AN ARCTIC360 DISCUSSION:

# ALONG THE (VERY) NORTHERN TRAIL OF CANADA'S ROOSEVELT MOMENT

## BUILDING CANADA'S 21ST CENTURY INFRASTRUCTURE REQUIRES BUILDING THE INFRASTRUCTURE OF A 21ST CENTURY CANADIAN NEW DEAL

*By*

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## ABSTRACT

In an April 2020 speech, Minister of Infrastructure and Communities, Catherine McKenna, announced that the federal government is going to spend billions of dollars on 'shovel ready' infrastructure projects to dig Canada out, literally and figuratively, of the COVID crisis. Her inspiration for this moment, she sated, comes from another major moment in history, Roosevelt's 1930's New Deal, which she had been reading up on. In the spirit of McKenna's words, it is appropriate in this moment to reflect on the institutions and successes born from the New Deal and the precedent it might lend to producing long-term and large-scale post-COVID economic growth in Canada.

In that light, this discussion makes the case that the COVID crisis presents Canada a once in a century opportunity to complete Northern nation-building so that the whole of Canada can finally benefit from the economic, social, and political opportunities that would follow. By thinking big and truly taking advantage of this moment, Canada can transform its vast North from a region of underinvestment and neglect—locked in a perpetual state of welfare—into a global greenfield infrastructure investment hub of the 21st century. Not unlike what the New Deal did for the United States, the Canadian government has an enormous opportunity today to help revolutionise the North, to set the foundations for building prosperous and sustainable Northern communities, to foster immediate growth for the whole of Canada, and to create new legacy institutions (based on equality) that can help drive a much more globally competitive and prosperous post-COVID Canada.

## PREFACE

This discussion paper was written because Canada is long overdue for a serious national discussion about the future of its North. At the heart of it, it calls for a new vision that sees the North as the place of strength and the immense opportunity that it really is. Doing so requires building what Northerners have long requested: a real roadmap to earnest opportunity for the North and its communities.

Of course, I do not have all the answers, nor do I think I am speaking on behalf of Northerners. What I do know is that the 'business as usual' tactic has not made Canada a stronger nation or fulfilled its obligations to the social contract. Love or hate this paper, I only hope that readers feel compelled to strengthen its weaknesses and to bolster its strengths. At the end of the day, the Arctic has made its debut onto the world stage. Canada needs to decide if it's going to step out from behind the veil of supposed impossibilities to become a global leader in Arctic affairs, make meaningful steps toward Indigenous reconciliation, and affirm that the social contract is not based on geography or voting numbers. Choosing otherwise means writing-off over 40 percent of its country (and Canada's stated commitments to those living there), and abandoning the notion that Canada is truly a Northern nation. I believe the former is possible, and offer my ideas in the spirit of this belief and in the anticipation of a bold Northern future.

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*I also want to thank a group of colleagues and friends, most of whom are Northerners, for our ongoing and endless intellectual discussions and debates about the future and potential of the North and the impacts that the lack of critical infrastructure has for all matters of the North. Our discussions, inspirations gleaned, and thoughts are the foundation on which this paper rests (Thank you specifically, Madeleine Redfern, Clint Davis, Paul Gruner, Innuteq Holm-Olsen, Nauja Bianco, Tom Hoeffer, David Ramsay, Jackie Jacobson, Darrell Beaulieu, Scott Northey).*

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## THE OPPORTUNITY OF CRISIS

So it is that in every crisis there lies an opportunity. For Catherine McKenna, the federal Minister of Infrastructure and Communities, that opportunity was born from the COVID pandemic. In an April 2020 speech, the Minister announced that the federal government is going to spend billions of dollars on 'shovel ready' infrastructure projects to dig Canada out, literally and figuratively, of the COVID crisis. Declaring that Canada needs to 'think big', the Minister went on to state that her inspiration for this moment comes from another major moment in history, Roosevelt's 1930's New Deal, which she had been reading up on.

In the spirit of McKenna's words, it is very timely and appropriate in this moment to reflect on the institutions and successes born from the New Deal. What kind of precedent does it lend to solving today's crisis and for producing long-term and large-scale economic growth in Canada? The successes of the New Deal not only pulled the US out of the Depression; it also created legacy institutions which fostered unprecedented long-term economic growth while drawing thousands of rural Americans out of poverty along the way.[1]

At the very least, the effects of New Deal under Roosevelt are reason to believe that success today in Canada will require a set of ideas that are, for our time, equally bold. If this really is to be Canada's Roosevelt moment, it is safe to say that another round of 'shovel ready' hockey rinks and highway retrofits on 20th century infrastructure will not result in New Deal outcomes. A true Canadian New Deal requires a strategic focus on what we should be investing in—understanding which kinds of infrastructure investments will produce fundamental and transformative changes for Canadian society and increase Canada's com-

1 Over the years evidence has shown that some of the legacies of those institutions also created unequal access to their benefits as well as other forms of systemic discrimination. For example, when the Federal Housing Association (FHA) was created African Americans were left out of its efforts to provide mortgages for middle and lower income, white families. The FHA also refused to insure mortgages in and near African black neighbourhoods. Rothstein, Richard. 2017. The Color of Law: A Forgotten History of How Our Government Segregated America, Liveright Publishers.

petitive advantage through the end of this century. That idea, however, begets a fundamental question: what kind of country does Canada want to be in the post-COVID 21st century world?

> *"What kind of country does Canada want to be in the post-COVID 21st century world?"*

If we are to look at Roosevelt's New Deal and begin asking these larger questions, the underlying presumption must recognise that a 21st century Canadian New Deal that can build a post-COVID Canada requires not just big federal dollars but, more importantly, it must be based on and built off-of big ideas. If a success, a 21st century Canadian New Deal can be Canada's nation-building moment of this century to what the original New Deal was for the US in the 20th century. The New Deal initiated and then produced decades long US global leadership in innovation and technology and global economic competitiveness.

The discussion to follow begins by looking at some of the ideas behind the New Deal institutions, specifically the Reconstruction Finance Corporation (RFC)—the umbrella for its other institutions, the Federal Housing Administration (FHA), the Rural Electricity Administration (REA), and the Defence Plant Corporation (DPC). The aim is to bring into focus that, though the institutions of the New Deal were created in another era, the ideas underpinning them are equally relevant today.

Though the RFC was initially passed under President Hoover, the foundation of the RFC was strengthened and expanded through Roosevelt's success in convening political leaders and public officials with widely different political and economic views and from differing political parties as well as the private sector (from oil to finance), and academia. As an extension of that, the solutions that the New Deal institutions created under Roosevelt's leadership were rooted in a belief that spending large amounts of federal dollars was not an answer in and of itself. Instead, it was believed that the federal government and the private sector needed to work together and only through collaboration could immediate and long-term solutions be found.

FIG. 1 Jesse H. Jones, Chairman and members of the Reconstruction Finance Corporation. 'Reconstruction Finance Corporation: Definition and Legacy: The Lender That Helped Save Banking and Fund the New Deal', Thought.Co: https://www.thoughtco.com/reconstruction-finance-corporation-4588284

Turning to the COVID crisis and to Canada, the discussion highlights some of the trends and changes taking place in the infrastructure investment space leading into and since the onset of

the pandemic. The last section then returns to Minister McKenna's speech. There she stated that the Canada Infrastructure Bank (CIB) will have a role to play in the infrastructure stimulus to come. Using those words as a point of departure, this last section builds on the ideas behind the New Deal's institutions to consider the opportunities that today's crisis presents for Canada's own institutions, including the CIB.

