Steve Kelley, Humphrey Institute of Public Affairs

Civic Caucus, 8301 Creekside Circle #920, Bloomington, MN 55437

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Present: Verne Johnson (Chair); David Broden, Janis Clay, Bill Frenzel, Paul Gilje (phone), Jim Hetland (phone), Sallie Kemper, Dan Loritz, Tim McDonald, Wayne Popham (phone), Bob White

Summary of Kelley's comments: Minnesota needs to establish an innovative culture in both its private and public industry. A process known as "Design Thinking" may help government and business organizations to both devise and accept change by bringing people with backgrounds in the design professions into the mix of in-house problem-solvers. Two areas greatly in need of innovative efficiencies, health care and education, are not treated evenly in state budget discussions. In forecast budget deficits, spending projections correctly include inflation in health care costs but not in education costs. This puts K-12 at an unfair funding disadvantage.

A . Welcome and introductions - Steve Kelley is a senior fellow at the Humphrey Institute and director of the Institute's Center for Science, Technology, and Public Policy. He served in the Minnesota Senate from 1997 through 2006 and the Minnesota House of Representatives from 1993 through 1996. He was chair of the Senate Education Committee for four years.

Before his legislative service Kelley was a public member of the Minnesota Board of Medical Practice for six years and served one year as its president. He has been a lawyer practicing commercial litigation at the Minneapolis firm of Mackall, Crounse, and Moore since 1979.

B. Comments and discussion -During Kelley's visit with the Civic Caucus, the following points were raised:

Establish an innovative culture in Minnesota

"Thanks for this opportunity," Kelley said, to the assembled participants in the Caucus. "I will start by saying that I think it is essential for Minnesota to do a better job at fostering innovation in a variety of ways." When businesses talk about innovation, he said, they often talk about needing people that are trained in math and science-people that excel in problem solving. That's often a preferred way to start thinking about innovation.

"But I think you need to create a whole innovation culture." If our government and nonprofits are not conveying that need of true innovation-if we're accepting just incremental improvements-then we will

not make substantial progress." So Kelley said he has been thinking of ways to engage organizations to embrace a difference approach that goes beyond problem solving.

Applying 'design thinking' to Minnesota public life

He described one method-'design thinking'- that has promise. "Design thinking starts with an approach developed by professional designers and architects to find out what people's real needs are." In many cases designers go and live with people, work with them, and observe them in their environment as they go about their daily lives. Only then do they begin to envision a model for improving how those peoples' needs are met.

Kelly cited a book by Tim Brown titled Change by Design. Find a TED video of Brown describing design thinking here, as he urges those in the design industry to think about problems larger than fashions of the day: http://tinyurl.com/yhwst85 .

And click here to find an article he wrote with Jocelyn Wyatt on design thinking applied to social innovation for the Stanford Social Innovation Review: http://tinyurl.com/y9zh3fd .

The concept has applications across industries. The Mayo clinic is interested in innovation, so they created a Center for Innovation a few years ago (http://tinyurl.com/mkwcps). Their own design staff, consisting of artists, architects, design professionals and engineers from other industries, work with doctors and nurses to rethink how they do things.

For example, in trying to reduce surgical complications the designers drew a map of the operating room and asked each of the people present during surgery to draw on the map where they move throughout the course of a surgery. The surgeon's "map" was a single dot facing the patient; the anesthesiologist drew a ring around the patient's head. Then designers saw that the nurses' "map" was a picture of extensive activity all around the operating room as they were bouncing about performing their assignments. This illustration made the risks for variability in quality control vividly apparent; these were the risks that they then sought ways to address.

A participant described a similar experience from the defense industry, when they had to assemble a proposal in a process that involved a large group of around 40 people. "The facilitator put us in a room, with an illustrator. 'Let's talk about it,' the illustrator said, and after an hour he had a cartoon that represented where we wanted to go with the proposal."

What is it about the design lab approach, a participant asked, that might make sense for our public services in the state? Kelley responded that research shows that having diversity in a group-adding someone who is a right-brain creative, or has story-telling abilities-makes it more likely there are innovative solutions. If a group is solely comprised of people that have risen within their own organizations they may often have very similar ways of thinking or looking at problems. Often they are 'left-brained', more analytical than creative. So even if they are diverse on some levels (age, gender, race, industry), the group may not actually be as diverse as it could or should be for optimal results.

One of the reasons why health care professionals took this approach early, Kelley explained, is that they understood that a person's state of mind affects their health. And different "states of mind" might logically be expected to affect the course of a collaborative effort. So by bringing truly different skills and perceptions to bear on a problem the thinking process on the whole should be enhanced.

Rapid prototyping

What is different about this process, a participant asked, from ordinary "brainstorming"?

One particularly different component is the research that precedes the work of re-design-the careful observation of processes, trying to pay attention to the *unvoiced* needs people have. It's as Henry Ford said, " If I had asked my customers what they wanted they would have said 'a faster horse.'"

"We need to pay attention to what problems people have and how they might be solved and then follow that with rapid-prototyping," Kelley said. Some groups do a 'behavioral prototype,' which changes how the group working on the problem approaches its solution. When you have a prototype, the conversation can be about the prototype and not about the disagreements of people in the room.

Design thinking can help create a public sector open to change

"I see this technique spreading more and more into government, and moving people away from being quite so risk-averse."

