WHAT WILL BE “NORMAL” THIS FALL?

COVID-19 IMPACTS SURVEY

Perspectives on the COVID-19 outbreak and how it will affect activities in Colorado’s research lab ecosystem and society
May, 2020
In late March, 2020, operations in Colorado at nearly all federal research laboratories, university and college research institutes, and related federally-funded scientific organizations were suspended due to the COVID-19 pandemic.

Through April, 2020 we were scrambling to adjust to travel restrictions, workplace shutdowns, school closures, cancelled events, at-home schooling, virtual meetings and the realization that our work, our kids’ schooling, our summer plans, our organizations’ budgets – nearly every crucial piece of our lives was not going to return to normal soon.

This unknown trajectory for society quickly added to the uncertainty felt about the public health threats of COVID-19. There became a pragmatic urgency to trend out the reality of how work and life could function with this new social distancing paradigm.

CO-LABS surveyed our network of scientists, economic development experts, professional researchers, academics, private sector technologists and engineers to learn the issues they were facing immediately and their outlook for possibly new normal attributes of our lives in the fall of 2020.

We offer this quick overview and further anonymized comments to help inform your perspective on the new priorities, activities, challenges, concerns and topics that may not have existed – or at least were not nearly so impactful – before the COVID-19 pandemic.

We will also share our findings with elected officials and civic leaders to assist with policy and support efforts at the federal level.

Thank you for your participation and support.
Dan Powers
Executive Director, CO-LABS
May, 2020

Note: This survey will remain open through August 31, 2020. We will release an update if appropriate – please contribute your thoughts at https://bit.ly/375x026

About CO-LABS: It is our mission to nurture Colorado’s federal research laboratory ecosystem to be a world-class scientific discovery and innovation asset to the country. In pursuit of this vision, CO-LABS educates the public, businesses, educational organizations, and government officials about the value of federally-funded scientific laboratories. We create connections between these sectors and support the technology transfer of Colorado’s scientific resources from the lab into society. To learn more, visit www.CO-LABS.org.
The survey revealed these key themes:

- Worried concern – if not outright certainty – that funding will be cut unless it is virus-related
- Remote activities will outpace and replace in-person activities
- Large events, if not cancelled outright, may be limited in size and have social distancing guidelines in place for the foreseeable future – with related loss of professional networking, sharing of ideas & exposure for scientific discoveries
- Uncertainty about having the right equipment and infrastructure for running formerly in-person events in an online fashion
- Businesses that rely on in-person activities will have to rethink and adapt their business models to combat the spread of the virus
- Businesses are struggling to meet productivity standards with everyone working remote, and hope to have better processes in place soon
- Education at all levels will pivot to continue to support remote learning opportunities
- Worry over the quality of education being given on a remote basis
- In terms of politics, there is a calling for write in or online voting option across most areas of government
- In 2021 there are hopes for established protocol during a pandemic and the implementation of technology to help combat pandemics
- There are crucial slow-downs affecting some projects, but for the most part there is hopefulness for the future – even optimism for the resurgence of society recognizing the value of science

On the following pages you can read all the replies, which have only been edited to remove a person’s name if appropriate to maintain anonymity.

The questions we asked:

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IMMEDIATE CONCERNS:
Keeping people safe and healthy on-site

Next fiscal year budgets are dire

Labs & businesses are struggling to meet productivity standards with everyone working remotely - better processes/new standards are needed

Many worry over the quality of team projects and research only allowed to happen on a remote basis

"Will museums, science centers and other such public institutions remain popular even if restrictions are lifted, or will people be wary of such gathering places?"

"There will be many more internet based meetings. They are so much cheaper and easier to attend, especially when considering participants from different states and countries."

"I can see increased spending in research as the federal government continues to try to stimulate the economy."

"Many of our research projects are on hold due to the state's shelter in place order. Not sure yet how this results in data or staffing losses"

"More continued work from home than was ever the case previously - getting used to wearing face masks in almost all meetings and public settings."

"The hallway networking typical at symposia and conferences will be lost, thus diminishing a portion of the creative process."

We asked our network of scientific research labs and organizations in Colorado what issues they are facing due to COVID-19.

AND: What could our world be like in the fall of 2020?

Many events may be limited in size and have social distancing guidelines - or be cancelled outright; loss of networking

Funding will be cut unless it is virus-related

Businesses, colleges, labs that rely on in-person activities will have to rethink and adapt their business models - more online interaction; public health upgrades to bathrooms, HVAC systems

Preparedness and resiliency are new budget priorities; especially in supply chains and cyber realms

Online education will be the norm - with inequitable access and veracity. A challenge to STEM fields.

Write-in or online voting options

Massive 2021 program & staffing cuts possible in some sectors
Excerpts of comments from the survey

**Question 1: Currently, what challenges are your top priorities?**

Connecting SME in industry to K-12 learning.

Not going to in person trade shows; Some disgruntled lower level staff.

Maintaining productivity and connectivity with colleagues while working remotely. Protecting self and society by social distancing.

Managing home schooling and a small team of remote scientists, while getting all my normal work done.

Not being able to meet clients face-to-face

Keeping my staff safe while still meeting our mission.

Making sure that our lab's staff are able to function well while working at home. Continuing efforts to keep all projects and progress on track.

Bringing in revenue for a museum that is currently closed to the public while still keeping staff employed.

Getting back into the office and laboratory without concerns of getting the virus.

Continuing to work effectively with partners and licensees, particularly those encountering hardship conditions

Ensuring needs of employees in my group are being met. The IT stuff is straightforward tov address. Mental health - not so much. People with dependents at home are clearly feeling the strain of trying to juggle house duties and work.

transitioning from being a student into a career

Climate Awareness from MANY STANDPOINTS: 1) Stop Denial of Science BY THOSE WITH $$$ GREED OBJECTIVES 2) Establish BROAD UNDERSTANDING by Everyday Citizens that PERSONAL RESPONSIBILITY for Action in Personal CARBON FOOTPRINT REDUCTION is AS NECESSARY to address Climate Destruction as Social Distancing and Wearing Face Masks is for Covid 19 Control. 3) Establish BROAD UNDERSTANDING that A continued Climate Destruction fosters more health emergencies. 4) CLIMATE is the FOUNDATIONAL Social Justice Issue to RESOLVE.

Phased reopening of research activity

Strategy for return to work
Accomplish research mission safely in the face of COVID-19 threat and effectively with possible cuts resulting from economic downturn.

Receipt/transport/resulting of COVID19 specimens

Cash flow. Customers are delaying purchases due to the stay-at-home directives.

Staying healthy. This is scary stuff because it’s so unpredictable how any one individual will fare when faced w covid19

Attention to undergraduate and graduate students' academic progress and educational rigor

Being able to bring people to the same space for collaborative design events.

Managing a team as we all work from home.