FIG. 2 Franklin D. Roosevelt Presidential Library and Museum: https://fdr.blogs.archives.gov/2020/05/27/artifact-highlight-fdrs-oval-office-desk/

It is here that the conversation focuses in on Canada's North. The COVID crisis is an opportune moment to finally set out on an overdue Northern nation-building strategy so that Canada can fulfill its end of the social contract. Moreover, this is Canada's once in a century opportunity to complete nation-building so that the whole of Canada can finally benefit from the economic, social, and political opportunities that would follow. In order to think big and truly take advantage of this moment is to recognise that, if done well, Canada can transform its vast North from a region of underinvestment and neglect—locked in a perpetual state of welfare—into a global greenfield infrastructure investment hub of the 21st century. Going into the COVID crisis, the world's emerging economies were those regions that have similar resource and growth potential to the Canadian North and, precisely because of that potential, they occupied the focus of long-term institutional investors from all over the globe.

Canada's North comprises 40 percent of Canada's land mass in the three Territories alone (add to that Nunavik and Nunatsiavut). The North can not only be Canada's own emerging economy but, further, it is a blank slate for creating innovations that can leap-frog existing infrastructure while also helping the whole of Canada transition to newly emerging infrastructure technologies, and pushing Canada to become a global leader in infrastructure innovation and intellectual property. There is no reason to think that Canada's North couldn't become the gold standard of low risk, 21st century greenfield investments for a host of long-term investors including Canadian and other pension funds around the world, sovereign wealth funds, wealthy family offices, and private equity funds. For long-term investors, the North contains an almost unlimited potential for growth and development.

Not unlike what the New Deal did for the United States, in this moment, the federal government has an enormous opportunity to help revolutionise the North, foster immediate growth for the whole of Canada, and create legacy institutions (based on equality) that can help drive a much more globally competitive and prosperous post-COVID Canada. But, first things first.

## A REFLECTION ON THE NEW DEAL

*"America did not merely endure the Great Depression; its response transformed it into a richer and more equitable society."* [2] *— Lizabeth Cohen, Harvard University*

Understanding the successes of the New Deal is to fully appreciate that its success was not based on investments in 'shovel ready' (pre-Depression era) projects. Rather, it was due to investing in the creation of entirely novel financial regulatory institutions as well as industrial and cutting-edge innovation sectors, which combined, produced long-term economic growth, and brought millions of Americans (white Americans) out of poverty. When Roosevelt and his 'Brains Trust'[3] (close group of advisors) moved into the White House at the height of the Great Depression the country was in peril. Having no blueprint to fix the state of the economy and effectively the state of the country, a group of intellectuals close to Roosevelt, coming from government and the private sector and from every side of the political spectrum, worked together to devise new tools to turn the newly founded Reconstruction Finance Corporation (RFC) into a host of legacy institutions that remain through to this day.

One of the New Deal's, enduring public images is of the work undertaken by the Work Projects Administration (WPA). The WPA, founded in 1935, used federal (as well as state and local) funding to build and renovate 20,000 schools, playgrounds, hospitals, and airfields (which it did accomplish). Yet, despite those accomplishments, the WPA failed to create long-term jobs and growth, which was the ultimate success of the New Deal.[4]

> *The New Deal "was the result of public policies that created innovative financial strategies to meet the short-term needs of the moment and to rebuild the US economy for the long term."*

In his research on the history of the New Deal, Cornell University historian, Louis Hyman, contends that, contrary to what many have come to understand, the New Deal was not based on disseminating direct allocations of massive federal dollars. Rather, it was the result of public policies that created innovative financial strategies to meet the short-term needs of the moment and to rebuild the US economy for the long term.[5] Much as we are witnessing today, the crisis of the Great Depression was not a lack of money. In fact, while joblessness was rampant (similar to today) the banks were flush with unused capital. The crisis was that there was no-

2 Cohen, Lizabeth. 17 May 2020. 'The Lessons of the Great Depression In the 1930s, Americans responded to economic calamity by creating a richer and more equitable society: We can do it again', The Atlantic. https://www.theatlantic.com/ideas/archive/2020/05/how-rebuild-nation/611704/.

3 Edwards, Sebastian. July 2015. 'Academics As Economic Advisers: Gold, The 'Brains Trust,' And FDR', Working Paper 21380 http://www.nber.org/papers/w21380, National Bureau Of Economic Research: https://www.nber.org/papers/w21380.pdf; Lash, Joseph P.1988. Dealers and Dreamers: A New Look at the New Deal, Doubleday Press.

4 McElvaine, Robert S. 1993. The Great Depression: America 1929-1941. Pp. 267-268

5 Hyman, Louis. 6 March 2019. 'The New Deal Wasn't What You Think', The Atlantic: https://www.theatlantic.com/ideas/archive/2019/03/surprising-truth-about-roosevelts-new-deal/584209

where to invest the capital and the aim of Roosevelt's Brains Trust was for them to start lending once again.

Even prior to the Great Depression, cutting edge new technologies were perceived to be too risky and obscure to attract the major capital investments required to scale them up and enter the economy.[6] At the same time, banks abilities to find secure places to invest were diminishing. As the economy worsened financial institutions became inclined to take less and less risk in the face of an increasingly uncertain economy and eventually, they stopped lending, altogether. [7]

Herbert Hoover, reluctant to acknowledge the severity of the Great Depression and even more reluctant to spend federal dollars on social welfare, eventually conceded that drastic measures needed to be taken.[8] Hoover convened his own meeting among policymakers, industry, and academia. He soon believed that the biggest priority was to renew confidence in the banks to start lending again. He also reasoned that innovative forms of investment and entrepreneurship were needed if the nations railroads were to survive.[9] With an effort that was brought forward on the suggestion of Eugene Meyer of the Federal Reserve Board of Governors, the United States Congress eventually passed the Reconstruction Finance Corporation Act of 1932.

The Act had broad bipartisan support. Its direction was determined by leaders from all sides of the political spectrum and the private sector. One of its architects was Jesse Jones, the President of Texas Commerce Bank system and later one of the founding investors in Exxon. Other industry leaders came from tobacco and the automobile industry, and finance. A bi-partisan group of politicians and civil servants also served as part of its leadership.[10] To this day the origins of the Great Depression are a matter of debate. Yet, by the time that the RFC was established, everyone could agree that something needed to be done to incentivise the banks to start lending again. To reverse the situation, the RFC began by lending money to banks. The leadership of the RFC concluded that investing directly in the banks would create a feedback loop of returns and private sector jobs.

What soon became clear, however, was that the mere act of lending directly to banks was not enough to ensure an immediate return to investing at a scale large enough to stave off total economic collapse. When Roosevelt assumed the Presidency, he appointed Jesse H. Jones as Chair of the RFC and in 1934, the Act was amended so that it could lend to industry in those cases where credit was not available from private sources.[11] The RFC Board and Roosevelt's Brains Trust believed that in order to restore investor confidence new mech-

6 Hyman, Louis. 26 January 2016. 'The New Deal You Don't Know' Lecture', The Interval: https://theinterval.org/salon-talks/02016/jan/26/new-deal-you-dont-know

7 'US National Archives. Stories from the Great Depression': https://www.youtube.com/watch?v=TpfY8kh5lUw

8 Stuart Olson, James. 1988. Saving Capitalism: The Reconstruction Finance Corporation and the New Deal, 1933-1940, Princeton University Press, P. 14

9 Ibid.

10 Ibid.

11 White, Gerald T. November 1949. 'Financing Industrial Expansion for War: The Origin of the Defense Plant Corporation Leases', The Journal of Economic History, 9:2 pp. 156-183 p. 160. Cambridge University Press on behalf of the Economic History Association

anisms were required that would connect private capital to borrowers. To do so, they turned to several specific sectors to carry out their efforts: housing, electricity, aerospace, electronics, and mining.[12]

