PAYNE INSTITUTE COMMENTARY SERIES: **VIEWPOINT**

In Search of a Trusted Messenger

By Jim Crompton

The world's 7.5 billion people need a vaccine for COVID-19 as soon as possible. The good news is that several vaccines have been developed in record time, building on long-standing medical research. The vaccine rollouts have started and are picking up momentum. But surveys of Americans suggest that not all of us are ready for the jab. (Which Americans Are Least Willing to Get a Covid-19 Vaccine - WSJ)

There remains a big trust issue behind all of this. Most modern countries have well-established processes to ensure safety of products before they are released to the public. Why the reluctance? Whom do you trust?

Pharmaceutical companies rely on the FDA to make business possible. In the same way that people fly because they trust the aviation regulator (FAA) or go to work because they believe that OSHA regulations will make them safe. They will take medicines because they are believed to be safe and effective. Take away the trust and the medicines makers would suffer. (Strong Medicine, The Economist, 9/13/2020).

But we can't take trust for granted. Over the past decade democratic institutions have taken a battering. According to Pew Research Center, an average of 64% of people across 34 countries do not believe that elected officials care what ordinary folks think. Fully 69% of Britons are dissatisfied with the way democracy is working at home, as are 59% of Americans. (Some assembly required, The Economist 9/10/2020)

Trust is an essential ingredient in modern society. Oddly enough, trust is also an essential ingredient in data management and data analytics. But while building data trust is essential, but it must be earned through:

- ✓ Transparency
- ✓ Consistency and verifiable process integrity
- ✓ Disciplined thinking

User trust is supported by:

✓ Standard rules about data behavior and contents

✓ Metadata that tracks the provenance and other details that user's value when deciding whether data can be trusted.

What is a trusted messenger and where do we find one? The key elements include:

- Share, not Teach or Preach. A conversation, not a lecture to a bunch of idiots. Listening before starting, not just the industry standard elevator speech.
- Trust - firm belief in the reliability, truth, ability, or strength of someone or something.

Trusted messenger - People believe people whom they trust, and they're more likely to act based on the recommendation of that influential other person. Communications experts call this the Trusted Messenger principle.[1]

So, how does this context apply to the environmental impact of oil and gas production in the United States? One example we work on regularly is reporting emissions data. Several states are now asking oil and gas operators to self-report their flaring and air pollution emissions data in order to get regulatory permits to operate. That is a good start but only if the data is trusted.

Researchers and NGOs are turning to satellite data to check on those self-reporting oilfield and midstream operators. The headlines are not good. You can argue about the spatial and temporal limitations of satellite data, or the sensitivity of the instruments from so far away, but the emerging studies are telling a story that not all emissions are being reported. That news doesn't help to develop trust.

There is now widely available satellite data and, in several basins, data is available from aircraft and drones. In addition, companies have SCADA data from wellhead, artificial lift units, separators and tank batteries. Many responsible oil and gas producers are improving their environmental data collection techniques, and service companies are adding drone-based and on-site continuous monitoring sensors.

We have a lot of data (with more coming) to look at and use to build event alarms and predictive models. But without trust, the arguments still divide operators from communities and regulators.

A popular saying is apropos here, "Everyone is entitled to his own opinion, but not his own facts" attributed to several authors including Daniel Patrick Moynihan, a four-term US Senator from New York. What about if someone had the right facts, trusted, verified, transparent, easily understood and widely available? Could this trusted messenger impact the debate? Could we build some common ground and start moving in the right direction?

- [1] http://www.bu.edu/ise/2019/04/16/trusted-messenger/

The concept of a certification process of methane emissions is not new. In 1992 the US EPA published its Natural Gas STAR program (1) and there have been proposals at the G20 level to agree on and support a revision of the current IPCC Guidelines (IPCC 2006, 2019) for the measurement, reporting, verification, and certification (MRVC) of methane emissions from the production of fossil fuels (oil, gas, and coal) and methane emissions from natural gas value chains (from the point of production to the point of use). (2)

Several organizations including Independent Energy Standards Corporation (recently merged with Project Canary) using their TrustWell rating, similar to the Leadership in Energy and Environmental Design (LEED) rating for buildings (3), In November 2019, Jonah Energy was awarded a Gold Rating by TrustWell. In that certification report it stated: "*Jonah Energy operates in one of the most uniquely challenging environments in the United States. While O&G operations are expected, any issue or mistake has the potential to be instantly magnified. To combat this challenge, Jonah Energy has demonstrated fundamentally sound engineering control measures ensuring that they operate to the best of their technical abilities. Strong performance in the Water, Air, Land, and Community categories have earned Jonah a Gold rating* (4)."

In 2020, MiQ an independent non-profit organization, has designed a certification system as well. Their framework is envisaged to assess methane emissions management across three criteria: methane emissions intensity at a facility level; monitoring technology deployment; and company practices. The MiQ certification will then be audited by a third party and will work to complement existing voluntary schemes (5). Whether it gets widely taken up is not clear.

I believe that responsible certification processes and agents can play an important role in developing trust between all the stakeholders in the natural gas value chain. Academic institutions can also play a role in building trust. Schools like the Colorado School of Mines, have the right elements to be one of those trusted messengers. We are approaching each issue with a collaborative, cross departmental approach building on the strong reputation that the Colorado School of Mines has earned over the almost 150 years of its existence. This is the core of our approach. Transparent and discipline thinking by expert faculty and innovate research students.

References:

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2) "Measurement, reporting, verification, and certification of methane emissions from fossil fuel production and natural gas value chains," Bassam Fattouh, James Henderson and Jonathan Stern, November 22, 2020, G20 Insights, https://www.g20-insights.org/policy_briefs/measurement-reporting-verification-and-certification-of-methane-emissions-from-fossil-fuel-production-and-natural-gas-value-chains/
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Jim retired from Chevron in 2013 after 37 years with the major international oil & gas company. After moving from Houston to Colorado Springs, Colorado, Jim established the Reflections Data Consulting LLC to continue his work in data management and analytics for Exploration and Production industry. Jim was a Distinguished Lecturer for the Society of Petroleum Engineers in 2010-2011 speaking on the topic of "Putting he Focus on Data". He is a frequent speaker a SPE conferences on digital/Intelligent Energy and the Data Foundation. His interests lie in the full spectrum of the information value chain from data capture, data management, data visualization, data access modeling and analytics, simulations, and serious gaming. Jim graduated from the Colorado School of Mines (BS in Geophysical Engineering in 1974 and MS in Geophysics in 1976) before joining Chevron in Denver, Colorado. He later earned an MBA degree (1976) from Our Lady of the Lake University in San Antonio Texas. Jim joined the Mines faculty in 2017 and teaches classes in Petroleum Data Analytics.

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