

Enhancing North American Competitiveness: Building on the North American Leaders’ Summit Agenda

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Table of Contents

- **Executive Summary**
- **Introduction**
- **Description of Priority Areas**
- **Discussion of Selected Priority Areas**
 - **Critical Minerals**
 - **Batteries**
 - **Electric Vehicles**
 - **Semiconductors**
 - **Medical Supplies**
 - **Border Management**
 - **Energy and Environment**
 - **Conservation**
 - **ICT Sector**
 - **Improving Cybersecurity**
- **Conclusion**
- **List of Recommendations**
- **Endnotes and References**

Executive Summary

President Biden, Prime Minister Trudeau, and President Lopez Obrador are slated to meet for their second North American Leaders Summit (NALS) in Mexico late in 2022. Working groups representing Mexico, Canada and the United States have been engaging since the fall 2021 NALS to make progress on an ambitious set of trilateral goals aimed at strengthening North America and its competitive position in the world. Simultaneously, officials are hard at work implementing the US-Mexico-Canada trade agreement or USMCA and related bilateral agreements such as in the US-Mexico High-Level Economic Dialogue (HLED). Progress and next steps in cooperation in will be on the table when North America’s leaders gather.

In anticipation of the leaders meeting, this report recommends specific steps that the three governments can take to enhance the integration of North America’s economies and to improve trilateral policy coordination and deliberative processes on priority issues.

Steps to enhance North American cooperation are increasingly important as the world is rethinking the economic globalization and the geostrategic alignments that characterized much of the last 30 years are evolving. New economic blocks are forming in ways that can undermine the economic role and performance of the continent. The three North American countries need to apply lessons learned from the COVID-19 pandemic, adjust the rapid and continuous development of technology, address climate change, and anticipate the effects of increased polarization and rivalry among and within nations. Russia’s invasion of Ukraine and the serious repercussions in global energy and agricultural markets, as well as for inflation, make the capacity and the potential of North American integration even more important than it was previously.

Addressing such near- and longer-term challenges reinforces the need for policy and practical collaboration across the North American continent as well as serious reflection and action in the United States, Canada, and Mexico. While each government will want to retain sovereignty, the three countries and their people will be much better off if their governments can deepen and enrich the cooperation among themselves.

To protect North America’s economic dynamism and wellbeing, the authors of this paper looked at the framework agreed upon at the 2021 North American Leaders Summit (NALS), talked with a range of experts, and read a wide selection of studies and policy pronouncements. Building on that research and working from a Washington-based perspective, this report recommends that the following priorities:

Supply Chains

- Developing stronger initiatives to understand and reinforce multiple resilient supply chains within North America in key areas such as critical minerals, batteries, electric vehicles, clean energy, semiconductors, and other sectors identified to be essential.

- Issuing regular reports on progress and offering opportunities to evaluate work underway, with updates issued before the next NALS.

Critical Minerals

- Agreeing on and implementing a North American critical minerals strategy that outlines mineral exploration, processing, and refining; and standardizes permitting and regulations across North America.
- Ensuring that stakeholders, environmental groups, indigenous people, and local communities are regularly involved in discussions and kept well informed with progress reports.
- Increasing research and development of clean mining technology, mineral waste recovery, and the forecasting of future critical minerals needs.

Batteries and Electric Vehicles

- Expanding recycling programs for batteries and other electronics with similar and compatible approaches across the three economies, as the continent progresses toward wider battery use.
- Engaging in a dialogue among North American governments to reach an agreement on a united approach to, and an agreed upon definition of, the concept of a North American electric vehicle (EV). Then, working together to explain this concept to key stakeholders and the public.
- Upgrading EV charging infrastructure with as much coordination as possible and agreeing to have similar consumer incentives across the three countries.
- Creating new investment avenues for EV industry development, enhancing related research and development programs and cooperation, and creating agreed norms and standards across the region to facilitate development of the sector.

Health

- Establishing a trilateral North American Committee on Health and Pandemic Preparedness under the NALS framework which would meet annually.
- Building and maintaining a live database of medical supply chain maps, border health capacities, and of good manufacturing practices for use during normal functions and during demand surges.
- Enhancing cooperation between the trilateral pharmaceutical and medical regulatory agencies through exchange programs as well as considering the establishment of a Mutual Recognition Agreement on finished pharmaceutical and biological products between the US and Canada and an expedited review process between the US and Mexico.
- Assuring that private sector actors are well integrated into these efforts.