Our group has taken a big hit financially and we are looking to expand where we get funding to support the Science On a Sphere program.

What does it mean to build relationships (often through in-person interactions) in a remote/new normal world? How do we cut through the noise in a crowded online, zoom-overload world? How is science going to come out on the other side? Are people going to trust it more or less? Are there going to be impacts to science/reputations if people "think" we overreacted (similar to the challenge with hurricane warnings/disasters/etc.)?

Keeping business support organizations operating during this time. 501c6 organizations will be severely impacted financially and will have a hard time staying afloat.

Dealing with the contrast between Institute funding being very healthy and the University financial situation being very poor. It creates a rift in the perception of research institutes that I am trying to overcome before it becomes a large issue.

Continuing to find funding for climate solutions

1) Managing telework for employees 2) Determining how to safely reintegrate employees back to working on site 3) Ensuring communication with employees is at a level where employees feel informed as to Agency policy and safe when they begin to return to work on site.

How to make decisions on/manage reopening our public space (exhibits, etc.) and inviting public visitors back.

Shifting from live events and meetings to virtual meetings

Supply chain viability

Main challenge is to have at least most of the team on-site for most efficient conduct of our work.
The necessary, but increasing federal debt will have profound impact on future funding for Federal Laboratories. I anticipate those labs not directly involved in COVID activity will suffer in future Federal budgets. Thus, reductions to laboratory budgets I fear are in the future.

Accomplishing something coherent during WorkFromHome (usually we do lab work) to maintain employment and for next career step; keeping healthy; making sure my interns are ok

Decisions that recognize that we can only deal with probabilities and not someone's "rights" or exact timelines and measurements. Science runs on probability and test. Society I fear runs on "choice" because of social media indulgences. Whatever our rates of recovery in both health and economic realms, we'll need to reintroduce probabilistic reasoning and trust. Extremely difficult right now, but Covid-19 exposes why we need them both.

Preparing for the next disruption which may be an unnatural disaster.

Supporting institutions who seek better understanding of the natural world’s interrelationships, biomes, resources, water, air, weather, species, habitats, oceans and their human interfaces.

Cashflow from various sources is low

Next fiscal year revenue

Keeping people safe and healthy

1) trying to deduce and navigate safe ways to keep designing and producing systems for our customers 2) working with customers that are working remotely, but still need to procure new advanced technologies and capabilities

#1 is maintaining manufacturing capacity and viability in the State of Colorado. This manifests in different ways. One is working with manufacturing companies now in the defense industrial base supply chain to help them prepare for DFARS 7012 compliance audits (thus, meeting NIST SP 800-171 requirements and those contained in CMMC v1 Level 3). Another is identifying and working with companies that are considering expanding their government market presence at any level because all federal agencies and many at the nonfederal level have indicated they are adopting the more rigorous approach couched in DoD'S CMMC. And as companies are looking at overall risk management and understanding that cybersecurity is part of business resiliency and continuity planning best practices, we are examining how to do a more general cyber hygiene campaign. (After all, hygiene is what we are all concerned about these days!) Across the organization, members of our team are working at the state level on task forces to promote safe recovery and also inform policy guidelines. As one example, the blanket "only 50% of the workforce returning" recommendation does not incorporate the specific context of those manufacturers who have huge facilities in the thousands of square feet. [Anonymous] is lobbying actively for an "employee density" measure that is more contextually aware. Another area is in
the state assistance for training grants. Some grants were approved that specified "on-site" as the training delivery method in a single cell in the budget worksheet submitted to support grant requests. At present, the requirement is for companies to resubmit grant applications after changing that cell to read "online." The backlog of state approvals is absurd and a misuse of state employee time. My take.

Manufacturer's Edge has developed comprehensive guidance for business continuity planning and for restart checklists, and is sharing that guidance across the manufacturing sector and the NIST MEP network.

Keeping staff safe while reopening.

These challenges are listed in chronological priority; that is, the first challenge is the first one we dealt with and the last challenge is one that will continue into the near future.

1. Closing our facilities to most staff and having most staff work from home; the challenge of an efficient and productive virtual office and ensuring that staff has the capacity and resources to work from home.
2. Planning, postponing, or cancelling meetings and events; converting some meetings and events into virtual activities.
3. Converting and sustaining an internship program as a virtual program; helping interns and mentors participate in the program in a virtual mode.
4. Dealing with administrative procedures and changing procedures that may not be flexible enough to deal with the challenges of operating through a pandemic.
5. Operations and maintenance of infrastructure dispersed throughout the United States, in other countries and in Antarctica; we face challenges regarding traveling, shipping, working with partners and working safely and securely to conduct operations and maintenance.
6. Opening facilities for more staff to work in the office and following new safety and security guidelines.
7. Developing and supporting new projects and advancing innovations during a time of uncertainty.

Improving online learning skills
Excerpts of comments from the survey

Question 2: Looking to this fall, what do you perceive will be new ways of functioning in your particular industry realm?

I think more events will be virtual / online

I've piloted a virtual collaborations with CENTURA, Lockheed Martin, Xcel, NREP, and multiple schools. You must meet with me so that I can show you what is going on right now. Here is an example: https://www.stemk12.org/apps/pages/index.jsp?uREC_ID=1467086&type=d&pREC_ID=1905059

More video conferences than ever.

More remote work, new guidelines for operating in the workplace. Possibly more virtual conference options.

More online meetings even once restrictions are relaxed. Not clear what our childrens' school schedule will look like.

Public access to the facility will be limited, we will serve far fewer clients. We will be taking on cleaning and sanitizing responsibilities. My team will have alternate Telework/on-site work schedules. Oil prices are bottomed out which is typically a time when we get lots of material donations to our core repository. Currently no one is there to accept or process donations which may result in disposal.

Meetings are being cancelled or moved on-line. I'm helping to plan a major conference for January that is up in the air - in-person, on-line, or a combination of the two? No one knows what the answer will be. What travel restrictions may still be in place? This will certainly impact the economy of the areas where the conferences were expected to take place.

Limited engagements--less visitors, smaller events, more virtual education content. (overall, very unknown!)

I expect we will be under rules for distancing and wearing masks and gloves.