One of the institutions created under the umbrella of the RFC was the Federal Housing Administration (FHA). The FHA again assembled some of the country's best and brightest to experiment with new ideas. Their solution was to create cooperative pools of lenders with government backed guarantees on the principles made of low-yield bonds.[13] Prior to the FHA, mortgage finance had no federal role. Lenders and investors were responsible for all default losses and variable economic conditions limited consumer access to mortgage credit and sustainable homeownership.[14] Essentially, the FHA connected banks to consumers, and through the newly created national mortgage markets,[15] Americans were able to borrow money at scale for the first time. The national mortgage markets spurred Americans to buy houses all over the US, ultimately giving rise to suburban America.[16]

Second, the RFC created the Rural Electricity Administration (REA). The REA set up cooperatives as another mechanism that channeled money from banks into rural America. Over the course of ten years, the percentage of rural households with electricity grew from 10 to 90 percent. Providing electricity to rural America not only provided a basic human necessity to thousands of Americans but, where previously excluded, it created the basis for incorporating a significant proportion of the US population into the US economy. What followed as a result was a substantial increase in demand for electronic goods, and with the support of a newly created commodity credit corporation, it also led the modernisation of agricultural production in the US.[17]

A third mechanism that was created was the Defence Plant Corporation (DPC). At the time of its creation, the DPC had its eye on readying the US for war and was focused on providing means for building military equipment. Yet, its significance lies in its creation of a mechanism that enabled private capital to invest in cutting-edge technologies. Roosevelt brought together a group of thought leaders from industry and labour including then president of General Motors, William Knudsen; Ralph Budd, the President of Great Northern Railway; the head of the Amalgamated Clothing Workers of America, Sidney Hillman; and activist Harriet Elliot, among others.[18]

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12 Hyman, Louis. 26 January 2016. 'The New Deal You Don't Know' Lecture', The Interval: https://theinterval.org/salon-talks/02016/jan/26/new-deal-you-dont-know

13 Hyman, Louis. 6 March 2019. 'The New Deal Wasn't What You Think', The Atlantic. The FHA also created construction and appraisal standards so that the FHA mortgage contract was readily tradable across the country, p. 2.

14 Bunce et al.in Szymanoski, Edward, et. Al. December 2012. Working Paper No. HF-019: 'The FHA Single-Family Insurance Program: Performing a Needed Role in the Housing Finance Market', US Department of Housing and Urban Development, p. 7: URL: https://www.huduser.gov/portal/publications/FHA_SingleFamilyIns_2012.pdf

15 Ibid.

16 The Federal Mortgage Association is also known as Fannie Mae. The role of Fannie Mae in the 2008 recession that began with the housing crisis is beyond the scope of this paper.

17 Hyman, Louis. 26 January 2016. 'The New Deal You Don't Know' Lecture', The Interval: https://theinterval.org/salon-talks/02016/jan/26/new-deal-you-dont-know

18 Hyman, Louis. 6 March 2019. 'The New Deal Wasn't What You Think', The Atlantic: https://www.theatlantic.com/ideas/archive/2019/03/surprising-truth-about-roosevelts-new-deal/584209/

By 1940, there was general consensus that preparing the US for the Second World War was going to require considerable capital. Private investors, however, were still too timid to invest in what they perceived as risky projects (projects to fund the war). Therefore, the DPC set out to invest in those commercial industries that were considered risky at that time and under normal circumstances would be eligible for private financing.[19] The DPC made specific investments (including factories for industrial production), with one of the most notable investments being responsible for the birth of the US aerospace industry. By 1943, 40 percent of all employment in Los Angeles was engaged in the aerospace industry (a 1100 percent increase from 1939[20]) and by 1959, it had become the largest US employer.[21]

By connecting private capital and cutting-edge innovators, the RFC supported the making and scalability of new breakthrough technologies (a new technological revolution) that brought about unprecedented growth which often accompanies major innovation revolutions. The aerospace industry went on to be a significant contributor to the steep economic growth that proceeded in the United States over the next half century. It is also a robust example of how government and industry worked together to turn a major crisis into a long-term economic opportunity.

As the more recent economic recessions and realities have laid bare, the mechanisms created by those institutions at the time of the Great Depression have not always been fair, able to accommodate, or react quickly enough to evolving realities (from its legacies of racial discrimination to the 2008 housing crisis).[22] The point to be made, however, is that the driving ideas underpinning them remain through to today. Though, unlike the Great Depression, the current crisis has been brought about by the worst global health pandemic since 1918, the economic repercussions today are as drastic as they were during the Great Depression, and some of the underlying economic failings are not so entirely different than during the 1930s. Likewise, and akin to the Great Depression, if Canada hopes to come out the other end of this crisis successfully or, if willing, in a stronger position than before the crisis, assembling a coalition of Canada's own current day Brains Trust will be a prerequisite.

## COVID, THE 21ST CENTURY'S GREAT DEPRESSION

COVID-19 took the breath out of 2020 before the new decade had a chance to makes its debut. In a matter of less than 6 months, COVID-19 had travelled across the world, bringing down economies along its path. Almost overnight, the pandemic

19 White, Gerald T. November 1949 . 'Financing Industrial Expansion for War: The Origin of the Defense Plant Corporation Leases', The Journal of Economic History, 9:2 pp. 156-183 pp. 169- 60. Cambridge University Press on behalf of the Economic History Association

20 Scott, A J. 1990. 'The technopoles of Southern California', Environment and Planning A, (22): 1575-1605, 1583

21 Converse III, Elliott V. 2012. Rearming For The Cold War: History of Acquisition in the Department of Defense: Volume I 1945-1960, Historical Office, Office of the Secretary of Defense Washington, D.C. P. 260: https://history.defense.gov/Portals/70/Documents/acquisition_pub/OSDHO-Acquisition-Series-Vol1.pdf?ver=2014-05-28-103257-540

22 For example, see: Edward, et. Al. December 2012. Working Paper No. HF-019: 'The FHA Single-Family Insurance Program: Performing a Needed Role in the Housing Finance Market', US Department of Housing and Urban Development, p. 7: URL: https://www.huduser.gov/portal/publications/FHA_SingleFamilyIns_2012.pdf;

ushered in the largest global economic downturn in a century, very much on par in size with the Great Depression. Unemployment in many parts of the Western world has reached the level of the Great Depression, and like then, the driving forces have not been so much a crisis of capital as a crisis of investment. COVID-19 not only lent to the hording of toilet paper around the world but also of global financial capital.[23]

In the still early days of the pandemic (February 2020), it was estimated that investment funds had raised more than 2 trillion USD dollars ('dry powder'), a larger amount than in any other time in history, that was not yet invested.[24] In private equity funds alone, 2020 had already created a record amount of dry powder. A Financial Post article dated 28 April 2020, stated that at that moment there remained 1.45 trillion USD of uninvested capital. To put that amount into comparison, in 2000, 250 billion USD of capital was raised and in 2015, 750 billion USD was raised.[25]

*"COVID-19 took the breath out of 2020 before the new decade had a chance to makes its debut. In a matter of less than 6 months, COVID-19 had travelled across the world, bringing down economies along its path."*

Overall, the majority of uninvested capital comes from long-term investors such as sovereign wealth funds, pension plans, wealthy family offices, and some public funds allocating to alternatives, which includes limited partners in private equity funds led by Canadian Pension funds.[26] Increased limited partner capital also created further capital to be invested alongside private equity sponsors or as investments on their own.[27]

Yet, before the COVID crisis, this global excess of uninvested cash had begun to slow rates of return on investment. The onset of the pandemic, however, quickly transformed the excess of that cash into a valued source of future performance and with that investors began to horde their capital or turn to government issued bonds for investment.[28] Lacking incentives, fund managers opted to focus on how to save rather than on where to invest, a condition that economists believe will persist in the face of ever-increasing uncertainty and continued economic stress.[29]

23 Whether or not the same could be said of toilet paper during the Great Depression has not been studied for this paper.

