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# EXPERT COMMENTARY

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*As changes and disruptions become the ‘new normal’, infrastructure investors have a responsibility to build adaptable, long-lasting solutions, writes [Gregory Smith](#), president & CEO of Instar Asset Management*



## Resiliency and the opportunity of change

Infrastructure investing is changing. Over the last few decades, our economy, communities and environment have been significantly affected by unanticipated, high-impact events, causing years of economic disruption and requiring lengthy periods of time to recover. These types of occurrences, including wars and threats to national security, natural disasters and pandemics, have historically arisen sporadically and infrequently. However, over the past few years, there has been an unprecedented increase in these events, compounding the severe inadequacies in our existing systems and creating

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knock-on effects throughout the supply chain.

While we can't predict widespread global events such as the pandemic or war in Ukraine, as infrastructure investors with projects providing essential services to communities for decades into the future, we do have the opportunity and responsibility to prepare for these disruptions by creating resilient solutions.

The field of infrastructure, at its core, has always been focused heavily on

responding to people's needs in order to build the cities and communities necessary for supporting day-to-day life, and facilitating long-term growth. As such, change, evolution and adaptability will always be key to long-term value. With major disruptors to 'business as usual' continuing to occur at an exponential rate, infrastructure of the future must become increasingly flexible to match the pace of social and environmental development while safeguarding our most precious natural resources.

### **Adapting to change**

Across the vastly diverse sectors of infrastructure investing, we have always

seen the critical importance, and value, of resiliency.

When engaging in long-term investments, how can we ensure the projects we invest in remain relevant for 50 years or more? In the past, this question was primarily concerned with the strength and lifespan of the structure, ultimately coming down to the quality and type of building materials used during construction.

Today, we're seeing that traditional understanding of resiliency shift to become less about the physical structure and more about the people it serves. Instead of placing the importance on material strength or durability, it is now of far greater importance for essential infrastructure projects to show flexibility and the ability to easily adapt, meeting both investor needs and the realities of a fast-changing world.

To effectively build resilient infrastructure, the concept of change must be incorporated into the foundations of what is considered investible, allowing us to appropriately develop, invest and build with the future in mind. This is

not a matter of rebuilding what currently exists but, instead, adapting and evolving to meet new demands arising from geopolitical and environmental events, and listening to our local communities at all stages of project development.

In recent years, public concerns around the environment, food and water security have shifted to the forefront. New advancements in technology combined with the increase in natural disasters have dramatically changed what is considered essential for families, businesses and cities to survive. In the energy sector, we have seen this most clearly through the push for cleaner, localised energy solutions, with sustainability becoming as important to a project's success as reliability.

Managing growing populations, changing government regulations, extreme weather patterns and global supply-chain disruptions have exposed a stronger need for localised, sustainable solutions, from district energy and microgrids to vertical farming facilities and controlled environment

agriculture. The future of infrastructure will ultimately depend on each sector's ability to unite a new model of thinking with traditional services, embracing the rapid rate of change we have seen dominate the world in the past few years and prioritising the safety, security and resiliency of our communities.

### Meeting current needs

It is one of my core beliefs that infrastructure is fundamentally about people. In a world where our landscape is constantly changing, from urbanisation to climate change, technological advancements to global pandemics, it is unsurprising that the needs of our communities are changing rapidly in response.

Technology is changing the way we live at an exponential rate, providing advancements and shifts in the way we work, socialise, educate and travel. As part of this, there has been a fundamental shift in the infrastructure industry into the digital sphere. During the past two years under the pandemic alone, we've seen drastic changes in the way we all conduct business that highlight the benefits and necessity of having a well-rounded digital infrastructure as the backbone to the current economic landscape.

Being digitally connected is inextricably linked with access to opportunities and the ability to maintain a good quality of life. It is necessary for our schools to provide equal access to education, for our medical professionals to have reliable access to information and supplies, and for our workers to have the same employment opportunities in an increasingly 'remote' environment.