Borders

- Establishing a regular trilateral ministerial meeting, as well as reinforced bilateral processes, to address border issues. The border dialogues should include the private sector and sub-federal governments in policy deliberations.

- Holding frequent bilateral meetings on border management to create dynamic dialogues that help solve existing problems, promote strong plans to modernize the border including implementing new technology, produce efficient and compatible regulations, and encourage well-coordinated decisions on infrastructure and related resource allocation issues important for well-functioning and “cutting edge” borders that enhance security and prosperity.
- Assuring good and rapid implementation of the recent US-Mexico announcement on border infrastructure and doing something similar on the US-Canadian border.
- Developing an overarching Memorandum of Understanding (MOU) to help address a range of emergencies at the border that could disrupt trade flows including the public and private sector and including a virtual crisis center for better emergency communication between agencies and stakeholders. Building on the welcome July commitment of trade ministers to task the USMCA’s Competitiveness Committee to begin work in this area.

Energy, Conservation and Climate Change

- Exploring energy supply expansions by researching rapidly the best areas for solar and wind development and ways to support “green” energy investment. Again, welcoming US-Mexican commitments in July in this regard
- Creating more integrated grids across borders by working with US, Mexican and Canadian authorities, and cross border partners outside of government. (This will require more coordinated planning work.)
- Establishing mechanisms to monitor and assure that climate-related goals in the 2021 NALS are achieved and ensuring a process to build trilateral cooperation on additional areas to help all three countries meet Paris agreement targets.
- Increasing data sharing, expanding cross border dialogue, and funding research into the effects of climate change, water insecurity and deforestation, to meet and advance the goals set forth in the 2021 NALS.

ICT and Cybersecurity

- Developing specific programs to enhance internet connectivity across the continent with a special focus on bolstering ICT systems in Mexico, all while working in close partnership with North America’s private sector.
- Developing a robust trilateral process to address key cyber threats, including holding a trilateral Cyber Security meeting, as agreed upon.
- Agreeing on plans and steps to enhance cybersecurity across the continent and within the interconnected production and commercial networks that are so important to shared prosperity.
- Building a close partnership with the private sector in cyber initiative implementation and encouraging help for Mexico to develop a cyber infrastructure that better supports the USMCA marketplace.

The authors recognize that to succeed this work needs to be a “whole of government” effort. Strong leadership and coordination are vital, which for the United States means

coordination led by the White House and the National Security and National Economic Councils. Foreign Ministries will need to play a key role as they have the lead on managing overall relations with North American neighbors and manage the embassies and consulates that will be key players in moving forward. Many other agencies from all three governments must be seriously engaged. We have seen such multi-agency work in action with Climate Envoy Kerry and Secretary of Energy Granholm working hard to make progress with Mexico on climate and “green” energy issues. Many other agencies and ministries must be fully committed given the broad agenda that must be addressed. It is essential that all three North American partners forge well integrated teams to help assure progress on North America’s vital and wide-ranging agenda.

The authors come away from their research convinced that increased cooperation across North America in these areas and others can help Canada, Mexico, and the United States to prosper in today’s highly competitive and challenge-filled world. We hope the recommendations described in this report will help guide and shape the interagency, bilateral, and trilateral processes ahead.

Introduction

The United States stands at a critical juncture where policy decisions and improved working relations can provide pathways to enhance global competitiveness through a stronger North American framework. The United States, Canada, and Mexico are indispensable neighbors that will greatly benefit from increased cooperation, especially when competing against rising trading blocs under the leadership of adversaries such as China. Russia’s invasion of Ukraine and the resulting disruption of energy, food and fertilizer markets also underscores how important North America’s capacity and production are for the prosperity of the continent and of others. North American cooperation on supply chains, border management, energy, the environment, and telecommunications technology has the ability to raise the region’s collective competitiveness globally. The recommendations provided in this report are designed to benefit each of the three nations by limiting dependence on competitors and capturing the full potential of a more collaborative North America.

