

CORENET GLOBAL | HACKATHON



A COVID-19 Virtual Ideation Experience

Team Topic and Number: Environment and Climate Change: Team 6

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Input your submission below. Please remember that you have 1500 words to share your insights.

Pre COVID or BAU “Business as Usual”

January 2020 started off with expectations for a relatively stable economy and the looming recession being pushed off to 2021. This was ascribed to the fact that recessions are caused by something specific with big impact, i.e. something relatively unpredictable where the recession is the result of a negative shock to an economy. For example, the 70’s Oil Markets/Inflation; 80’s Monetary Policy; 1991’s Invasion of Kuwait; 2001’s Dotcom Bubble; 2007’s Residential Mortgage Crisis.

We live in a VUCA world (volatile, uncertain, complex and ambiguous) where the uncertainty in the short term is as high as the uncertainty in the long term. 2020 also started out with potential risk from the Trade War, Brexit, the Yield Curve and the Coronavirus. As the nature of uncertainty has changed for business, plans have many more contingencies. The coronavirus has challenged and changed BAU and has put planning contingencies to the test.

C.A.U. or “COVID as Usual”

Winston Churchill said, “Never waste a good crisis”, and COVID 19’s impact on BAU presents an extremely unique opportunity for business and Corporate Real Estate (CRE) to dramatically change energy, commuting, real estate utilization and other consumption practices as we ramp up “the new normal” moving forward. During CAU we have seen families, suppliers, services providers and infrastructure, quickly adapt to a different way of living, consuming, working, collaborating, and volunteering. As we double down on resiliency, business’ commitment to combating climate change should be an integral part of its plans, retaining many of the behavioral changes made during the CAU slowdown.

Return to Work or PCAU “Post COVID as Usual”

An expected drop of 6% in greenhouse gas emissions linked to the global economic crisis caused by the COVID-19 pandemic is only short-term, good news. Once the global economy begins to recover, emissions will return to normal and likely increase unless true change occurs.

The following are recommendations and predictions which promote lasting change for climate and environmental impact.

Leadership and Political Will

Recommended:

- Aggressive flattening of climate change crisis
- Recovery Plans which focus on shifting to Green Economy: delivering new jobs and businesses through clean, green transition
- Recovery policies and implementation mandate a connection between health, air pollution, climate and environment
- Invest stimulus funds to sustainable sectors and projects that help the environment and climate including Smart Buildings and Businesses' Digital Transformation
- Aggressive investments accelerating the decarbonization of all aspects of our economy
- Mandating the Zero Carbon target for all real estate projects
- Advancing Climate Change Resiliency projects
- Promoting recapitalization projects
- Prioritize energy efficiency to advance clean energy grid
- Shift subsidies from fossil to renewable energy sector
- Funding for District Energy Systems
- Energy efficient retrofits for existing buildings
- Rethink the approach of designing, constructing and managing commercial buildings

Predictions:

- Investment in better transmission and distribution infrastructure to make the power system better and more able to absorb renewable energy
- More reliable and resilient power system reducing the cost of electricity
- Behavioral changes about the importance of making society more resilient to disruptions of all kinds, including from climate change
- Bolstered and improved waste-to-energy (WTE) practices and
- capturing landfill gas

Transportation and Land Use

Recommended

- Individuals' increased comfort with telecommuting arising from current Shelter in Place orders leveraged to eliminate unnecessarily long commutes. High-carbon work travel via airplane or long car rides replaced with higher prevalence of virtual meetings.
- Cities adopt smarter practices for spacing and cleaning to allow for continued benefits of high density transit-oriented land use while allaying concerns regarding future pandemics.
- Re-configuring retail uses to better conform to today's consumer demand without abandoning the walkability and public safety benefits of retail-rich downtown corridors. Successful future uses include more experiential retail and in-store pickup options for consumers.
- Destructive, greenfield-development land use patterns bring humans into closer contact with zoonotic diseases, like COVID-19. Recommend adaptive re-use, infill development, and preservation of natural habitats when planning and executing CRE development.