All of this plays a critical role in maintaining and generating economic development, and our ability to be resilient in the future. Over the past two decades in the US alone, homes with access to all-fibre connectivity have grown nearly a thousand-fold, representing around 20.5 million households according to the Fiber

## Tapping into emerging opportunities

### Canadian agricultural infrastructure business Greenwood Mushrooms is driving value with leading technology

With rising populations, long-term urbanisation and climate change deeply impacting the agriculture industry, there is an increasing need for food security and safety across the continent. Further, the covid-19 pandemic has affected the agriculture industry through several complications, including labour shortage, price fluctuation, inadequate availability of supply-chain facilities, disruption and uncertainty.

In response to this evolving need, agricultural infrastructure businesses present investors with a significant new opportunity to drive value.

One such business is Greenwood Mushrooms Development, a leading vertically integrated producer of mushrooms. Greenwood's best-in-class, technologically advanced facilities produce higher yields of natural and pesticide-free mushrooms than average mushroom production facilities in North America, through climate-controlled, vertical farming.

Displaying resilient and consistent prices and volumes of mushrooms through economic cycles, Greenwood reflects the traditional characteristics of an infrastructure investment while simultaneously looking forwards to meet the future needs of communities for years to come.



## Addressing essential needs

### **Irrigation projects in Alberta, Canada, are tackling more than just water shortages**

Now more than ever, investors require a high level of sophistication to manage the complexity of continuously shifting risks. When managed successfully, these infrastructure projects have the potential to create significant benefits to communities, particularly around food and water security.

A great example of this can be seen in Alberta, a province containing the largest irrigated area in Canada. In 2021, the Canada Infrastructure Bank partnered with the government of Alberta to invest in irrigation projects. Combining private sector expertise, public sector support and agricultural innovation, these projects are expected to create thousands of permanent jobs and contribute around \$477 million to the province's GDP each year. These large-scale irrigation systems and water projects will address the shortage of fresh water while simultaneously enhancing critical agricultural operations, which accounted for \$9.68 billion of the province's GDP in 2020.

Where alternative solutions may solve for sustainability or water security alone, flexibility and the willingness to collaborate have opened up avenues to support local socioeconomic stability as well.

Broadband Association. The need for infrastructure to meet this demand will only continue to increase, making this an opportunity that infrastructure investors must address.

Technology has had a similar impact on our relationship with the natural environment, from reducing our carbon footprint to changing how we produce food. The initial focus on carbon sequestration or neutrality has continued to shift as climate change has become an increasing reality and, backed by technological advancements, is now concerned with addressing the entire environmental impact, from the beginning of production through to the transportation of goods

and services, and finally to the waste created after the product's useful life.

These are opportunity sets for infrastructure investors that would not have existed or been on the radar even five years ago but which, with technology, bring tremendous benefits to businesses and communities.

As the natural climate to grow food becomes increasingly volatile, we see opportunities emerge within controlled environmental agriculture, with technology that allows us to tailor the environment to grow specific produce. As the world experiences water shortages and droughts, we see opportunities emerge in our approach to water use, leveraging technologies to

monitor pipe leakage or to repurpose wastewater. As we witness the impact of climate change firsthand, we see opportunities emerge in electrification and sustainable aviation fuel, enabling travel and keeping us connected while still protecting our environment for future generations.

In order to continue providing essential infrastructure services when what is 'essential' is in a constant state of change, our asset class will require an equal amount of adaptability to keep pace and help our cities thrive.

### **Building for the future**

Infrastructure as a sector needs to be resilient. It has to adapt to shifting population densities, ageing demographics and continual technological change, so that any infrastructure we build today can actually be valuable and viable over the next 20, 30 or even 50 years.

To achieve long-term success in a rapidly changing environment, we have to integrate the concept of adaptability into our framework as we think about what we're actually developing, investing in and building today. We cannot ignore technological advancements, shifts in public policy, government grants and incentives and other forces shaping the trends of this sector and creating new categories of infrastructure in niche subsectors. These new categories are critical to build resilient systems encompassing change, evolution and adaptability to create long-term value for the future of our cities and communities.

To paraphrase Benjamin Franklin, change is the only constant in life, and success will be determined by our ability to adapt. While infrastructure of the future will be built in response to the ageing systems and growing populations of today, we must remember that we are not simply working to rebuild what currently exists. We are adapting to the needs of communities both now and for the decades to come, empowering future generations to thrive in a rapidly changing world. ■