24 Lee, Peter. 02 April 2020. 'Private equity can be the big winner from Covid-19 sell-off', EuroMoney: www.euromoney.com/article/b1l0r609mm870v/private-equity-can-be-the-big-winner-from-covid-19-sell-off?copyrightInfo=true

25 Wiggins, Kaye, Vandevelde, Mark and Wigglesworth, Robin. 24 April 2020. 'Coronavirus: private equity's bailout moment', Financial Times: https://www.ft.com/content/f7cc82d7-70b9-40c3-b4a0-815ebc5d99d5

26 Lee, Peter. 02 April 2020. 'Private equity can be the big winner from Covid-19 sell-off', EuroMoney: www.euromoney.com/article/b1l0r609mm870v/private-equity-can-be-the-big-winner-from-covid-19-sell-off?copyrightInfo=true

27 Ibid.

28 Ibid. Wong, Craig. 11 June 2020. 'Amid low interest rates, income investors need to look beyond bonds for yield, CTV News: https://www.ctvnews.ca/business/amid-low-interest-rates-income-investors-need-to-look-beyond-bonds-for-yield-1.4979677

29 Ibid.

What became systematic, investment funds opted to save and to invest in bonds rather than investing in the kind of capital projects (e.g. infrastructure) that was previously common as they turned to what planned expenses should be saved, what investments should be delayed, and what additional capital would be needed. Subsequently, as investors begin to expand their scope of investments, the focus will continue to be on conservative places to invest rather than investments in the kind of game changing sectors required to spur a major economic recovery. This includes sectors such as those that have no exposure to the pandemic and long-standing resilient (mature) assets.[30] Without an incentive, it is unlikely that investors will soon put their capital in risky (cutting edge, innovative) or uncertain businesses which is often the driving force behind periods of accelerated economic growth.

Turning specifically to the infrastructure investment space, in the years leading to the COVID crisis, brownfield infrastructure projects (or those that are already built) and that conventionally have the characteristics which provide the return on investment investors are looking for, were less abundant and therefore increasingly competitive. Consequently, greenfield infrastructure investments (those that are new builds) were starting to be viewed by certain investors as a growing niche portion of a fund's portfolio. However, for the most part, incentive was still lacking and too much risk remained for large scale investments that those projects require.

FIG. 3 Iqaluit photo: Tranter, Emma. 14 May 2020. 'Additional $34 million available to northern businesses affected by pandemic', Nunatsiaq News: https://nunatsiaq.com/stories/article/90632/

Greenfield projects require large amounts of up-front capital and long-term commitment and they derive much of their return on investment from appreciation rather than short-term return on investment.[31] Because it only takes one or two bad investments to drive down a fund's returns, many pension funds and other conservative investors prefer brownfield infrastructure assets (which were never meant 'to provide eye-popping, double-digit returns like private equity') that are 'big, plain and boring,' with long, steady rates of return.[32]

Consequently, Canadian pension funds, for instance, have spent the last decade investing in airports and other built infrastructure assets around the world rather than in the abundance of greenfield projects needed here in Canada. Because the infrastructure needed for society (sometimes referred to as social infrastructure), are in greenfield projects, the private capital required to help close the gaping infrastructure deficit in many regions of

30 Ibid
31 https://www.pionline.com/article/20160502/PRINT/305029979/seeing-growth-in-greenfield-funds
32 Ibid.

Canada has instead gone to Australia, China, Africa, and elsewhere.[33]

Thus, today the entire Canadian North—close to half of the country's territory—still lacks much of the most basic critical infrastructure required for essential health, food, and economic security much less for jumpstarting and supporting desperately needed economic growth. What could be considered ironic if it was not so devastating for those that live there, is that Canada's North is a treasure trove of significant mineral deposits, expected gas reserves (argued to be necessary for the transition to the renewable energy economy[34]), fisheries with vast potential for growth, as well as a robust and growing tourism industry. When it comes to mining in particular, Canada's North contains vast amounts of world class and potentially globally competitive (with the necessary infrastructure to get them to market) resources such as cobalt, nickel, copper and others that are increasingly accessible and sought after as they are critical for the products used (e.g. electric car batteries, solar panels, wind) to transition to a global renewable energy economy.[35]

And, that is only the beginning. The incredible knowledge that exists in the North (human resources, in economic terms) regarding natural resources alone is fertile ground for a host of secondary economic activities—including 21st century technological innovations such as remote surgeries, transportation infrastructure, data collection and storage, the maritime sector, and the list goes on. In any other region of the world with similar

33 E.g. Thompson, Jennifer. 19 August 2018. 'Canada's CPPIB plans to double China asset allocation: Pension scheme looks to tap fast-growing emerging markets for greater returns', Financial Times, https://www.ft.com/content/002dcf66-a22e-11e8-85da-eeb7a9ce36e4

34 E.g. Government of Canada. June 2018. 'Canada's Energy Transition: Getting to Our Energy Future, Together', The Generation Energy Council.

35 According to the January 2016 Report by the National Aboriginal Economic Development Board: 'Recommendations on Northern Infrastructure to Support Economic Development' the proposed major resource projects in the North as of 2016 have the potential to generate three dollars in government revenue, per worker, for every one dollar that the government spends on workers. P.17. In all investments (not only the resource sector), according to the National Aboriginal Capital Corporations Association, each dollar loaned returns up to 3.60 CAD in contribution to Canada's GDP ('Opportunities to improve the financial ecosystem for Aboriginal entrepreneurs and SMEs in Canada', Conference Board of Canada, 2017). In terms of infrastructure investments, according to a Nunavut Resources Corporation Report, the Gray's Bay Port and Road Project alone, for example, is estimated to create 2,250 full time equivalent jobs in Nunavut (factoring all direct, indirect, and induced effects, equal to an average of 900 full time equivalent jobs annually during construction), 189.5 million CAD to Nunavut's GDP, and government revenues of 85 million CAD in tax revenues from the construction activities. In terms of the mining made accessible through the Gray's Bay project, the Report estimates that mine construction would raise GDP in Canada by 1.5 billion CAD while the mineral production would add 7.5 billion CAD to GDP. Further, mining operations could contribute as much as 665 CAD million to government revenues through resource royalties, corporate tax, and personal income tax, not including revenues from indirect taxes on goods and services and fuel, land taxes, import duties, and licensing, and Nunavut's 2% payroll tax (Nunavut Resource Corporation. January 2016. 'Impact Economics Briefing: Economic Assessment of Grays Bay Road and Port Project', produced for Nunavut Resources Corporation). In another March 2019, Report written for Department of Infrastructure (GNWT), the proposed Slave Geological Road has the potential to bring in annual revenue from mining between 15 -45 million CAD. In a Medium Growth Scenario on the NWT economy, the economic effect includes an estimated 27.4 billion CAD increase in gross output, 14.3 billion CAD increase in GDP, and 45,000 jobs. The effects for the Canadian economy include an estimated $44 billion increase in gross output, a $22.6 billion increase in GDP, and 114,000 jobs (Department of Infrastructure (GNWT). March 2019. 'Impact Economics: Economic Study of the Slave Geological Province Road', GNWT).

potential and supported by federally backed, long-term commitment from one of the world's strongest democracies, it would be viewed as a globally sought-after investment space for long-term institutional investors. Instead, up to now and despite its potential, Canada's North remains one of the greatest undervalued economic regions of the world.