Predictions

- A material percentage of employees will begin to seek more space and outdoor access for work, socializing, family time and seeing the lower price of housing in the suburbs will start moving from urban to suburban housing. Transit-served suburbs will win over those that are not given continued vitality of urban cores. Return of suburban office to complement urban offices.
- Increase in domestic travel as a supplement for international travel will help stabilize local hotel markets while reducing overall air travel associated with the hotel sector.
- Myriad impacts to the global supply chain have arisen from COVID and should give rise to long-term positive trends in the industrial sector including increased local manufacturing and enhanced logistics management reducing vehicle miles traveled associated with the sector.

Building Performance is the low-hanging fruit on the Sustainability Tree

Building Performance = Employee Performance

It is fundamental to harness the benefits of increasing the performance of buildings we work in. Begin by identifying the structure's energy and water use. Take measure of current energy use, set a benchmark understood as a measure of a building's Energy Use Intensity (E.U.I.) which calculates the total energy used within the building divided by the building's area (in square feet). E.U.I. is stated as a number, the lower the better. On average, buildings in the US have an E.U.I. of 68. A high-performance building cuts that by 75% or more.

Recommended

- The easiest and most impactful first step is to optimize the operations of the current building systems.
- Adjust temperature setpoints, understand how custodial crews use energy and water. Look for ways to reduce after hours utilization, staggering MEP system start times, and retrofitting to include additional filtration and ventilation systems.
- Place buildings under tighter, more responsive controls with automation systems that analyze thousands of data points and optimize systems for the lowest energy use.
- Set energy benchmarks and goals. Look to replace existing and inefficient systems with new high-performance ones.
- Start or complete Building Commissioning and Retrocommissioning
- Install or buy power from renewable energy sources
- Embrace recycling more than just paper and trash by installing
- greywater systems used for flushing toilets and irrigation, touchless fixtures to reduce water use and the spread of germs, and automated lighting controls that are turned to our circadian rhythms that mimic our cognitive response to natural light.
- Retrofits to optimize the building's skin, decreasing air & water
- leakage, increasing insulation, glazing retrofits to decrease solar radiation

Predictions:

- We will see a reduction in absenteeism for building occupants due to workspaces that support our health and well-being
- Operating costs of buildings will decrease allowing more spending in other impactful areas including employee wellness and retention.
- Productivity will increase
- Buildings will become a positive, regenerative influence on communal resources, ultimately generating more than they deplete.

Individual Human Behavior

Policies, constraints and forced adaptations experienced since early March have shifted how we are experiencing life, personally and professionally. Many of these habits adopted are helping our planet and are proving to be sustainable over time.

The world's largest work from home experiment has facilitated a Master Class in effective virtual meetings. We have learned how to effectively communicate, authentically connect and build relationships and trust through a screen, camera and microphone. This does not mean business travel for some meetings will not return when restrictions are lifted, but it should increase the propensity to conduct virtual meetings.

Human beings produce nearly 300 million tons of waste per year in the U.S. (*source: EPA*). Remote workers tend to produce much less waste on a daily basis than those in the office. The U.S. EPA estimates that Americans use 69 million tons of paper and paperboard annually. A remote worker, performing digitally-based work, produces significantly less than the estimated 10,000 sheets of paper per year consumed by office workers. We are also less likely to buy and waste excess food and other consumables for our household than we typically do catering meals in the office using company funds. Our waste production rate does not need to increase as we return to the workplace. Being more mindful of how we consume and produce waste will help the environment as well as our expense budgets.

Recommended:

- Conduct an increased proportion of meetings virtually, eliminating unnecessary travel.
- Source goods and services from closer proximity to curtail transport-induced emissions.
- Procure, produce and consume resources based on essential need (shifting from prosperity-driven excess) to reduce municipal solid waste and food waste.

Predictions:

- Shift to more resourcefulness and acceptance of fewer options for efficiency
- Buildings and space will become more adaptable for multifunctional use "Swiss Army Knife"
- Expectations for a focus on moving toward a circular economy and employees asking their employers how they are working to execute upon that expectation
- A sustained and more deliberate approach by households, grocers, restaurants, hotels and caterers to reduce food waste.

Conclusion:

The imperative to reach peak carbon dioxide and begin to draw down requires reducing emission sources, protecting and increasing natural systems that cycle these chemicals,

and doing so while improving society. The pandemic accelerated underlying trends demonstrating that people are willing to help and make sacrifices to better community, society and public health.