Anticipate we may continue to perform work remotely at least in some respects

I do not see an end to telework coming in the near future. I've heard talk about cycling groups of people into our building for periods of time but I don't know how serious that is being looked at.

working from home

Health screening and social distancing
fewer in person meetings
More flexible, and less personal, work environment.
Continued social distancing and COVID protocols as established.
There will be increased work-from-home latitude.
As a master technician at NREL, I plan on trying to work in the labs with as little human contact as possible until a vaccine or the armory numbers become statistically low that it’s safe to return to normalcy.
enhanced and more robust distance/online teaching and learning, catching up with deliverables on research projects
Move to more virtual events, at least where possible; more spread out collaboration.
Assuming the pandemic has passed, I believe there will be a heightened use of VTC tools and less in-person connections.
Because we operate primarily on sales of museum exhibits, we suspect we'll be focused on slimming our team and working towards making our software more stable.
Mostly remote; gatherings where people can spread out (small!); a need for human connection
"*Educating the value of economic development
*Supporting the needs and delivering valuable resources to our economic developers to help their communities recover from the crisis"
As an organization that did mostly satellite algorithm and model development, we can work from home. The fall will likely see us more separated - because we can - thus allowing those who need to be there to re-engage sooner.
It's going to become more important to keep fossil fuels in the ground and fund clean energy. The money "pie" has shrunk so the intensity of competition for funding will increase.
We will have to implement physical distancing procedures for internal meetings and events hosted at the facility. We will have to implement more robust sanitization procedures for activities occurring in the facility. We will be functioning according to Agency recommendations at most times, unless we discover COVID has reinfected our building. In that event, employees will likely go back on telework until the building has been sanitized.
In education/outreach, we are following closely what's happening with schools. Even if schools are back in session, it's still unclear whether they'll be taking field trips (what we provide). In
terms of wider public, we may or may not be offering tours or visits to our public exhibit space. We are working on virtual education programming, and that will likely continue regardless.

Most live events and meetings will be handled whenever possible without face to face contact.

Getting used to wearing face masks in almost all meetings and public settings

We will do more work remotely which has been only occasional case-by-case situation until March 2020.

Face to face meetings, and scientific meeting will be put on hold. There will be more reliance on virtual interaction. While this can be structured to be effective, most organizations and societies are not well prepared for this type of format. This will be a continuing challenge. Also, the hallway networking typical at symposia and conferences will be lost. The spontaneous and impromptu will be lost, thus diminishing a portion of the creative process.

shifted and staggered work with no personnel overlap in the lab; no in-person conferences and fewer conferences planned for 2021

University of Colorado: rethinking economic models as well as campus models for safe learning and engagement. Not easy, either of them: different delivery, different measures of precarity (risk), but also different models for living and learning ecologies--complicated: biological models alone won't cut it; we'll need to revalue the urban infrastructure of campus, resource supply and demand, vulnerable populations by mental and physical measures--adaptation and resilience, sure, but widening our lenses on contagions and healthy adaptation.

More collaboration, the sheer scope of current wicked problems requires mobilization: a moral equivalent of war if you will.

Attempting to secure and supplement funding for the world’s laboratories that are gathering data and finding better ways to sustain the life of all planetary systems and species.

Limited person to person marketing and collaboration activities.

Balancing virtual and in-person as a tuition-dependent higher ed institution

More continued work from home than was ever the case previously

Increased remote interchange and virtual acceptance of hardware systems; reduced fact-to-face meetings

We are expanding the option for delivering training and consulting services remotely. We are also reworking job expectations so that everyone is involved in outreach activities. Some of the onsite practices, for example, production facility walk-through to establish baseline understanding about current plant layout and process flow, are being adapted to use videos
taken by client employees. We will continue to use virtual connectivity extensively, for our team members, clients, and industry sector forums to share current state observations, lessons learned, and promising remediative approaches.

We may be providing more in house sampling without clients present, suspending educational tours for an unknown period of time.

The organization may conduct more work in a virtual setting and implement additional safety and security measures if the virus returns.

Operations and maintenance of infrastructure and support for new infrastructure projects dispersed throughout the United States, in other countries and in Antarctica may require additional safety and security procedures.

Redesigning the learning experience - online and face-face
Excerpts of comments from the survey

Question 3: What do you see as likely new ways of functioning in Education and Schooling (your choice on pre-K to Higher Education)

something structured around a learning management system as opposed to simple web conferencing tools

Synchronous Learning combined with Industry Partnerships. I've been working on this for four years. Again . . . I would love to show you.

More remote learning and teaching options, virtual classrooms.

I don't have inside information on this.

More virtual content, reduced class sizes, more social distancing

There will be much more Internet based meetings. They are so much s cheaper and easier to attend than in face meetings, especially when considering participants from different states and countries.

Supporting staff who may not have the usual options for their children

zoom classes for higher education

I Pick ADULT EDUCATION - THROUGH MEDIA - The TV Channels need to Cover Climate (and our contributing personal habits) AS MUCH OR MORE THAN THEY COVER the NFL plus Baseball and the NBA . Th ey Need To Tie the Denial which spread Covid to the Denial which Keeps CARBON POLLUTION accelerating.

Distance learning

more distance learning

More private schools and home tutors. Back to standardized tests.

hybrid online/distance learning and face-to-face lectures (with distancing as appropriate and feasible)

Again, using online platforms where possible; hopefully to allow for as much in-person education as possible.

I believe there will be plans put into place for greater efficiency should we find ourselves in such circumstances again. Teachers may even find the added requirement of attending classes that
will prepare them and even certify them in remote instruction tools. Policies will be passed that outline procedures in case of future pandemics.

Our free mobile application is going to be our bread and butter for getting datasets into the hands of schools and students. I hope we can start making some curricula.

Those that are open to flexible formats and new, creative ways of engaging are going to come out better

smaller class room sizes; cleaning as they have never cleaned before; educating the importance of not sharing each other’s food, drink, etc. social distancing, etc.

In higher Ed, remote classes may be here to stay.

More outdoor schooling, better systems from online schooling.

I am anticipating schools will go be to something that resembles what it used to be. However, schools will have to reevaluate the physical layout of classrooms and common areas. If school systems really take this seriously, they may have to consider smaller class sizes.

K-12... a new focus on virtual programming and online education! How can we best share our resources without physical contact.

College may or may not be attended live in the fall of 2020,

Greater reliance on eLearning

More distance/remote learning, HOWEVER, this is going to be difficult for families where both parents and especially for single parents are working outside the home.

On line learning will provide valuable alternative to the campus experience. Thus education may become more affordable at the college level. By the same token, no one wants to pay high tuitions for on-line content. The "college experience" will be lost. College is more than content, it is also a life skill for socialization and networking. This will be a victim of a movement to virtual interaction.

"skype a scientist" type opportunities for local professionals to connect with students; remote internships

We don't know--which is one of our best answers right now. We know we'll need more "remote" instruction but we don't know the health costs involved nor the learning measures, nor learning differences, nor social ramifications. Zoom gives me headaches. The informatic zealots are as dangerous as any other form of denialism, if they deny the human body and its animality. Humans need the whole of planetary life--senses, exposure, contact, perception, all the non-verbal, non-visual cues we take for granted.
Online education will enable education to become life-long and hopefully people will find the time to use it.

Make innovation in science the ultimate exciting quest in securing a healthy and sustainable future.

More hand sanitizers

Much more virtual learning blended in with in-person experiences. Fewer/few large-attendance events (higher ed).

