



Notes Template for Facilitators – Fall 2020 Business Round Tables

Topic: Future of Geoprofessional Industry

Facilitator: **Steve Wendland**

Number of participants: 7

Briefly summarize up to ten things from the discussion that were of most interest. This might include points discussed, concerns expressed, lessons learned, advice given, solutions offered, case histories presented, or anything else related to the topic. Expand the boxes as needed.

1	Artificial intelligence and machine learning will come to our work in unexpected ways, making us more efficient and eliminating mundane work tasks.
2	Public sector work (especially from state governments) will likely be significantly reduced in the coming years due to budget crises in many states.
3	As more construction uses prefabricated components (e.g., precast concrete, pre-assembled trusses), the need for materials testing services will be reduced.
4	The most significant disruptors will likely be outside entities (technology businesses) entering our markets, not existing geoprofessional firms or geo-contractors.
5	Our aging national infrastructure will be an increased source of work, but we'll have fewer engineers available to do that work.
6	Use of instrumentation will be increased to monitor aging infrastructure; we will need to improve our expertise with instrumentation.
7	Increased use of AI and machine learning will improve our efficiency. Instead of increasing our profits, we'll likely lower our fees as commoditization continues to control our industry.
8	Changes in immigration laws (especially H1-B visas) will reduce the supply of engineers, making the currently short supply even worse.
9	We will improve our ability to use existing/historical data as more and more of our project files are digital.

Summarize the three most important items from the discussion that should be shared with GBA members:

1	Remote working (working from home) has become a permanent feature of our work environments; we must adapt to this new reality. Mentoring young staff can be limited by remote work since they won't be around the office every day to hear others and passively learn from them.
2	The most significant disruptors will likely be outside entities (technology businesses) entering our markets, not existing geoprofessional firms or geo-contractors. An outside technology company could completely revamp the design and construction process, making existing engineering and construction firms obsolete.
3	Our aging national infrastructure will be an increased source of work, but we'll have fewer engineers available to do that work.

Facilitator: Charles Head

Number of participants: 9

Briefly summarize up to ten things from the discussion that were of most interest. This might include points discussed, concerns expressed, lessons learned, advice given, solutions offered, case histories presented, or anything else related to the topic. Expand the boxes as needed.

1	DEI – Huge hill to climb but critical – need to make deliberate effort to add minorities and women to pipeline; we will need to become more socially activist and deliberate in future; the old approaches of not addressing problem head on needs to change – we, the ones in the drivers seat, need to accept that we are a big part of the problem.
2	Geostrata recent issue on technology a recommended review – we're slow to adapt new technology still need to "touch and feel it;" Does current standard of care both hold us back or protect us from disruption? We're risk adverse.
3	Hybrid model for future meetings – people miss socializing and building networks but there is a big cost in time and dollars; Close to home, GBA will have challenges and opportunities in the way it brings content to its members; need to get on this right away and lead
4	Climate change will be big disruptor and opportunity; geohazards need to now be addressed; impacts everything – weather; fires; rising ocean levels; resiliency; etc. And changes to climate are accelerating.
5	The way we work will change; the world is now flat – we can work from anywhere; challenges will ensue – mentoring, idea generation, and network development are a few big ones.

Summarize the three most important items from the discussion that should be shared with GBA members:

1	DEI is a front and center issue; a critical matter for the future of the profession. A big step up in the way this is being addressed is needed.
2	Climate change will be big disruptor and opportunity; climate change disruption appears to be accelerating.
3	The way we work will change; the world is now flat – we can work from anywhere; challenges will ensue – mentoring, idea generation, and network development are a few big ones.

Facilitator: **Steve Noble**

Number of participants: _____

Briefly summarize up to ten things from the discussion that were of most interest. This might include points discussed, concerns expressed, lessons learned, advice given, solutions offered, case histories presented, or anything else related to the topic. Expand the boxes as needed.