This kind of thinking can inform policy makers, helping them construct systems that are more open to change. In health care, given how much more pervasive government's role is going to be, government will need to be open to this sort of innovation or else significant improvement will be impeded.

In education, Kelley described a neuroscientist at the University of Minnesota who trains teachers to teach a brain science unit in middle school in a way that adheres to the latest research on the neuroscience of learning. In another example of the design thinking approach,, the Nueva School in the Bay Area of California became much more project-based in how they teach students. These students are learning new, project-based problem-solving skills that appear to increase learning.

A participant asked how a school could redesign to be more personalized without the additional cost of adding teachers?

"I don't know about how it affects cost," Kelley replied, "but if you're teaching in a way that motivates kids, productivity should go up." It is clear, he added, that personal relationships are essential to learning. This is the real key to the technology question-if technology is used to replace the teacher, it can be harmful. If technology is used to offload rote tasks, such as drilling multiplication tables, it may be very helpful in freeing the teacher to do the important work of establishing that personal connection.

State budget projections include inflation for health care costs, but not for education

"I just want to say something about the cost of education," he continued. "The mantra is we don't include inflation in the costs of the state budget. We don't-but

when we forecast what we're going to spend in health care, we add up the benefit set we said we'd deliver to people, and then we project how much it will cost to provide that benefit set, based on health insurance estimates that do include an inflation component."

He explained that $2.2 billion of the coming budget deficit is the inflation in health care and human services. "Why is it okay to say we're going to inflate the cost of health care and the cost of other services, but not inflate the cost of education?"

Systems evolve

"I think you can work on issues of tenure and school processes without saying, 'let's throw out the whole organization.' Kelley said. "I was at a school in Stillwater that was going to provide every student with a laptop computer. I went to the parent information night, and met a 58 year old teacher who said how rejuvenated he was by this experience of rethinking how to teach in a room where every student would have a laptop. His whole outlook as an educator was re-inspired."

Incentives matter. Investment banks have to use incentive plans, he said because it's really hard to hire a lot of people willing to call firms up and ask them to buy loans. "But I can't think of anything about a monetary incentive plan that would get teachers to like working with their students more. If teaching is really about the relationships, I think our focus should be put there."

"As we think about how we drive toward these innovation opportunities, we have to think about the balance of innovation and effectiveness. We don't want to kill an innovative culture by restricting efforts only to those that have already been tried and deemed safe."

The budget will not be resolved without innovation in health care

If you were to solve the budget problem in a meaningful way, Kelley said, instead of simply cutting spending, you would have to find ways to cut health care inflation. That's where the real solution is.

We can't solve this health care problem unless we have innovation in patient services. Up until now our payment structures have not encouraged that kind of innovation. Park Nicollet had a program where they expanded personal contacts with people with congestive heart failure, following up with them regularly to assure that they took their medication-that cost *them* $600,000 in additional personnel expense but saved the government around a million dollars by improving health outcomes with less hospitalizations.

"I think that what government must do is rethink our processes so that we get people to *want* to change their behavior. We've done all the preaching, we've done all the logical and rational arguments, so now we have to find out how to connect with people at an emotional level."

There is a lot of poorly done technology-enabled service. It is important to think past the hardware, and toward what the technology can do to solve real needs of real people. Apple's iPhone for example unleashes human capacity in its wide-open "applications" marketing. The key is the use of technology as an enabler, to facilitate the communication and foster creativity.

Early childhood improvements require a broader view of community

"A lot of the education reform efforts have focused on school. And I'm convinced they need to take a wider view of things. You look at generational poverty, and education, and health disparities, and these things are obviously connected."

He described Geoffry Canada and the Harlem Children's Zone, working to take a whole-family, whole-neighborhood approach. "What Canada is trying to do is cut off the effects of poverty for the next generation. Ideally we would start with very good prenatal care, so that children do not start out badly because they were born to a poor family.

We have to understand that we can't do this during 6-7 hours a day at school, then not pay attention to what happens in the hours outside of school, and in the years before school. At the Humphrey Institute, Kelley said, they are trying to connect a network of science and math teachers, and community institutions to work toward enrichment activities after regular school hours. "If we're really going to have an impact on students we need to be there all along the way."

C. Closing

To close a participant asked Kelley for his thoughts on the governor's race, in light of his message on innovation.

"My personal feeling is that Representative Emmer's slash-and-burn approach will be anathema to innovation. I think both Senator Dayton and Tom Horner are open to innovative solutions, and I take real encouragement that toward the end of Dayton's 11-point education plan there is reference to freeing up teachers to innovate. I hope that's a sign that Mark, across a range of things, would be more open."

Kelley also said he is raising money to create a "design thinking" center at the Humphrey Institute for smaller businesses as well as public sector groups who might lack the resources of a Mayo Clinic to engage in this type of research in-house. "I think having a well-designed place to help people think about innovating-really innovating-would be very valuable in spurring the kind of creativity we are going to need."

One last thought: IBM does a survey every few years of CEO's at top companies. They ask them their views on a variety of topics, and the 2010 survey asked them for the top thing on their agendas. The most common response was

innovation/creativity; the second was how to improve relationships and get closer to their customer.

It would be a good thing if government were to put that at the top of its agenda as well.

Thanks to Steve Kelley for a good conversation.