*"Canada's North remains one of the greatest undervalued economic regions of the world."*

Presently, the Canadian North remains stuck in a perpetual chicken and egg complex. The Canadian government has not made the necessary infrastructure investments to jump start the Northern economy for the simple fact that it cannot afford the trillions of dollars that closing the infrastructure gap requires.[36] At the same time, the government has not created the necessary incentives to attract the private capital that would make those investments possible. Instead, year after year, just enough money is spent in the North to maintain a perpetual state of economic stagnation and poverty.[37] Institutional investors, in the meantime, (including Canada's pension funds) take their capital to China, Australia and elsewhere as they argue (rightly) that they need the federal government's support to help make the business case. Consequently, the result so far has been an ever rising dollar amount needed to build Northern infrastructure and a Canadian government that has not been able to meet its responsibilities to its Northern citizens to provide the basic amenities of life from potable water and access to health care, broadband, housing, sufficient and affordable energy, roads, ports, and the list goes on—all of which are a critical starting point of Indigenous reconciliation.

However, the COVID crisis presents an unprecedented opportunity to turn underinvestment in the North on its head. This could be Canada's New Deal moment to dig out of the economic depression and generate long-lasting exponential economic growth for Canada via the North. Rather than encouraging Canada's pension funds and others to invest in infrastructure projects in Australia, Africa, or China, this can be the moment for the federal government to think big and bring together the country's best and brightest to create

36 A full inventory has, to this day, not been undertaken by the Canadian government. See Shadian, Jessica. November 2018. 'Brief to the Standing Committee on Foreign Affairs and International Development Canada's Sovereignty in the Arctic: The Emerging Economy of the North American Arctic' https://www.ourcommons.ca/Content/Committee/421/FAAE/Brief/BR10185960/br-external/ShadianJessica-e.pdf. For a very rough (and very likely grossly understated) estimate on the infrastructure gap for the entire Arctic see: https://www.guggenheimpartners.com/GP/media/pdf/Bloomberg_The-World-Has-Discovered-a-1-Trillion-Ocean.pdf

37 In January 2016, the National Aboriginal Economic Development Board whose mandate is to provide 'advice and guidance to the federal government', published the Report: 'Recommendations on Northern Infrastructure to Support Economic Development'. Among its recommendations are 1) The Canadian Government should fund a system to identify priority investment areas and coordinate investment 2) Infrastructure development needs to be seen as an investment opportunity for Indigenous Governments and 3) A North-specific private investment model should be examined. Thus far, only the first recommendation could be considered acted upon through the creation of the CIB. Anselmi, Elaine. 26 January 2016. 'The Infrastructure Deficit: Report Calls On Government To Bolster Northern Development With Dedicated Funding' Northern Affairs URL: http://www.northernpublicaffairs.ca/index/the-infrastructure-deficit-report-calls-on-government-to-bolster-northern-development-with-dedicated-funding/

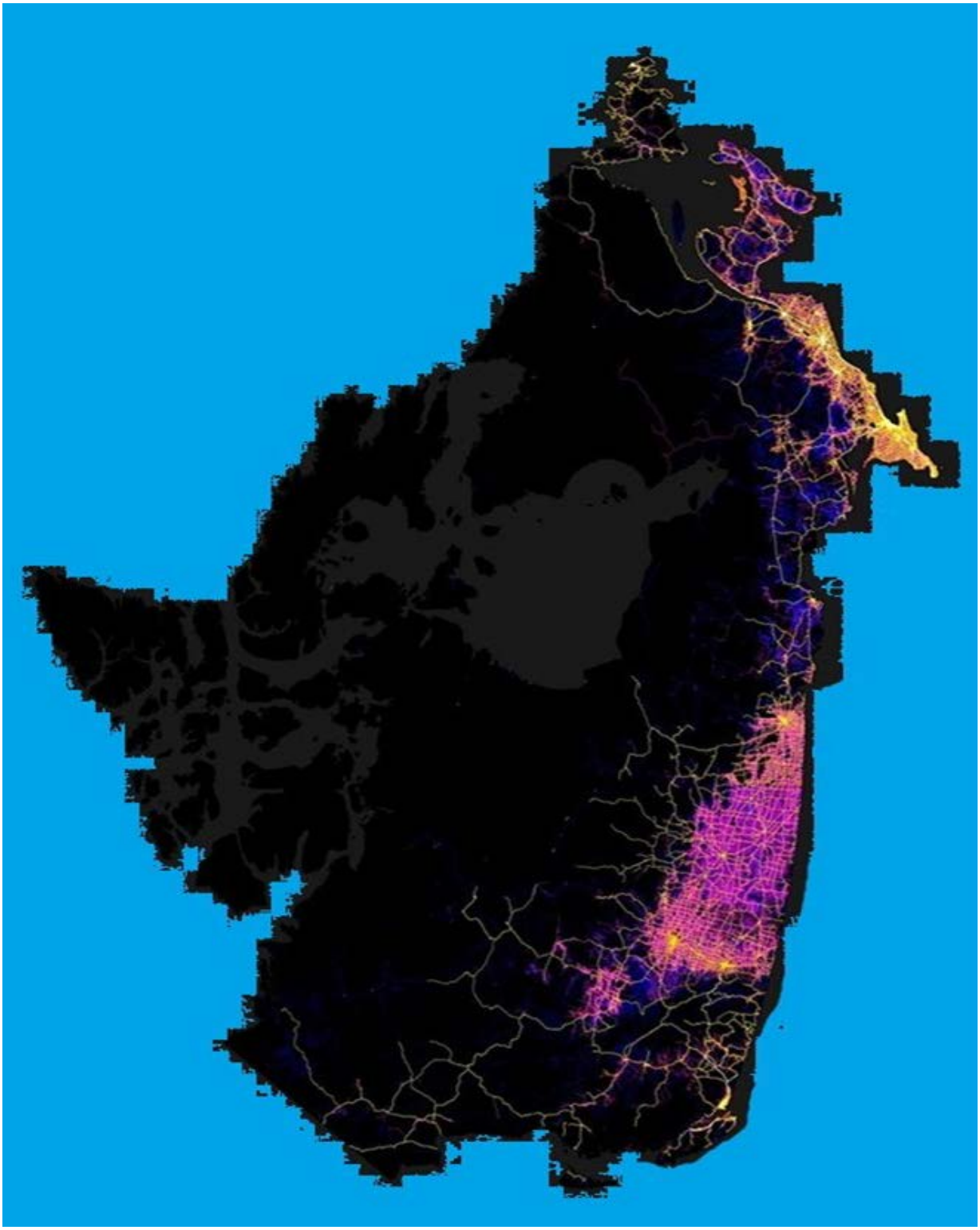

FIG. 4 Canada's electricity by night: photo compliments of Darrell Beaulieu.

targeted financial mechanisms to invest here at home. Essentially, this could be Canada's moment to make the business case for the North and as part of a new generation of greenfield projects that so many institutional investors have been looking for. By thinking big and with a vision (and subsequent investment strategy), the Canadian North can be the world's next emerging economy propelled by global capital investments in the sizeable list of potential greenfield projects.

