even in cases like ADEQ is experiencing where we've drastically improved our process times. The public no longer compares government agencies to one another anymore; they expect us to be just like Amazon. By deploying Lean in a systematic, iterative way, we are discovering the root causes of problems, reducing the number of wasteful steps in our processes, and in some cases, eliminating whole processes altogether because they are not value-added in terms of what customers are willing to pay for. Efficiencies gained, in turn, result in freed up capacity to look at faster, better, cheaper ways to deliver service. Without information technology, though, we are still unable to meet customer demand for immediate delivery of products and services.

E-technology is critical to an organization's ability to deliver radically simpler, faster service and respond to ever-growing customer expectation. But agencies must be careful not to apply information technology solutions to existing inefficient, and often overly bureaucratic, ways of doing business. It's important first to do the laborious work up front, identifying customer value streams, ensuring you have standard work flow for similar type activities so continuous improvement can occur. If you get these steps out of order, you run an almost certain risk of locking in inefficiency because of the considerable financial investment such solutions often incur. Conversely, if performed in the correct sequence, process improvements involving information technology can greatly enhance and even accelerate improving the delivery of government services.

In my opinion, ADEQ is doing things the right way, as evidenced by the myDEQ Web-based portal project, which will enable the agency's customers to conduct all manner of business transactions they have with us, from submitting required data and reports to applying for and receiving permits. Over 18,000 facilities in Arizona currently conduct business with ADEQ, resulting in some 28,000 paper transactions a year. There is a lot of wasted effort embedded in the current process, and it invites error and delay in evaluating adherence to environmental requirements. For example, ADEQ receives between 25 and 500 applications for each of 70 permits types annually; only three of these are currently available on-line. This requires customers to fill out applications by hand, submit their paper copies to the Department, where staff then must manually enter the data into our system. We estimate that for many of these permitting processes, we can improve elapsed time in days, from application submission to permit issuance, by 67 to 99 percent.

Though certainly worthy goals, the point of myDEQ is not simply to make things simpler and easier for customers and staff. The fact is, real environmental good results, and the public at large benefits, when those we regulate are able to report their activities, receive feedback about compliance, and take corrective action quicker. After deploying myDEQ, those who are required to report monitoring data by ADEQ's groundwater protection permits will be able to submit their information on-line and get feedback about compliance within 24 hours. Prior to myDEQ, permittees would receive feedback regarding compliance at best three months after submitting the data, if at all. More timely feedback

about compliance will mean an opportunity for quicker corrective action - a result Ohio has already documented after implementing on-line self-monitoring report forms.

### **Conclusion**

Ultimately myDEQ will result in more environmental good as customers are able to complete their transactions with the agency faster with less potential for error. They will more likely be in compliance with environmental laws and rules at inspection because the whole process, which has been thoroughly leaned, will be increasingly transparent and streamlined for value added customer benefit. Customers get exactly what they need when they need it and are ready to receive it. This is the point of Lean, made radically faster and simpler when e-technology is applied in responsible order. Because we're doing these steps correctly, myDEQ will be more than the most ambitious project to date in the history of the agency; it will be the legacy from which further progress and environmental benefit result.