This document identifies eight priority areas, analyzes challenges, and provides recommendations for the fostering of cooperation between the United States, Mexico, and Canada to enhance the future competitiveness and wellbeing of North America. The priority areas include five supply chain subgroups: critical minerals, batteries, electric vehicles, semiconductors, and medical supplies. Furthermore, the report identifies three other areas for collaboration in North America that can help to secure regional growth: border management, the energy sector and the environment, and the Information and Communications Technology (ICT) sector. Maintaining secure and resilient supply chains, increasing efficiency at the

borders, and transitioning to a greener economy are reliant on increased levels of cooperation in North America, as outlined in this report. The report endeavors to align with the mission/agenda approved by the 2021 North American Leaders Summit (NALS) to enhance our competitiveness and propel the region's future growth. We hope to support the work underway to prepare for the 2022 NALS to be hosted by Mexico.

Description of Priority Areas

Based on our analysis on various reports and interviews with subject-matter experts, the following priority areas were identified:

Supply Chains:

Critical Minerals

The ability to extract, process, and refine critical minerals in North America will be essential to supporting future US national security and economic prosperity. Currently, the critical minerals supply chain is heavily reliant on China as its main producer. Critical minerals are necessary to produce batteries for electric vehicles, smartphones, aerospace technology, semiconductors, metal alloys, fiber optics, solar panels, among others.

Batteries

A sustainable battery supply chain is necessary for the green transition as batteries are a primary component of electric vehicles and their advancements will be crucial for the expansion of new technologies. Improving the North American battery supply chain will better advance the region's economic competitiveness and address national security concerns.

Electric Vehicles

One of the most important initiatives of the green transition is the growth of electric vehicle manufacturing. Securing coordinated approaches to the production of EVs and charging infrastructure across North America will build the adequate foundation for cheaper and more accessible EV use.

Semiconductors

Semiconductors are essential to all modern technology, including phones, computers, cars, and weapons. With demand trends and China's political and economic expansion threatening the industry, it is important that North America prioritizes self-sufficiency in semiconductor production.

Medical Supplies

The value of the healthcare industry in North America, as both a growing economic sector and an essential area for security, must be recognized and fostered. In order to build competitiveness

in the region, it is crucial that our medical supply chains are secured, and regulations harmonized, to guarantee preparedness for future medical crises.

Other Priority Topics:

Border Management

Facilitating efficient, secure, and adaptable border operations is indispensable for the movement of goods and people across North America's borders. To maximize the economic competitiveness of the region, streamlining cross-border movement as it relates to transportation, infrastructure, processes, and crisis management is critical.

Clean Energy and Environment

Creating a resilient supply of secure energy in North America is key in meeting our goal of reaching a carbon neutral electricity sector by 2030. Promoting data sharing initiatives and increasing renewable energy capacity will ensure energy competitiveness.

The Information and Communications Technology Sector and Cybersecurity

The future of world economies will be digital. Mexico is in danger of becoming vulnerable in the long run as China attempts to control as much of the Mexican ICT sector as possible. Additionally, as cybercrime is ever growing, Mexico's heightened vulnerabilities put both of its neighbors at risk.

Selected Priority Areas:

Supply Chains:

Critical Minerals

Canada and Mexico possess great potential for contributing to a North American critical minerals supply chain. Canada supplies 13 of the 50 US labeled-critical minerals to the US while Mexico contains large deposits of lithium and other minerals that will be important for green technology. Together, North America can decrease their reliance on foreign critical mineral producers and create a secure, domestic source of critical minerals.

Critical minerals strategies from Australia, Canada, and the province of Ontario can act as coordinating guidelines for agencies and programs to create more efficient and resilient supply chains. The US and Mexico currently do not possess a critical minerals strategy. The US-Canada Roadmap for a renewed US-Canada partnership has committed to strengthen the Canada-US Critical Minerals Action Plan and has outlined joint steps for increased cooperation on critical minerals. Steps like this can be expanded to include Mexico and gain access to mineral deposits throughout North America.