1	Recruiting staff to keep up with needs and being able to mentor them in a more virtual environment is a significant disruption. Biggest challenge is retention and engagement – most agree that it is our biggest challenge
2	Some concern that design build trend is leading to greater risk on Geotech issues for our firms and larger contractors might be headed in the direction of hiring some of this more in-house
3	Quick commoditization of our practice. Less personal interaction makes commoditization more likely – harder to ward off
4	Technology is changing rapidly and these types of disruptions can spawn more/smaller start-ups
5	Funding reductions from public sector is going to be significant and will likely be more manifest in 2021; hopefully an infrastructure bill will help to mitigate this.
6	Enrollment in universities is down and could result in future workload / staffing issues in the future

7	Migration of folks from larger urban centers to more moderate sized firms
8	Some folks love zoom and the remote WFH is likely here to stay. Larger groups can be more difficult to engage folks. Traditional methods of public and stakeholder engagement to garner consensus is going to have to change.
9	Younger/emerging leaders are more likely to participate in smaller meetings; lower cost to the firms; could be a way to get more folks to participate – but maybe not at the depth of commitment/loyalty that we have seen
10	Office spaces are going to get smaller; folks will work from home more and more; could be a lot more opportunity with redevelopment of office space
11	We are lucky to be able to work outside and in the office; avoid becoming a commodity; don't do low bid work; be careful with contractual terms and conditions;
12	AI and big data if left unchecked could lead to a significant disruption to our work and put us out of business. Automation of project monitoring and controls is already having an impact on perception of value that the Geotech

Summarize the three most important items from the discussion that should be shared with GBA members:

1	Most firms have weathered the storm pretty well so far, but reduction in tax revenue and public sector funding will potentially have a significant impact in 2021 or later. Not just from a workload perspective but will increase pressure for commoditization and could spawn
2	Reduction in enrollment at the universities could create a gap in the workforce
3	Some folks love Zoom and the remote WFH is likely here to stay. Larger groups can be more difficult to engage folks. Younger/emerging leaders may be more likely to participate in virtual meetings; lower cost to the firms; could be a way to get more folks to participate – but maybe not at the depth of commitment/loyalty that we have seen

Facilitator: Mike Dreyer

Number of participants: 10

Briefly summarize up to ten things from the discussion that were of most interest. This might include points discussed, concerns expressed, lessons learned, advice given, solutions offered, case histories presented, or anything else related to the topic. Expand the boxes as needed.

1	Geoprosessionals need to do a better job advocating for ourselves and informing the public on what we do.
2	We need to become more involved in our communities, reaching out to schools and children and educating on the value of our industry.
3	The current pandemic environment has caused disruptions in our industry. Some of these challenges include managing the dynamic of working from home, migrating back to the office, and managing people's comfort.
4	It has been difficult to hire and to mentor during the pandemic. This needs to be resolved or there will be disruptions to professional development within our industry.
5	There is a concern of a lack of corporate culture due to the current work environment and how it carries forward in the future. We do not want to become a gig economy or get consumed by big technology companies.
6	This environment may result in an opportunity for different types of work going forward as well as the potential for doing things in new ways and opportunities for more collaboration. Technology has made it easier to collaborate remotely with coworkers. Will likely continue.
7	New work/industry opportunities may arise from this. Cloud computing and data storage centers, warehousing, infrastructure could be an emerging market.
8	Future technological advances will impact our industry. We must embrace technology and push innovation forward under our direction.

Summarize the three most important items from the discussion that should be shared with GBA members:

1	To overcome industry challenges, we must embrace technology and work harder to actively engage with each other to promote our corporate culture, hire and retain good colleagues, and develop junior professionals.
2	As geoprosessionals, we must advocate for ourselves to obtain a larger voice in public/society. We must educate young people and the general public on what we do.
3	Emerging markets could develop as part of the shifting work environment and technology. These include data storage and server centers, warehousing, infrastructure, etc.