Fortunately, precedent was already being established prior to the COVID crisis. At the global level and in the decade leading into the crisis, there was a growing recognition that new mechanisms were needed to offset the fact that investors were faced with weighing the risk of overpaying for a brownfield infrastructure project versus investing in a greenfield project where the bulk of invested capital goes into the pre-built stage and the lag time on returns are much longer than brownfield projects. Kathryn Leaf Wilmes, partner and global head of infrastructure and real assets at Pantheon Ventures, has pointed to the fact that 'there's been a historic mismatch between where the capital is needed and where the capital is looking to invest.'[38]

To address the mismatch, federal governments around the world, began to discuss their role in greenfield projects, specifically in looking to help offset risk. To a degree, it can be argued that Canada was already in the early stages of acting on this prior to COVID, most notably though the creation of the Canadian Infrastructure Bank (CIB). According to its mandate:

> [The] Canada Infrastructure Bank attracts and co-invests with private sector and institutional investors in new, revenue-generating infrastructure projects that are in the public interest. Our priority areas are public transit, trade and transportation, green infrastructure and broadband.[39]

Though the CIB has taken interest in a number of Northern projects, an inventory of infrastructure projects in the North that are seeking investment has not yet been completed (the primary prerequisite necessary to plan and determine financing priorities) and the majority of those projects would not have the return on investment that the CIB currently requires to obtain federal support.

## A CANADIAN NEW DEAL: BUILDING A 21ST CENTURY CANADA THROUGH THE NORTH

If this is to be Canada's Roosevelt moment, 'thinking big' can not equate to another round of bocce ball courts and circus schools. This is a unique moment for Canada to build transformative nation-building infrastructure projects that will provide both long-term economic growth and necessary social infrastructure for the whole of Canadian society. Of course, it can be expected (whether or not the short term political gain makes long term economic sense) that there will

38 Jacobius, Arleen and Appell, Douglas. 02 May 2016. 'Seeing growth in greenfield funds: Tighter market for existing projects hints of shift by investors', Pensions&Investments: https://www.pionline.com/article/20160502/PRINT/305029979/seeing-growth-in-greenfield-funds

39 Canada Infrastructure Bank Home Page: https://cib-bic.ca/en/

be investment in retrofits of existing infrastructure in urban centres and elsewhere, the types of investments that create incremental growth and not the kind of long-term, high growth required to dig Canada out of the Depression and embark on a globally competitive economic track going forward. A Canadian New Deal must think big by creating the mechanisms to attract investments in major innovative infrastructure projects that will fundamentally transform Canadian society while also putting Canadians back to work in the short term.

*"A Canadian New Deal must think big by creating the mechanisms to attract investments in major innovative infrastructure projects that will fundamentally transform Canadian society while also putting Canadians back to work in the short term."*

To begin, the prerequisite of carrying out any type of effective infrastructure stimulus, much less a Canadian New Deal, is a willingness to establish a healthy working relationship between the federal government and industry. This moment is a perfect opportunity for the federal government to create its own modern-day Brains Trust. Like the New Deal, the Canadian federal government must be able to bring together leaders from Canada's pension funds, other asset management funds and venture capital; Provincial and Territorial policy leaders from all political stripes; the tech sector, both mature companies and startups; other industry leaders including energy, mining, and telecommunications; as well as Canada's thought leaders.

Together, it is possible to envision, design, and prioritise projects. Further, only with such a coalition is it possible to establish the kind of public-private partnerships that can set Canada back on its track to becoming a world class and much more globally competitive economy. This includes working together to create a procurement process that is efficient and effective for all parties. At the end of the day, the federal government needs private capital to carry out its social infrastructure obligations and private capital needs a business case to invest. Canada has strong democratic institutions making it one of the safest places in the world to invest. Yet, to offset risk also requires a reliable and efficient investment environment. Reflecting on the New Deal of the last century, a successful 21st Century Canadian New Deal focused on Canada's North should consider the following:

a) Significantly broaden the mandate of the Canadian Infrastructure Bank (CIB) so that it can be innovative and enabled to produce novel financing mechanisms akin the earlier US Reconstruction Finance Corporation. Moreover, the CIB should establish a specific Northern Desk dedicated to Northern infrastructure.[40] This includes bringing a specifically Northern Infrastructure Fund to fruition (as has been recommended in numerous

40 Shadian, Jessica. 26 June 2019. 'It's time for Canada to act like the northern nation it proclaims to be', National Post: https://nationalpost.com/opinion/its-time-for-canada-to-act-like-the-northern-nation-it-proclaims-to-be

Reports including Canada's 2019 Housing Strategy and the Senate's 2019 Arctic Report).[41] It is well known that the governance landscape in the North combined with the abundance of social infrastructure investments that are needed make the North entirely distinct from any other region of Canada.

Further, for a Northern Desk to be a success it must be run by those from the North as well as those that have long standing careers working there. We know that the North is going to require public/private partnerships that vastly differ from the rest of Canada. While the current return on investment (ROI) required from the CIB may be enough to propel private sector investments in southern infrastructure projects, those finance models are not only inadequate in many cases but also very often inappropriate for the North.

The Northern Desk should also bring in industry thought leaders from northern and southern Canada including from the country's tech hubs to be tasked with designing the infrastructure to be built, developing a road map demonstrating the pipeline of projects to be built, and creating financial mechanisms that will unleash public and private capital in a coordinated manner.[42] It should go without saying that this vision for a Northern Desk goes is well beyond the CIB's current norm of using standard financing tools to help fund projects typical to the kind found in southern Canadian cities.

Thus, first and foremost, the Northern Desk of the CIB should be to convene a Northern Brains Trust that will create a Northern Infrastructure vision and accompanying strategy. This first step is a real prerequisite and a necessity if there is to be any hope for its success. Moreover, the needs for an infrastructure strategy for the North is something that has a growing chorus and is long overdue.[43]

b) Under the umbrella of the Northern Desk should be the creation of a Northern Broadband Association. Rather than the North being a part of Canada's 'High-Speed Access for All Connectivity Strategy',[44] it should have its own mandate to find ways to harness private capital investment into building broadband Internet and 5G, specifically, throughout Northern Canada. With a lot of creativity there is every reason to think that the Northern Desk could devise a clear strategy that includes federal investments and, by working in collaboration with tech and logistics innovators, a means to create a certain level of return on investments either through data collection, or otherwise. In the same vein that the New Deal's rural electricity association (REA) lent to increased demand in consumer products and revolutionised rural agriculture, providing North-

41 https://pm.gc.ca/en/mandate-letters/2019/12/13/minister-infrastructure-and-communities-mandate-letter. Report of the Special Senate Committee on the Arctic: 'Northern Lights: A wake-up call for the future of Canada'. 2019.: https://sencanada.ca/content/sen/committee/421/ARCT/reports/ARCTFINALREPORT_E.pdf

42 In a recent New Yorker article, John Cassidy made an argument that the US Congress should create a Coronavirus Finance Corporation for the US based on the original model of the RFC: https://www.newyorker.com/news/our-columnists/its-time-to-establish-a-new-reconstruction-finance-corporation

43 Report of the Special Senate Committee on the Arctic: 'Northern Lights: A wake-up call for the future of Canada'. 2019.: https://sencanada.ca/content/sen/committee/421/ARCT/reports/ARCTFINALREPORT_E.pdf. 'There's no vision': Agnico CEO slams feds over Northern resources', BNN News. 30 June 2019: https://www.bnnbloomberg.ca/there-s-no-vision-agnico-ceo-slams-feds-over-northern-resources-1.1294569

44 http://www.ic.gc.ca/eic/site/139.nsf/eng/h_00002.html#c

ern Canada with cutting edge broadband would not only create demand for all types of goods that could be sold and bought within Canada but it would also connect the North to the global economy via Internet commerce.