Critical minerals strategies standardize permitting law with coinciding environmental regulations for opening, closing, and rehabilitating of mines. Synchronizing permitting law can

allow for faster access to projects that will support critical mineral intensive products. In the Ontario Critical Minerals Strategy, for example, the province has streamlined the permitting process by analyzing mining projects through a low impact mining framework. This framework views mining projects through an environmental risk lens and attempts to reward low risk mining projects with permits for early-stage exploration and can graduate permits to higher levels as mining projects and maintain a low level of risk. Permitting can also be operationalized to quicken permits for mineral recovery from waste.

Recommendations:

North American Critical Minerals Strategy

- Constructing a North American Critical Minerals Supply Chain roadmap that outlines mineral plans for the next 5-7 years, under the direction of a trilateral ministerial group.
 - Coordinating between the respective geological surveys to produce updated critical minerals maps.
 - Identifying the efficient locations for explorations, extraction, processing, and refining across the continent.
 - Identifying the specific minerals that will be mined within North America and which minerals will continue to be sourced from outside the continent.
 - Ensuring that a North American Critical Minerals Strategy is created in conjunction with policy on electric vehicles and battery supply chains.
 - Establishing a working group that determines timelines for regular progress reports to the respective nations and transparency reports for the public.
- Synchronizing public policy and regulations on mining.
 - Mapping out a work plan to move toward standardization and synchronization, recognizing that there will be serious challenges given the range of federal and sub-federal laws and regulations involved.
 - Working to standardize permitting law for the opening, closing and rehabilitation of mines through an environmental risk assessment criterion
 - Working to standardize environmental regulations on mining related projects.
 - Agreeing to properly fund permitting offices to ensure they can efficiently and rapidly award permits, avoiding lag in critical mineral exploration.
- Creating and cooperating on compatible incentives for private investment.
 - Working to coordinate investment across borders.
- Establishing a taskforce that will craft and propose a plan for training and education programs to increase workforce development in critical minerals projects and sectors.

Maintain an Open Dialogue with Stakeholders

- Crafting and agreeing on a broad strategy for bilateral and trilateral outreach events with stakeholders, environmental groups, indigenous groups and local communities.

- Each of the three governments should provide open channels for communications with stakeholders through webinars, workshops, town halls, and other avenues for commentary.

Shift Public Messaging of the Mining Industry

- Focusing on the creation of a public relations messaging campaign for mining on the national security concerns and green technology as the driver for increased mining.

Expand Funding for Research and Development

- Establishing a trilateral coordinating committee for funding research and development in the following:
 - Clean mining technology that lowers emissions and decarbonizes the extraction, processing, and refining of critical minerals.
 - Expanding research into the forecasting of new critical minerals that will be necessary for future economic competitiveness
 - Fast tracking research and development in the mineral recovery process that can utilize existing mineral waste and improve the environment.

Batteries

According to the Department of Energy, advanced-technology batteries are essential to national security concerns, electric vehicles, stationary energy storage, and the use of defense weaponsⁱ. In a White House press release, the Biden administration notes the global battery market will increase approximately five to ten times by the year 2030ⁱⁱ.¹

Battery recycling is a critical component to a resilient and sustainable supply chain in North America. Companies are hard at work in this sector. Ascend Elements, for example, recently finished building the largest battery recycling plant located in Georgiaⁱⁱⁱ. This shows progress, but not enough.² Chris Berry, president of an energy supply chain consultancy, notes that the recycling business in the United States is immature but growing quickly as battery manufacturers begin to partner with recyclers; thus, he predicts the US and North America will see more movement in recycling programs in the next few years^{iv}.³

Recommendations:

Exploring Alternative Battery Materials

- Establishing a cooperative bilateral research and development program to discover alternative materials for batteries that are not found in North America with the United States and Canada taking the lead. It is important that Mexico remains an active member

¹<https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/08/fact-sheet-biden-harris-administration-announces-supply-chain-disruptions-task-force-to-address-short-term-supply-chain-discontinuities/>

²“Battery Resources Is Opening the Largest Battery Recycling Plant in N” n.d.

<https://www.fastcompany.com/90711336/the-largest-battery-recycling-plant-in-north-america-is-about-to-open>

³ Interview with chris berry

in these programs while continuing their role as a large consumer of North American cars.