We will have to have much more in the way of virtual teaching and learning experiences

Major challenges! I've observed my granddaughter's experience as a 6th grader in DPS and can see that course material is not as challenging as it could be. It seems as though the virtual discussions are useful. There are some administrative disconnects, in that students are required to sign in separately to take a "how are you doing" survey daily and dinged if they do not; meanwhile, they will have been fully engaged in interactive sessions during that time period covered. It's odd. There are also some disturbing features in software used by DPS that automatically connects students to Skype even when that is not pertinent to students. I would like to see camera covers on ALL the laptops issued by school systems. Use of more outside resource, such as those from NIST, NOAA, NASA would be superb. These are video-generation young people. There is excellent content out there to which teachers can curate student use. More written assignments, weekly book reports, daily journals, daily exercise tracking . . . I would like to see these encouraged. I suspect that in-school might be delayed past September. My granddaughter, also 6th grade, who attends private school in Virginia, is doing a lot more work than the one here. It's a bit harder to know how to approach the pre-K, which is where my four-year-old (and youngest grandchild) is. She does miss interactive play with children other than her sister--although racing her across-the-street neighbor, each on her own sidewalk--gives some entertainment. I would love to see parks and playgrounds reopened, quite frankly. We need to figure out how to live with this

Redesigning at all levels
Excerpts of comments from the survey

Question 4: What do you see as likely new ways of functioning in the Federal Government, including the FY21 Budget outlook?

more virtual meetings and events

These must be community efforts centered around public/private collaborations.

Far more distributed outlays in health, education and welfare. Tax and loan relief.

Travel funding temporarily redirected to more technology resources to facilitate remote work. Some emphasis on developing best practices/tools around optimizing effectiveness of remote collaborations. My hope is that baseline funding for ongoing important missions will not be impacted, and in fact should be strengthened to account for potential lapses like this in the future.

Putting stimulus activities aside.... And then there is the looming National debt, who knows.

I expect that some federal agencies will actually get some plus-ups due to the pandemic. Some of this will be directly to study transmission, impact, environmental drivers, etc.

A shift to new and updated systems that can handle more virtual traffic, and offering more in terms of remote access to services

The FY21 budget will still stifle research on climate, guns deaths and air quality issues.

Remaining adaptable and innovative

remote participation is probably going to be the norm for the foreseeable future. Cutting back on travel is not necessarily a bad thing but there are of course trips that require face to face communication or just cannot be accomplished over the internet. I know both AMS and AGU are talking about virtual participation...not optimistic that will be successful. As for budget, I don’t know whether to be optimistic or pessimistic. At some point, the govt will have to stop it's emergency relief efforts and look at the budget implications of the economic fallout (i.e., cutting back spending). I have no idea how that will impact my work.

deep cuts in the budget

Hopefully the Feds Bring Back SMART / HONEST / EXPERT folks under the Next Administration !

Shift work and telework

bullish
I fear budget cuts in spite of proven return on the investment in research, especially in ag. The importance of ag, from field to table, has been highlighted by the COVID-19 crisis.

Unfortunately, I see the all levels of government becoming more autocratic.

continue all function but with distancing and personal hygiene as appropriate or required. catch up with laboratory research and office work

I'm sure there will be much bigger shifts, but the most relevant for us is that as programs get budget cuts, money towards collaboration and travel may be the first to go.

Due to the financial burden that COVID19 was to the Gov't, I believe there will be cutbacks. Gov't officials will need to decide what programs are priority. Additionally, I believe there will be policies and procedures implemented that will decrease the amount of time it will take for solutions to be acquired by the Gov't and other agencies.

Our team's FY21 federal base budget is bleak. I'm guessing more educational grants we can be a part of might just keep a few folks on the team.

cuts! it'll be interesting to see how the election shifts things or doesn't

Severe budget cuts to services and capital improvements

I can see increased spending in research as the Federal Government continues to try to stimulate the economy

Depends on the election!

I don't anticipate federal programs will get a bump in funding specifically to deal with infectious disease management. Any new programs to manage risk will come out of current budgets. This will cut our ability to deliver normal program functions. I believe that for an undetermined time, security guards will have enhanced procedures to screen visitors. I am not sure what that will be. For employees, I think our process will be more along the lines of requiring employees to stay away from federal building (sick leave, telework) if they feel at all ill. Supervisors will have authority to send people home if they feel they are a threat to the building population.

Not sure, but for awhile, unlimited spending and that will likely be followed by tax increases.

Hopefully overcoming aged and anachronistic practices like mandatory in-person voting (in the Legislative Branch)

All kinds of programs are going to be slashed. Hopefully the first will be the stupid border wall with Mexico.

Grim. If it is not defense, emergency response or disease related the next few budge cycles will be hard on organizations. The key will be to pivot in a meaningful way.
need continued support for ongoing high tech projects (National Photonic Initiative, National Quantum Initiative, NASA, etc)

(hide your eyes) I have little hope for any kind of economic rethinking--too much money in politics. Trump is greedy, blind and arrogant. Worst leader ever, but Washington/Wall Street align to prop up the finance section and not the "real" economic. We apply anything from 2008 or other virus strains? The fed-government will need to reinvest in infrastructure, civil rights, science and all realms of evidence-based learning, one-soul-one-vote...I'm not holding my breadth.

I would like to see the Federal Government moving some of its power to the states, while the central governance does the things it SHOULD be doing like preparing disease screening so that we don't have to shut the entire economy down.

Increase funding for all federal laboratories in collaboration with industries and philanthropic participation.

A slight shift toward more infrastructure investments

Depends on November election.

I hope that NASA and other agencies will have steady or increasing resources.

Frightening! The prospect of seriously reducing the role of inspectors general is horrific, ill-conceived, and dangerous. I'm debating whether I should start taking Social Security payments now (I'm 68) rather than wait. The guarantee of an 8% increase annually might no longer be valid. There are areas that should be reviewed like Secret Service and other "for-life" commitments with respect to politicians. Throwing money at people in the short term will not build our economy. It's just one more election-year gambit, a kind of masked vote-buying. I do see possibilities for continuing remote work for many government employees. That is a good thing for families, the environment, individuals.

Unknown at this time.

Reduced resources across the board
Excerpts of comments from the survey

**Question 5:** What do you see as likely new ways of functioning in the economy and/or financing/funding? (Your choice on local, national, global themes)

To be honest, the largest ask is time and listening. You don't need a big budget to do the right thing. However, doing the right thing gets noticed and put you in a position to apply for funding.

A return to global cooperation with the WHO.

though not as effective, virtual pitch days

The balance of in-person versus virtual business has already shifted and may never come back to the way it was. Global and local supply chains need to be taking extra precautions to mitigate future issues like this. At the same time, too much power in the hands of tech companies that are doing well at the moment (e.g. the Zoom troubles) should be a warning sign that we need to have better rules and guidelines in place.