A Northern Broadband Association would also revolutionise existing mature industries (e.g. mining) and unleash an innovation revolution from scaling up remote surgeries, to building smart infrastructure, the creation of new incubation hubs, and help protect Canada's Northern sovereignty along the way.[45] Because broadband requires an abundance of affordable energy, the same could be argued for creating a Northern Energy Association that removes the North from reliance on imported, high cost, high polluting, and rationed diesel by transforming the region into a world class energy producer. For instance, the Norwegian Arctic LNG field, Snøhvit, has on-site carbon capture and storage of its Co2 emissions.[46] Norway's Snøhvit field is a concrete example of how Canada can also produce its Northern resources and be environmentally sustainable.

FIG. 5 This hotel that is being built on the Arctic Circle near Bodø and the archipelago of Lofoten, will sit suspended over the water of a fjord and will be the world's first 'energy positive' hotel. https://www.svart.no/. Hurst, Nathan. 18 April 2018. 'In Norway, an Ambitious New Standard for Green Building Is Catching On', Smithsonian Magazine. https://www.smithsonianmag.com/innovation/in-norway-ambitious-new-standard-green-building-is-catching-on-180968828/

c) The Northern Desk should also be tasked with creating a Canadian 21st Northern Indigenous Housing Association (carved out of the Canada Mortgage and Housing Corporation). Its mandate should be to work with existing Northern housing corporations and associations to build the 3,000 affordable homes that the North is currently deficient of.[47] Canada's May 2019, Northern Housing Policy Recommendations provides a start, however, the money allocated is too little, the timeframe too long to accomplish its goals, and the financing mechanisms lack real innovation.[48]

45 For instance, elevating Yukon University's Northlight Innovation Hub into one of national significance (https://www.yukonu.ca/innovation-entrepreneurship) and taking seriously the efforts being made in calling for a university in Nunavut (https://www.google.ca/amp/s/www.theglobeandmail.com/amp/news/national/momentum-builds-for-inuit-university-in-nunavut/article24471832/).

46 Draxler, Breanna. 23 January 23 2016. 'Arctic Report: How This Small Fishing Village Turned Into a Fossil Fuel Boomtown Despite heavy regulation and environmentalist pushback', Popular Science: https://www.popsci.com/arctic-report-how-small-fishing-village-turned-fossil-fuel-boomtown/

47 Brown, Beth. 11 October 2019. 'Nunavut and housing: A federal election explainer, CBC: https://www.cbc.ca/news/canada/north/housing-nunavut-federal-election-1.5314583. Brown, Beth. 24 February 2020. 'Northern housing ministers join forces to face crisis', CBC: https://www.cbc.ca/news/canada/north/northern-housing-ministers-talk-shop-1.5472264

48 https://www.canada.ca/en/polar-knowledge/northern-housing-forum-knowledge-products/policy-recommendations.html#h5-6

> *"If MIT has figured out how to make 3D printers that can assemble houses on 'other planets', Canada's tech industry should be able to find a way to build houses here in Northern Canada, on planet Earth."*

Thus, it is suggested that the success of a specifically Northern Indigenous Housing Association needs to bring the right (innovative in the financial space and with expertise in the North) thought leaders together to build novel financing mechanisms so that a) all Northerners have a home in much shorter order than outlined in Canada's housing strategy. This includes a home that is environmentally safe and built to address climate change (e.g. melting permafrost) and b) so that everyone has an opportunity to gain equity in the home in which they live. Rather than focusing predominately on social housing and also taking into account the unique private property structures in parts of the North, the aim should be to create financial mechanisms whereby spending of all kinds on housing made by Northern Indigenous families and individuals will go towards future home ownership, if that is desired. For example, a process for transforming non-market housing into eventual market housing (e.g. a federal government investment that recognises that the return on its investment would come from the future dividends created by the individual economic sustainability that would grow from that investment over time). Essentially, a Northern Indigenous Housing Association should focus on creating options that fit the whole of the housing spectrum rather than the limited understanding that exists today.[49]

Further, the Northern Indigenous Housing Association should convene a formal collaboration with Canadian companies that are already working to devise new construction materials and methods from 3D printing to materials that keep mould at bay and can withstand melting permafrost. And, equally central to this collaboration is bringing in Northern Indigenous architects and designers to ensure that all homes meet the needs of those living in them. If MIT has figured out how to make 3D printers that can assemble houses on 'other planets', Canada's tech industry should be able to find a way to build houses here in Northern Canada, on planet Earth.[50]

FIG. 6 If MIT has figured out how to make 3D printed houses for other planets we should be able to do this and affordably for the North. Lofgren, Kristine. 27 April 2017. 'MIT unveils new solar 3D printer that can build houses on other planets', InHabitat: https://inhabitat.com/mit-unveils-new-solar-3d-printer-that-can-build-houses-on-other-planets/

As part of that effort, tax incentives could be created for innovation companies to create new building techniques and materials so that they can be scaled up and enter the economy. The North serves as a perfect pilot project for innovative thinking and new technologies in house design, retrofits, and materials that can then be exported to the rest of Canada and

49 Robin, Michael. No Date. 'Tax Autonomy Key To Unlocking Indigenous Innovation', Industry West: URL: https://industrywestmagazine.com/features/tax-autonomy-key-to-unlocking-indigenous-innovation/

50 Lofgren, Kristine. 27 April 2017. 'MIT unveils new solar 3D printer that can build houses on other planets', InHabitat: https://inhabitat.com/mit-unveils-new-solar-3d-printer-that-can-build-houses-on-other-planets/

globally to address existing and expected impacts of climate change and the need for greater energy efficient housing and buildings. Rather than see the Northern housing as an issue defined as social welfare, the Northern housing gap should be viewed as an opportunity to bring Canada's most cutting edge innovators in housing engineering and construction to the North to work with the North so that the North can lead the way in the future of the structural engineering industry in Canada and globally.

d) Under the umbrella of a renewed and broadened CIB should be the formal creation of a Canadian Industrial Innovation Corporation (CIIC) based off the Innovation Economy Council's call for a Canadian Industrial Innovation Strategy and making use of the current federal government's Supercluster Innovation Initiative (a corporation mirroring some of the central characteristics of the New Deal's Defense Construction Plant.

According to an April 2020 white paper by the Innovation Economy Council, author Barrie McKenna argues that Canada's 'Old Economy' (already mature industries) such as manufacturing and the resource sector are already actually part of the 'New Economy' because they rely on an enormous supply chain of technology companies. Yet, for those industries to make it out the other end of the COVID crisis, they must be agile to survive.[51]

Thus, as the Report argues, startups and tech companies are nimble, often best positioned to pivot to support their clients and help the economy, are able to become resilient in order to respond to changing global supply chains, and can most often cope with major disruption.[52] Therefore, mature companies need to be able to incorporate the tools of Canada's startup technology industry to survive.[53]

The Reports also points out that, overall, the tech sector is Canada's most productive sector; it creates new jobs at a faster rate than the rest of the economy, does more research and development than other sectors, produces more GDP, and has more exports.[54] Not only is the tech sector the driving force of economic growth in Canada's large cities, the smallest of those companies are often behind the most innovative 'ideas, products, and visions'. In fact, the Report concludes that many of today's jobs and growth come from the small startups that were born from the 2008 recession and they will once again be critical for the new ideas to come that will drive the future of Canada's economy over the next decades.[55]

51 McKenna, Barrie. April 2020. 'The Post-Viral Pivot: How Canada's Tech Start Ups Can Drive The Recovery From Covid-19', Innovation Economy Council, p. 12: https://www.marsdd.com/wp-content/uploads/2019/03/IEC-The-Post-Viral-Pivot-April-2020.pdf
52 Ibid.
53 Ibid.
54 Ibid. 6
55 Ibid. 5