- Involving leading academic institutions, private sector companies (major battery producers like LG Chem, Samsung SDI, SK Innovation, or Panasonic), smaller startups that use novel materials (like Sila Nanotech or Enovix), and national laboratories.
 - Modeling after the structure of DOE’s Joint Center for Energy Storage Research
 - Incentivizing the private sector to boost their participation and minimize the risks for research and development, including price volatility for minerals and environmental pushback.
 - Meeting regularly and reporting data into a new collective database shared between the three governments and tracking the development of alternative materials.
- Ensuring that any battery policy adheres to the insights from the North American Critical Minerals Strategy.

Continue Expanding Recycling Programs

- Expanding stakeholder engagement through active conversations to discuss coherent recycling standards that meet environmental regulations and homogenous targets.
 - Including environmental groups, NGOs, indigenous communities, etc.
 - Regularly engaging in conversations with Retriev Technologies and Li-Cycle, the two largest battery recyclers in North America to gain insight.
 - Supporting initiatives to incorporate financial incentives like tax breaks or grants to reduce the costs of initiating recycling programs and boost the recycling sector^{v. 4}

Electric Vehicles

The NALS 2021 discusses the acceleration of sustainable transportation, while President Biden and Canadian Prime Minister Trudeau also agreed to work in these areas in the US-Canada Roadmap.

Under the Bipartisan Infrastructure Law of 2021, President Biden provided roughly \$5 billion over five years to make the American economy more accessible to electric vehicles^{vi. 5}. The intended outcome of this law is to provide a \$2.5B grant to build EV infrastructure, improve air quality in local communities, and facilitate the use of EV charging stations in historically marginalized communities^{vii. 6}.

In December 2021, to help use the new spending, the DOE and DOT signed an agreement establishing the Joint Office of Energy and Transportation. This office has worked

⁴https://calepa.ca.gov/wp-content/uploads/sites/6/2022/03/AB-2832-Final-Draft-Policy-Recommendations-Lithium-ion-Car-Battery-Recycling-Advisory-Group-As-of-3-11-22.a.hp_.pdf

⁵“President Biden, USDOT and USDOE Announce \$5 Billion over Five Years for National EV Charging Network, Made Possible by Bipartisan Infrastructure Law | FHWA.” n.d. Accessed May 1, 2022. <https://highways.dot.gov/newsroom/president-biden-usdot-and-usdoe-announce-5-billion-over-five-years-national-ev-charging>.

⁶<https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/13/fact-sheet-the-biden-harris-electric-vehicle-charging-action-plan/>

with both agencies to implement an EV charging network across the United States and offers a range of resources concerning EV charging.

Automotive manufacturers such as General Motors, Honda, Ford, and Tesla play a crucial role in the development of electric vehicles. These companies are working to produce a sustainable electric vehicle that reduces the supply-chain cost. This year, GM and Honda expanded their partnership with an affordable electric vehicle for the region that will go on sale in 2027, incorporating "a new global architecture using next-generation Ultium battery technology^{viii}."⁷ Tesla claimed to have delivered over 310,048 EVs in the first quarter of this year due to supply chain challenges^{ix}.⁸ This month, Honda announced that over the next decade the company will invest \$39.8B on EVs, including research and development^x.⁹ In Tennessee, Ford built BlueOval City, an auto production complex and a twin battery plant in Kentucky; the company is investing \$11.4 billion and creating approximately 11,000 American jobs^{xi}.¹⁰

In the US, there are 28 different electric vehicles that originate from 18 different domestic and international manufacturers^{xii}.¹¹ Although the US is one of the biggest net exporters of electric vehicles, with Tesla, Honda, and General Motors among others. The North American electric vehicle market still holds room for more growth with its infrastructure. Jasper Jung, Head of Global Strategic Initiatives at General Motors, explains that public policy plays an essential role for the electric vehicle market to take off.¹² He notes that there is a way to bring the North American countries along for the ride in terms of the development of electric vehicles.¹³ With this in mind, Mexico has a potential role in the electrification process. This April, GM will be converting their plant in Ramos Arizpe with the intent to assemble more battery packs and electric motors and by 2023, GM hopes to produce electric vehicles there.

Recommendations:

Creating a North American Electric Vehicle Approach

- Engaging in a dialogue among North American countries and their respective key stakeholders with the goal of reaching an agreement on a united approach to the concept of a North American EV and then explaining this concept to key stakeholders and the public.