Possibility of a one time spending stimulus, but otherwise anticipating relatively flat federal funding. Not clear what will happen with state and local funding sources, but they seem likely to be more constrained

My grants program requires a 1:1 state government match. This will very likely be challenging for states due to reduced revenues. The match is congressionally mandated and generally a good thing as it helps state agencies leverage state dollars. These however, are exceptional times and maybe match requirements need to be relaxed.

It appears that more organizations will encourage a percentage of their staff to work from home more regularly. Travel will be less frequent.

The great unknown. As a non-profit, we are not sure exactly what to expect and how much the public outings will change in the near and longer-term future.

There will need to be a political change in the Federal government from to a democratic president and possibly senate for increased funding for climate related research and monitoring.

Constantly re-examining assumptions to consider other possibilities, sectors

less travel

Return to a More Graduated Federal Income Tax.... Top Rate at the Pre-Reagan Levels.

terrible downside for state universities

Continued use of pandemic protocols
Virus lockdown insurance????

I’m a year away from full retirement.. I want to make it to that point so I can enjoy the fruits of my years of honest hard work.. whatever way possible to do meaningful, and useful work for the lab. I’ve spent the better part of my career making cheap PV a reality!!

increased use and dependence on online/distance communication/meetings of all kinds/display of graphics/meeting protocols/etc., etc.

As a contracting company, if budgets are cut at the government level, that will almost certainly affect the funding that we receive. It also could impact small business resources, such as SBDC and PTAC, negatively.

I believe intangible means of managing finances will be introduced. Imbedded chips or other ways of transferring money apart from physically touching it (or credit cards, etc.)

Severe budget cuts due to economic downturn and lack of revenue from major CO industries; a shift to focus on stabilizing, especially for the state; anticipate furloughs and/or some other contractions for the state; hope industries will look to more virtual/remote business models

My hope is we did enough in the beginning to revert bankruptcies

This is mere speculation on my part but I will guess that economies will try to become more self-reliant.

I would love to see the global economy focus on rebuilding with climate solutions on the front burner!!!!

For the next 1-1.5 years I believe there will be a heightened sense of appropriate physical distancing, sanitization and probably a higher usage rate of face masks. However, I think that with these measures, business will resume at pre-COVID levels. Since COVID is highly contagious, I would like to see mandatory vaccination programs, but fully understand the difficulty with such a program. I think the COVID vaccine will become as common as a seasonal flu shot.

I’ll just comment on a few areas that are not necessarily likely--just some things on my wish list. The healthcare system needs reexamination from a holistic perspective. Patient costs cannot be contained without alternate educational options for medical students. Limits on malpractice awards so that litigators are not rewarded for seeking disproportionately high damages. Limits on drug company profiteering and executive level compensation packages. Tracking to the subcomponent level on infrastructure equipment. Human-assisted AI and data analysis. Collaborative robotics. The overreliance on sensors or predictors (e.g., for financing/funding) without good understanding of context and multifactor analysis is likely--and unfortunate.
Reduced budgets at all levels

More robotics, more automation, less human interaction, destruction of many small businesses, the "Amazonification" of the world completed.

Epidemiology will be the new growth market, with rapid and reliable testing capabilities driving profit

More work at home for everyone.

Again, pivoting to the near term disease response and preparedness will find more success over other topics. Until the next crisis (we Americans seem to be able to focus on only one major thing at a time).

move towards more socialist support for all people (Nordic socialist style); increase in support and trust of science, medicine, technology (I can dream!!); surge in youth interest in healthcare and technology (like Space Race era)

I will go local on this one. Teachers have a key role to play, which is why public ed. is lampooned by the political right. We have to teach our current circumstance as a problematic that touches all lives, all things.

The global economy has demonstrated its brittleness, so I look forward to a more decentralized local economic model which increases the ability to adapt and thrive given disruptions.

Build greater awareness of the importance that advancing data and technology is having on the earth and all of its species.

More online connecting

Entirely depends on how long it takes to get clarity with respect to the duration and depth of this downturn.

National resources for research will need to increase and I believe they will

Anticipating slow down on customer acceptance and other contractual process steps, which will likely result in banking adaptations to maintain cash flow
Excerpts of comments from the survey

Question 6: What do you see as likely new ways of functioning in the realms of politics?

I'm frustrated with politics. When the same effort is put into a grassroots efforts directly with students and teachers, things happen quickly in sustainable and meaningful ways. Getting politicians to listen to people is the challenge. Students are amazing at this if we support them and find ways to let their voices be heard.

Redistributive outlays based on emergency powers in US

With all the misguided and potentially dangerous information coming from various top levels in the government I want politicians to start listening more to the science and experts but I have no hope this will actually happen.

Politics makes me cry.

Can we get everyone to mail in voting. Electronic voting would be better, but requires more infrastructure to support securely.

Not my expertise.

One has to focus on research and monitoring that brings kudos to the senator of the state of interest.

Hopefully more focus on pandemic preparedness and supply chain

Likely? Sorry I do not know Likely after the 2016 election disaster... So MY HOPE: Money Out Of Politics / Paper Ballots / One Person One Vote ... NO ELECTORAL COLLEGE!

More polarization

They want more power, now that they've tasted tyranny.

We’re all doomed if major policy changes aren’t made.

Check the voracity/truth/facts/etc. regarding all political assertions and statements. Speak truth to power, regardless of potential consequences, and be as deliberate as possible with detailed easy-to-understand explanations, analysis, assessment of potential consequences, etc.

Because of conflicts within government (like in Kansas), I believe the policies and signature authorities will be better defined. Hopefully a better plan will be devised to find those in need in this type of a crisis rather than throwing money at the masses.
2020 elections and voting is going to be huge -- I have no idea what to anticipate here, except for concerns on security but also opportunity for engagement/turnout. Excited to see what models come out on top for the state

I see little or no change.

Politics should be about electing people who govern, not self-promoters. If politics is going to succeed, it needs to be behind the scenes and working - not the theatre it has become. If are political leaders spent less time traveling and more time learning about the job, and we expected them to be intelligent - this would change how things function.

I don’t think this will have a large impact on the election process past 2021. I think we will see more elections adopting mail in balloting, but there will still be polling locations. I think preparation for a pandemic will be a campaign topic during the next 5 years. I think legislative bodies will have to implement social and physical distancing policies to ensure law makers and staff are safe.

Focus for awhile on unlimited spending, vaccine and medicine.

Fewer rallies, more virtual town halls

Virtual or teleconference meetings with constituents. Need an amendment to allow Congress to vote remotely and we need an mechanism to vote by mail on a national

Better attention to communication strategies that incorporate social license and biases will be key in driving any perspective.