FIG. 7 Anselmi, Elaine. 11 February 2020. 'Quebec has invested in the next generation of airships to help serve the North', Nunatsiaq News: https://www.arctictoday.com/quebec-has-invested-in-the-next-generation-of-airships-to-help-serve-the-north/

Because Canada's tech sector is already well underway in envisioning, devising, and hoping to design the transportation infrastructure of tomorrow,[56] a formal cooperation between the tech sector via a CIIC and the CIB is a natural match. Together, it will be possible for the kind of infrastructure projects that are often considered too pie in the sky (and especially in the early days of digging out of the COVID depression) to secure the kind of capital investments required to make them economically scalable. Hyman points out that when the US began focusing on and investing in the aerospace industry, the notion of taking an airplane to attend a work meeting was much more about daydreaming and certainly not about calendar planning.[57]

The Northern Desk of the CIB should have a portion of the CIIC dedicated specifically to working with the Northern Desk. The Canadian North is the one region of Canada that not only needs the most infrastructure investments but has a potential to create the most return on investment over the long run. By focusing on infrastructure projects that will not only connect the North from West to East, as well as to the rest of Canada and to the world, Canada has an opportunity of this century to build 21st century Canadian transportation corridors and gateways within Canada and to the global economy via a vastly changing Arctic Ocean (e.g. Asia and Europe) thereby creating the same trade and economic prosperity that the Canadian Pacific Railway and the St. Lawrence Seaway brought to Canada centuries earlier.

> *"When the US began focusing on and investing in the aerospace industry, the notion of taking an airplane to attend a work meeting was much more about daydreaming and certainly not about calendar planning."*

At the same time, building 21st century infrastructure could be a major opportunity for long-term institutional investors as well as for venture capital to enlist Canada's tech sector which is the brains behind the visions, ideas, and technologies that will comprise the next generation of infrastructure assets. Along with the capital that Northern Indigenous communities can bring to the table, the opportunity it presents for Northerners to become future equity owners of the country's cutting-edge

56 https://www.skycanoe.ca/
57 Hyman, Louis. 26 January 2016. 'The New Deal You Don't Know' Lecture', The Interval: https://theinterval.org/salon-talks/02016/jan/26/new-deal-you-dont-know

infrastructure and to grow their own capital is something that should not be underestimated.[58]

By considering the infrastructure investment challenges that predate the COVID crisis as well as the current situation, the greenfield infrastructure dilemma presents itself as a major opportunity for creating a Canadian New Deal that would provide both short-term results (protecting existing jobs and creating additional new jobs supported by venture capital) and long-term economic growth by creating 21st century infrastructure investment opportunities that provide slow, steady returns on investment that pension funds and others and seek for portions of their portfolios.

Thus, a formal cooperation between the CIB and a CIIC could create mechanisms for encouraging private capital investment in existing Canadian industries such as minerals, food products, fisheries, energy, telecommunications, shipping, etc. and connecting those to Canada's innovation companies to build long-term growth in transportation networks of the 21st century. This includes AI, multipurpose ice-breakers fuelled by alternative energy sources (rather than eventually buying them from South Korea and other countries already underway in building the next generation of ships), cargo blimps, cargo drones, and automated cargo trucks and cars including those which do not require conventional roads to move people and goods from A to B. With a combination of long-term and venture capital investments in these technologies and accompanying infrastructure, substantial short-term returns could be generated for tech startups in Canada's urban centres as well as the long-term growth that new Northern transportation logistics supply chains would engender.

Further, as these technologies would be developed in tandem with the development new ports, airports, energy sources, and fibre optic, etc. the ripple effects would not only lead to significant economic growth in existing sectors and a host of secondary businesses that fosters sustained long-term economic growth for the North and whole of Canada, but it would fundamentally transform Canada's supply chains by the addition of new transportation corridors that connect Canada to Asia and Europe via the Arctic Ocean.

Finally, and not inconsequential, the social and economic growth created by building Northern infrastructure will also directly strengthen Canada's Arctic security and sovereignty in the process and provide Northerners with the legally rightful opportunities to build healthy, prosperous, and sustainable communities, both of which are long overdue. Ultimately, however, true success will lie in Canada's ability to envision, leapfrog, and harness the required private capital to build the kind of new infrastructure that will take us through the next 100 years.

58 One very vague and not systematically compiled estimate is that Northern Indigenous capital could total about 6.6 billion in the three Territories combined. It should also be noted that the majority of that capital is not available (it was not raised) as it is currently locked up in various types of funds, etc.

## THE ROAD TO A NEW NORMAL BUILT WITH A VISION OF A NEW WORLD

As we are quickly coming to recognise, the COVID crisis is ushering in a global rebalancing of the world economy and its accompanying international political institutions. Yet, which countries emerge from this crisis in a position to help lead as well as influence everything from the future of the WHO to global supply chains will be those who best use this moment to think big. In this moment when states of all kinds have no choice but to spend state dollars to an extent not witnessed since the Great Depression, there lies an opportunity. When the moment comes to rebuild our way out of the COVID crisis, the investments that are made must be those that will strengthen Canadians and Canada for the long term.

*For Canada to properly leverage this moment and truly foster large-scale, long lasting economic growth than its efforts cannot be incrementalistic they must be visionary, innovative, and transformative.*

Focusing the infrastructure stimulus on shovel ready projects are not those projects and it is not the 'big' thinking Minister McKenna has stated is required. For Canada to properly leverage this moment and truly foster large-scale, long lasting economic growth, its efforts cannot be incrementalistic they must be visionary, innovative, and transformative. This is the moment for Canada to step up and away from an infrastructure bank that works on a business as usual model and towards creating truly novel and innovative institutions and mechanisms to de-risk major investments in cutting-edge technologies and greenfield infrastructure projects. In fact, there are so many pre-existing and new issues that are converging currently (from a changing investor landscape to a vastly changing geopolitical Arctic and global order altogether), it is almost impossible to imagine doing otherwise. If done well, if Canada dares to think big, this could be an opportunity for Canada to come out the other end of the COVID crisis in a much more globally competitive place than prior to the pandemic.

Instead, if the federal government chooses a lackluster, business-as-usual response to this moment by focusing on funding an array of 'shovel ready' (and shovel worthy) projects, whether hockey rinks in Alberta or 2G Internet and single windmill projects in the North, that were not only designed for a pre-COVID era but for the 20th century (and the assumption that the North will forever be a region of stagnation) then the future history will be written as the moment Canada passed on its opportunity of this century.

Moreover, time is of essence. While many financial institutions have the strength to hold on to their capital, Canada's burgeoning innovation start-up economy does not have the capital to survive a long depression. There is a real risk, while investors guard their capital, of losing some of the country's most innovative future and world-changing technologies. Essentially, if the 'big' infrastructure stimulus is any less than Canadian made cargo blimps flying above the Arctic Ocean and automated zero emission multipurpose icebreakers sailing along

the NW Passage[59] (after taking off from any one of a number of state of the art, ports dotting Canada's Arctic Ocean), then not even all of the great minds and talent that exists in Canada will be able to make Canada grow its competitive advantage and realise its potential.

As the mantra of the COVID crisis has become and will likely be remembered by: 'these are not normal times' then we absolutely can not rely on normal solutions to meet the challenges of the day. In the eloquently put words of Hymen: 'The economy is not made by economists but by people who can imagine a different world.' There is no time like today—as we remain confined at home and returning to the old normal a growing improbability by day—to imagine a different world at the top of the globe and the vision of Canada's North there.

*Dr. Jessica M. Shadian*

59 It is expected that the North Pole will be ice-free by 2050.

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