Upgrading the Electric Vehicle Infrastructure

- Implementing and enforcing regular strategic trilateral dialogue on best ways to build this.

⁷https://www.greencarreports.com/news/1135501_gm-and-honda-expand-partnership-with-range-of-affordable-evs-expected-by-2027

⁸https://www.greencarreports.com/news/1135486_tesla-delivered-a-record-number-of-evs-in-q1-amid-supply-chain-struggles

⁹<https://www.cnn.com/2022/04/12/business/honda-electric-cars-intl-hnk/index.html>

¹⁰<https://media.ford.com/content/fordmedia/fna/us/en/news/2021/09/27/ford-to-lead-americas-shift-to-electric-vehicles.html>

¹¹<https://www.visualcapitalist.com/visualizing-all-electric-car-models-available-in-the-us/>

¹² Interview with Jasper Jung

¹³ Interview with Jasper Jung

- Establishing a working group composed of actors from the three governments with the intent to coordinate on how the US plans to spend newly appropriated funds for the prosperity of a regional EV infrastructure, as well as how Canada and Mexico might add funding to projects on their sides of the border.
- Creating a task force that includes representatives from both the private and public sectors, government agencies, NGOs, and state and local governments that evaluate and identify risks for building charging infrastructure
- Establishing standard guidelines for building charging stations
 - Develop consistent norms, equipment, and regulations to minimize risks
- Cooperating with Mexico and Canada to implement compatible federal grants/programs to build public and accessible EV charging stations, this will incentivize the private sector to invest

Implement Compatible Consumer Incentives for the Adoptions of Electric Vehicles

- Collaborating with the US, Canada, and Mexico to develop and coordinate an approach that establishes compatible incentives for consumers. These regional incentives should support the purchase of a North America EV and align with the interests of the three nations.

Semiconductors:

Of all the supply chain issues the world is facing today, perhaps none pose a greater long run risk to the US than that of semiconductors. Whether it be vehicles, computers, phones, or weapons, the role of semiconductors in modern American society is so huge that the Biden administration considers their continued production a matter of national security^{xiii}. Over half of the world's semiconductors are produced in Taiwan, which in and of itself poses a major risk due to aggressive Chinese rhetoric towards the island. In the shorter term, production is starting to slow across the board as those companies responsible for manufacturing semiconductors face input shortages, bottlenecks, and increased demand.

The US and Mexico have discussed the possibility of opening fabricating facilities in Mexico during their High Level Economic Dialogue. They additionally established a bilateral semiconductor working group to post findings on the American and Mexican supply chains. The US - Canada Roadmap has no such working group. The US Department of Commerce (DOC) released a report based on Requests for Information (RFIs) on the matter. This report recommends a long-term increase in wafer production capacity, citing it as the primary node bottleneck in the supply chain. The report advocated continued use of an early warning system, to identify node specific shortage, such as the wafers^{xiv}. Continuing transparency in the semiconductor market will make it easier to identify the locations of problems and government spending on semiconductor production is one of the best ways to solve them.

The US Innovation and Competition Act could be a vital step towards increasing semiconductor production on the North American continent^{xv}. While this piece of legislation is

gaining traction in Congress, a joint agreement between the three countries to offer compatible investment, subsidies, and tax credits to manufacturers (similar to an agreement between countries to spend an agreed sum on defense) would allow the industry to grow in all three countries simultaneously.

Input shortages can mean several things as there is no single type of semiconductor. Chief among these problems is the slowed supply of raw materials, such as silicone. Bottlenecks are also occurring along the supply chain unrelated to natural resources. In the case of wafer production, producers can't open new manufacturing plants fast enough to keep up with current demand.

Increased demand underlies all the supply issues seen along the chain. Some of the largest culprits for this increased demand are car manufacturers (particularly stemming from EVs), ICT companies' shift to 5G, a general trend towards telework, and the rise of crypto mining.

Of major concern to the US debates is the fact that the US is reliant on many Asian-based manufacturers, and especially for the most sophisticated semiconductor chips, Taiwan being a leading producer^{xvi}.