American individualism has failed for decades and now it is more obvious, huge changes needed; leadership needs to be younger with diverse personal and educational backgrounds

Get the anti-science, anti-fact, anti-evidence jerk out of the White House. First priority. It won’t be enough. Only a shift in public accountable will see this through. The climate change advocates are extremely worried about shifts in priority that down-grade climate change mitigation. That’s one example in which we’ll need long-term vision not greedy developers and promoters.

I look forward to a swing in the pendulum from polarizing politics being a statemate to a model in which polarizing is a an asset providing a full picture of our system capability.

A virus is impacting all life worldwide. A microscopic organism is changing our world across all national and political boundaries. We need to better understand what affect the most minute systems can have on all civilization and policies. Increasing funding for advancing sciences is essential for any politician to have relevance and respect today.

More thoughtful politicians after the election
"Vote by mail."

I hope that the guilty will be punished and the innocent will be rewarded

Expanded mail-in ballots

Less press-the-flesh and kissing babies! More mail-in voting, I sincerely hope.

Chronic unemployment and Covid-19 will become an ugly stumbling block to bi-partisan policy initiatives - it will get ugly
Excerpts of comments from the survey

Question 7. What do you see as the new ways of functioning in the realms of recreation and entertainment?

Less team sports

I would hope folks would be more vigilant and wary of falling sick and staying safe (e.g. masks may become a new normal) but social and larger entertainment gatherings will continue.

In CO, we will continue lots of individual outdoor recreation. Perhaps fewer group opportunities.

I see more willingness to limit size and scope of recreation and entertainment gatherings (for example, will people be as excited to go to events that have several thousand people in fairly tight spaces?), more attention to health safety

I see no great changes.

Finding alternatives which maintain social distancing

will cinemas come back the same? will in-home entertaining replace going out.

My Hope - a return to Nature... getting off the THumb Toys.

I have a D.M.A. in music. I can show you in real time how to engage in the future of entertainment. In fact, I'm hosting a concert tonight for El Sistema Colorado. Recreation could go from the masses be in spectators, to the masses being active. The same in entertainment. Again - let me show you.

individual activities at expense of group activities

Social distancing and COVID protocols to remain in place.

Invest in Netflix!

I can exercise alone.. have been for weeks.. I play in 2 different bands, and that is going to be difficult unless these venues comes back.. so this hurts socially and for most, financially.. I'm ok, but 2 of the guys in my band are retired and relied on this as extra income..

Keep your physical distance the needed/required

Some people may be hesitant to go back to what was the normal - perhaps there will be a shift for entertainment and recreation companies (such as gyms) to provide more individualized, at-home services and resources.

I believe there will be restrictions put on games that draw large crowds. So far we've had metal detectors, perhaps we'll be scanned for diseases as well.
I think people are bad judges of personal risk, especially when it's something they like or want to do. I anticipate seeing people going back to activities that they really enjoy and eliminating those that they don’t (e.g., outdoor recreation, dining out will be things that people flock back to but things such as grocery shopping will shift to more delivery/alternative methods)

severe budget cuts; if we get to recreate or go to theaters, 50% occupancy, seating mandates, masks

It will take a long time to come back. Certainly not before an effective vaccine.

Recreation can be more outdoors. We need to connect with the outdoor world. Entertainment should become more intimate and less of an addiction (like sports teams). Entertainment should be entertainment and not take over our lives.

Again, I think there will be short term impacts on indoor activities. But as time goes by social and physical distancing policies will become lax and thing will go back to a previous normal. I do believe that some industries (restaurant, bar, entertainment) will have to consider how to keep patrons safe, while juggling maximum profit. I believe a vaccine will hasten the return to normal.

We will need to plan around this main question: Will museums, science centers and other such public institutions remain popular even if restrictions are lifted, or will people be wary of such gathering places?

Skiers where goggles, gloves, and face masks. That key recreational activity should not be derailed! There should be a way of managing movie theater profitability such that individuals can bring their own popcorn in without worry that someone is scooping popcorn into a bag onsite is contaminated. Drinks sold in closed containers. I see growth in membership clubs like the University Club of Denver where expectations of self-monitoring with respect to health can be imposed. I take my temperature daily because I do go to the grocery store. Outdoor recreation is so important to general well-being that I fear overreaction will actually depress health outcomes. There is always risk in what we do. Closed containers might be better at concert venues as well. A personal hygiene campaign--similar to Suzy Litterbug, Smokey the Bear, and other such campaigns--should continue. Quality of life is at least somewhat proportional to risks in life. Be mindful.

Limited large venue sporting events attended live, increased demand for new programming - TV and movies, developed world becomes even more obese and unhealthy.

People will be more respective of personal space (on trails and common areas), and dense-pack seating will become far less popular
Sports venues will remain closed....those sports will suffer. Outdoor recreation will be more the norm.

It will be a slow come back until a vaccine is developed. So, my hobby of fly fishing was prescient in terms of social distancing. :) reserve trail time (please!!! the trails are not safe now with crowding and lack of mask compliance)

Courtesy on the trails, universal testing, social distancing for some venues. Colorado's recreational industries will need to rethink their business models. Life-on-line "education and recreation" are NOT the only best future for our kids and selves. Grandiloquent as this may sound, we have to use this moment to rediscover the planet.

It is my hope that people learn to prefer a slow pace rather than the frenetic pre-COVID lifestyle.

"A major factor in recreation is the outdoors, experienced individually or collectively. A healthy body depends on a healthy environment. Live-streaming is the next best thing to in-person, live experiences.

Collective entertainment puts people in close proximity in mutual appreciation for an event. Virtual experiences offer filtered connection whether they are in mutual appreciation or at odds. Solving the world's ecological challenges is the ultimate win/lose/love event. Elevate science to the greatest game or performance possible."

Smaller and more open events. More single-use, throw-away stuff

Much more virtual, television and film ; in person highly constrained for an extended period. more home entertainment and less group functions

Wearing masks for quite a while. Physical distancing when possible.

Slow evolution of a return to old habits
Excerpts of comments from the survey

Question 8: What sources of information do you trust and/or recommend? You can be general or specific.

I trust those in the trenches. The people who work directly with students, the students, parents who care about their children, and industries who understand that the future of their industry depends on us getting this right.

BBC, The Economist, The Financial Times, PBS, NPR, the Times and Post

NPR, CNN, NYTimes. Anything that comes directly from the CDC and politicians who actually show facts and figures and demonstrate use of scientific data in their public speeches (e.g. many governors and local state agencies).

Evidence driven science (*including* social / economic studies) I don't know of any media outlet I trust completely at this point (though I know a few that I don't), sources like the CDC, NIH, NSF, CDPHE as long as the information comes from a non-political appointee and someone that isn't looking over their shoulder at their politically appointed boss.


The Johns Hopkins site. The CO official site. WorldOMeter (https://www.worldometers.info/coronavirus/). CDC site tends to be very low level, pandering, and politically controlled. The Australian sites (eg. CSIRO Newsletter) are refreshingly accurate and avoid "over-scaring". Avoid cable talking heads, but keep track of formal announcements via local news and newspaper.