Recommendations:

Joint Investment:

- Working to see if the North American countries can reach and take similar approaches creating funds, subsidies, and tax credits to incentivize growth of semiconductor manufacturers in North America.
- Agreeing on and implementing a *coordinated and compatible* set of regulations and incentives that encourage new FABs to spring up, in places that are most efficient for existing supply chains and manufacturing.
- Agreeing on a common approach to describing the benefits of such investment for fostering job growth, lowering prices, and improving competitiveness against rival global producers as well as reducing dangerous reliance on those far away suppliers, e.g. China.

Trilateral Supply Chain Planning:

- Expanding the US national dialogue between semiconductor producers and consumers to include Canada and Mexico for more accurate supply chain predictions^{xvii}.
- Organizing a trilateral effort to collect data from and discuss projections with the private sector and research institutions on future semiconductor usage and requirements for future semiconductor technical capabilities.

Research Network:

- Developing collaborative R&D across North America between industries, universities, and laboratories to increase efficiency, share findings, and avoid redundancy.

- Giving special focus to the role that Mexico might be able to play as a lower cost center of manufacturing in the semiconductor field as firms try to relocate production closer to the US out of security and resilience concerns.

Medical Supplies:

To foster a more competitive North America, the value of the healthcare industry ought to be recognized. While essential supply chains are strengthened and protected. The current nearshoring of American medical supply chains should be capitalized on and guided to encourage good outcomes for public policy. The US already imports large quantities of medical products from Canada and Mexico.

Canada ranks fifth for total COVID-19 related products and pharmaceuticals imported by the US. Canada and the US have also harmonized regulations in personnel areas such as nursing, but more work is still needed^{xviii}. North America has a unique advantage in this area, due to the existence of previous cooperation measures such as the TN visas as part of the USMCA facilitating easier travel for recognized professions^{xix}.

Mexico is also the largest exporter of medical instruments in Latin America and its market share of medical devices and pharmaceutical products in the US has risen to 28% and is expected to continue rising^{xx}. Deepening the regional integration of medical cooperation and supply chains will help to bolster the preparedness of all three health sectors in the face of a crisis, and it might help to move Mexico out of its middle-income trap, according to one study.

Some key areas of cooperation that can be expanded are addressing the lack of communication and data sharing through the creation of a national trilateral committee, with task forces under such a committee to maintain live databases. To address one of the largest bottlenecks in the medical supply chain, quality control, a focus should be placed on the training of inspectors and aligning Good Manufacturing Practice (GMP) compliance regulations in all three partners. Furthermore, to build supply chain resiliency, companies that do not keep surplus supplies should be given economic incentives to do so. Scaling up production on short notice is difficult given the risk that demand plummets post-crisis, so such incentives must be institutionalized. Finally, a nursing personnel shortage exists across the region, with Mexico suffering the most in terms of nurses to population (at a rate of 2.8 nurses per 1,000 population compared to the 9 to 1,000 OECD average). There have been improvements, particularly with Canada's adoption of the National Council Licensure Examination (NCLEX) in 2015, but more cooperation would be beneficial for healthcare across the region.

Recommendations:

Forming a North American Committee on Health and Pandemic Preparedness (NACHPP)

- This body could be set up under the NALS and be composed of delegates from the HHS, Health Canada, and Mexico's Secretariat of Health along with others. Its mission would be to serve as a platform for facilitating cooperation in medical supply chains and regulations, as well as assessing systemic vulnerabilities.

- The new committee would also explore the regularization and institutionalization of data sharing through the creation of a shared database. New MOUs may be necessary, but such a live-updated database could allow for ease of access by regulating agencies in all three trilateral partners. The task forces mentioned below would go under this new Committee and data sharing mentioned below would go under this joint database.