Trusted: gov't (such as CDC, Governor's Office), health organizations

NPR.

CDC is definitive. State government reporting over local press

CDC, WMO, Johns Hopkins

Higher education universities - they are resources for expert knowledge in stem

Scientific Societies / Public Broadcasting / NYTimes / Wash Post / Trevor Noah / CBS Late Show / The Unitarian Churches / The Society of Friends (Quakers) / The Humanist Societies.

Corporate Headquarters

I do not trust CNN. The modelers are disappointing. I distrust the hospitals, cities, and states because there are incentives to over-report covid-19 deaths.
Certainly nothing coming out of Washington.. mostly I have trust in gov polis, and since I live in boulder county, that both of these organizations have a good handle on what’s going on and I feel they really have my and the rest of the electorate’s best interest in hand.. if we all do do much too soon, it’s going to cost us all way more in the long run, both economically and human capital.


The Gazette has been a very helpful source and I consider it to be reliable. The Springs Chamber and EDC is also a trusted source.

Jay Lindell from OEDIT has been sharing information from the Governor.


RestoreYourEconomy.org

IEDC.org

CDFA.org

ChooseColorado.org

CDLE for unemployment information

DOLA

Related to COVID, I more or less follow the CDC.

The Guardian, science journals, the experts in my organization and our circles.

Of course we rely heavily on policies and directives coming down to us through the USDA and APHIS management chain. We pay close attention to State and local information as well and heed those guidelines and policies even if they are more strict than those coming to us through the federal management chain.

NIH, CDC

News always come with an agenda - hard to recommend. Still looking for "Just the facts"

Unbiased data aggregators are the best, provided we are willing to do a bit of our own analysis. Pundits and experts-du-jour are the bane of rational responses, and cause more consternation than they assuage.

I trust Dr. Fauci and Dr. Redmond, but not anyone closer to the president.
The primary literature is good but to the general public it is obtuse and with no contextual filters. We need better and cogent outreach and communication translational methods and venues.

CDC, educational institutions, WHO

I'm an academic: books, articles, studies both public and private; peer reviewed materials, authors who cite their sources, replications, meta-data, career-long bodies of work, and the slow tracing of social events, toxins, social trends that typically required mixed methods and atypical research teams. Scientists alone cannot do this. Humanists alone cannot do this.

If an organization has Regenerative in their name it is a good bet that they are focusing on the preferred direction.

Science-based, high-technology based, quantifiable data that is clear of political, ideological, tribal or religious influence. I trust bonafide, independent journalism such as The Washington Post, The New York Times, national institutes of health and science NPR and usual progressive sources. IP

One example; I have a twitter list of ca. 150 global COVID19 experts who keep me up to date on the science and data around the virus. It's a public list that many others subscribe to as well.

I have virtually zero trust in anything coming from the current federal executive leadership. Some pockets of government and news that are immune to political and commercial gain are worth listening to. However, political people want to win votes at any cost and journalists want to win ratings. Few players have pure motives.

Governor's office

National Institute of Standards and Technology, international news sources (France 24, Deutsche Weld--spelling might be wrong), Mercury Examiner (San Jose), Wired magazine.
Excerpts of comments from the survey

Question 9: Thinking optimistically, what topics, projects or aspirational themes do you envision making steps forward going into 2021?

I think virtual meetings and events will see improvements in security, performance and "ambience" (less techie feel)

I'm doing it now. Synchronous Learning, Global Learning Partnerships, Industry Informed Learning, Experiential Learning, Strengthening Communities, and a few targeted project especially for rural schools.

Greater awareness of the need for global risk assessment

Improving the quality of virtual connections, especially for scientific conferences, which could help many people cut down on their carbon footprints from traveling to meetings. An awareness that we have the capacity and will to reduce carbon emissions (as we're accidentally doing right now with the economy being less active) to help with climate change efforts. Looking at scientific data and developing critical thinking tools to understand basic concepts (e.g. exponential growth, flattening the curve, transmission risks etc).

Lots of grand scientific projects, nothing COVID related.

Advances in renewable energy. Improvements in climate modeling inspired by new AI methods. Many researchers studying the statistics of how COVIDS spreads and impacts in their particular field of expertise, including weather and climate impacts. Just on a committee call on how COVIDS is impacting energy loads - will be an area to study - can help move toward higher levels of renewables.

One positive outcome has been the focus placed on the need for education (in a variety of forms) and for people to support education, health care, technicians of all kinds, and skills that often come from skill-based learning. That has been overlooked in the past, and now I am hopeful that the public in general will realize the need for science-based education and skills.

Better planning for pandemics, more planning and funding for job losses. Look to the model in Germany for one.

Would like to feel that we are doing our part to support a recovery, economic and otherwise

Advancing NOAA's water prediction capabilities

Recognizing 'at risk' communities

Continuing my Last 17 years of: 1) Doing what is needed to TRANSFORM my Museum / Library / Gallery / Permaculture Center / Home even FURTHER BEYOND Net Zero Carbon ... 2) Continuing
to Educate (at Conferences and Tours) general folks about what they can do in their lives. 3) Produce and Post more Videos which show the Reasons as well as the Physics and then the Processes of Lifestyle Transformation to be PAST CARBON FREE to Carbon Negative especially on 30 to 50 year old homes as DIY projects for retirees instead of them wasting their time chasing little white balls around green fields.

Advanced cryogenic system test capabilities for superconducting and quantum computing

More companies with business continuity planning that includes cybersecurity workforce and safe work environments. Personally, multiple cybersecurity certifications, many more hours playing piano, less international/more domestic travel.

Theme: "Never again" and a return to stature of science based policy

Artificial intelligence

enhanced collaboration across disciplines

Increased awareness and appreciation for ag, and increased funding for ag research.

Proactive protocols established in addressing future pandemics

1. Define just when a government can decide to bankrupts private enterprise. Just how many lives at risk should trigger that draconian measure. A hundred? A hundred thousand? A million? More? 2. If the government can shut down private enterprise, can private enterprise shut down government/ Where’s the check and balance?

Becoming a valued member of the NCPV support team/liaison officer.. if you have a y opening on the technical side of things, I’d be very interested in talking to Co Labs about a position of some kind when I do retire in April, 2021.. I have a very extensive resume in the PV R&D realm..

Climate Change analysis and modeling, all relevant health care topics, environment, energy, space science, etc.

I am sure the Air Force (and broader DoD) will be looking into how it can adjust its operations so as not to be so caught off guard by another crisis like this. This will probable happen at multiple levels, so our organization will likely have a part to play in bringing in people to help shape what that looks like.

I believe this has pushed many people into being creative on VTC platforms. I wonder if this will turn into a trend that brings global communities together.

We hope to give the world a nice case study of how the earth was less impacted during the COVID lockdown.
Would love to see a thoughtful, appropriate conversation on the intersections between the pandemic and climate (any silver linings; not tied to terrible economic downturn; behavior changes, etc.) and what can be learned from the pandemic on how to pull together to solve a global challenge.

Getting back to our normal schedule!!

I believe that this crisis has demonstrated the need for clear science communication and I hope to position CIRA, but all the labs in Colorado, to strengthen that.

Activate and accelerate as many climate solutions as possible.

"I would guess our facility will be fully operational by the end of June 2020 with most staff back on site and almost all of our lab and field studies underway. I do anticipate COVID infections will flare up in the fall/winter 2020, perhaps extending into 2021. However, I believe our facility will be more prepared to function as close to 100% as possible.

On a side note, I believe that our facility will move from an emergency response function to more of a preparedness function given our expertise in wildlife vectored zoonotic diseases. I believe our Center will be asked to develop surveillance systems in this area."

High-quality online/virtual education and outreach to audiences of all types.

Mastering virtual technology, focus on health and safety

Sensory awareness for our environment - such as stand-off fever detection and Hyperspectral imaging. HIPPA laws will have to evolve too (so we aren’t denied prudent safety measures due to an individual’s assertion of medical secrecy).

Safer at home is going to become the new normal for at least a year.

Have a plan, be honest on what we know and do not know, be honest and optimistic on where we need to go and how to solve the problem at hand and into the future.

socialist ideals implemented to help every person worldwide; renewed trust in science!

I am going to teach the shit out of "virality" which means more that Covid-19. For something to be "viral" it has movement, contagions, mutations, morphologies that have to be first imagined then traced. The imagination industries (art, fiction, dance, sculpting, etc.) have a major role to play here. Biological and artificial systems have to be understood as co-constitutive. Plenty of people trying to think this way, invent methods, reconceive energy and events of consequence. I will try.

Learning how to create abundance while honoring planetary limitations
"On the upside, COVID-19 is causing people to think deeply about human impact on the world and hopefully will stimulate fresh solutions, policies and industries.

Forging an alliance between science, data, nature, culture, creativity and innovation that transcends city, state, national and international boundaries."

Contract for an automated suspended monorail project in the state.

We are rapidly re-envisioning content and delivery in an era when we cannot convene as we'd like. That's spurring remarkable creativity.

I believe the U.S. and the world need good news, not more depressing examples of failure and ineptness. I believe science can be the source of such good news. Biological success and exploration success (space, etc.) is just what we need to inspire hope.
Excerpts of comments from the survey

Question 10: What other efforts or issues affecting you and/or your organization because of the COVID-19 outbreak should we know about?

The uncertainty of travel. will we be checking pandemic forecasts like we check weather forecasts?

To be honest, my ideas have gone viral. Those clinging to the past are suffering, fearful, and vulnerable. I'm trying to help. Have you noticed how many are now questioning . . . What Matters! Maybe it's time to do the right thing and stop protecting broken systems.

Keep the lines of potential business functioning.

While everyone is trying their best, this is not the most optimal environment for successful collaborations and some may find it hard to juggle family demands versus deadlines. Senior leadership should assist as much as possible (e.g. paid administrative leave, helping with technology at home, demonstrating care for their employees, being flexible with deadlines).

Our commercial and foreign clients are not able to continue on-going projects with us. We have had various Stop Work orders and Slow Work orders due to the financial impact of the pandemic on some sponsors.

As many rules and laws are being made right now, oftentimes non-profit venues such as museums and libraries are not discussed directly (guidance is given for schools, movie theaters, even bowling alleys, but yet there is not much in terms of what a museum should do, for example).

Colorado is doing a great job. Ignore the Republican leadership rhetoric in Washington, but do not offend the president or senators as they are very vindictive.

Less funding to higher education means less research into the pandemics that will happen

Elected Officials SHOULD (like the Native Americans): Consider their GReat, Great, Great, Great Grandchildren in all of their decisions.

fewer conventions, symposia, public meetings

Reduced clinical specimens having an impact on business goals

26 millions layoffs in the US. How many were government employees? None. Even with PPP and EIDL, my company is having a challenge staying alive.
As being part of the rank and file of the lab, we need to feel like the lab management has our backs, which I personally feel that they do, because without your permanent staff, those in the trenches, this is just a bunch of management people and pretty buildings...

continuity, discontinuity, suspended, etc. funding/financial support

Stay-at-home orders are only effective if enforced. How will policy makers and government officials enforce their rules in a crisis like this in the future?

We are looking at the cancellation of several of our forms/conference and educational opportunities which will impact our income for the year

The professionalism in our Institute is incredibly high and the issues we have are negligible compared to everything that is working with nearly 1000% work from home (and all the challenges that produces).

COVID 19 is the warm-up for climate change. Let's take this warning seriously and be much more proactive. Being reactive is never a good strategy.

Since we are a research organization (lab and field) many of our research projects are on hold due to the state's shelter in place order. I don't believe we have had to cancel any studies, however, many are delayed.

Staying healthy, helping retrain workers whose jobs will never come back, taxes, guaranteed minimum income.

None - glad we are part of an exempt industry (Aerospace & Defense) with established tools for remote collaboration

We expect supply chain issues from suppliers of raw materials, both biological and other materials.

As a recent retiree and now consultant, it certainly has forced be to develop a new business model.

We've done very well in terms of tactical efforts to reduce transmission by expanding work from home, attention to increased cleaning, social distancing, masks, etc. However, these measures all come at some cost to efficiency and effectiveness of operation. Identifying the path forward for incremental recovery of efficiency is not obvious. In the event that an employee is diagnosed positive, we have a plan for "safing" the company, but formulating this is a series of best guesses - more detailed guidance in context of high tech manufacturing operations would be welcomed.

We will be suspending tours for quite a while, and limiting clients.

visa-holding highly-trained employees may have special needs and concerns
UCB is a public institution; this is not news--we're facing serious budget deficits tied to predicted enrollment declines, but so are all post-secondaries. Campuses have been running on enrollment growth models for decades. Endless growth will not longer be the only way to survive. UCB's rebuild will tell a tale.

My hope is that recovery is a conscious effort of choosing what needs to be restored, and that we actually learn how to magnify our good values while rejecting low value habits.

There isn't an aspect of life, society, culture, and economy that I know of. It affects all people and societies.

Slower cashflow throughout the economy.

Higher education has a huge and leveraged economic impact on the state of Colorado -- leveraged in that it prepares the future highly skilled, high-earning workforce and in that it is a state-wide employer/conduit. The financial stability of this sector is foundational to Colorado's prospects.

Never again! We--as a nation--could have and in some sense did see this pandemic coming. We must never again allow ourselves to be unprepared by leaders who looked the other way and who assumed it would not happen on their watch.