Mapping of supply chains and predicting demand in the fields of medical device, pharmaceuticals, and medical surgical products

- Creating a task force for supply chain mapping within the Committee database, which could include personnel from the FDA, Canada’s Health Products and Food Branch (HPFB), and Mexico’s Federal Commission for the Protection against Sanitary Risk (COFEPRIS). Such a map can be built based on existing mapping requirements for the ensuring of GMP.
- Creating a task force to identify demand surges, drawing experts from the FDA, the HHS (specifically the Office of the Assistant Secretary for Preparedness and Response and the CDC), Health Canada (supported by the Public Health Agency of Canada (PHAC)), and Mexico’s National Center of Technological Excellence in Health (CENETEC) and COFEPRIS.
 - As part of a broader COVID “After Action Report” (AAR), these same agencies could work together to identify potential demand surges through reviewing shortages and surpluses from the pandemic to make targeting policies towards specific vulnerable supply chain areas easier, adjusting stockpiles and planning as necessary.
 - Similarly, the three governments could ask their experts to begin to map hospital capacities by enlisting states/provinces and local governments to help build what would become a federal and then North American database.
- An important goal would be to provide transparency and a clear “end to end” visual of the medical supply chains for both the private and public sectors to adjust production. Drug regulation agencies in all three countries (FDA, COFEPRIS, and HPFB) should lead their domestic efforts through observance of GMPs and sharing the relevant data.

Establishing agreements on ways to give incentives for maintenance of surge capacity through programs such as the signing of reserve contracts and providing reimbursements for hospitals which build surge capacity in accordance with serviced population size.

Harmonizing medical manufacturing regulations with a focus on Mexico

- Establishing Mutual Recognition Agreements (MRAs) on finished pharmaceutical and biological products with Canada and providing an expedited approval process on these same products with COFEPRIS.

- Recognizing the lower capacity of Mexico’s health system, the FDA (and possibly Canadian counterparts) could work with COFEPRIS in providing joint approval for non-controversial pharmaceutical products (such as aspirin).
- Establishing a joint program for training of inspectors between the FDA and COFEPRIS. Such a program should allow COFEPRIS inspectors to train and work at the FDA and vice versa. If successful, such a program can also be expanded to other agencies.

Nursing regulation harmonization with a focus on recognizing Mexico’s professional certification process

- Encouraging the creation of a standardized test for bachelor-level nursing in Mexico with the goal of joining the NCLEX in the future.
 - Establishing a task force composed of key stakeholders, including the US and private partners, to encourage testing standardization and its recognition of equivalency with the NCLEX in Mexico.
- Encouraging study abroad programs for nurses in the region to standardize qualifications while building language and cultural capacity. Incentives for studying in Mexico would expand beyond future career options abroad, but also in better serving the growing Hispanic community in the US.

Border Management:

Efficient border management - encompassing policy framework, transportation, infrastructure, processes, and emergency mitigation - is essential to maximize the economic benefits of trade and legal cross-border movement between the three countries. To achieve this, more collaboration is needed, focused on improving efficiency in the movement of goods and people across the border, while enhancing security.

Trilateral Border Framework

To effectively improve cross-border operations and adequately engage on key issues, creating a new standardized North American framework on border management is crucial. Multiple border experts that the research team consulted discussed how current approaches to the border are disjointed because of inadequate communication, collaboration, and deep knowledge of daily border operations. These experts argued the lack of a cohesive framework also impedes progress on border management when changes in presidents and prime ministerial administrations occur. New leaders may change the staff of border management committees or cease unfinished projects or processes, for example.

A well-crafted and institutionalized border policy framework should serve as a guide for the various aspects of border operations while allowing for adaptations for the specific needs of the northern and southern borders. The team believes such coordination should be governed with a trilateral component where common issues, processes, and procedures can be developed

and agreed upon. The trilateral framework would bless two bilateral processes that address the specific needs and demands of each border, work to modernize and improve safety and efficiency on each border, accounting for specific threats and challenges, and consider the unique needs of northern and southern border communities.

To ensure good coordination, measurable results, and common objectives, we recommend holding a trilateral ministerial meeting annually, that includes relevant agencies from all countries. Border stakeholders should be well integrated into the bilateral and trilateral processes.

The trilateral framework should deal with border issues facing the three countries and aim to regularize border procedures and processes, while binational working groups between the US and Mexico and the US and Canada would collaborate on the vital issues specific to each border and their respective border states and communities.

Binational Border Framework

The binational working groups established under the trilateral framework mentioned above can develop effective border management through dynamic cooperation on issues including border processes, technology, infrastructure development, environmental problems, and border emergencies. Though binational working groups on border issues exist currently (such as the US-Mexico 21st Century Border process), having targeted working groups governed by a wider trilateral framework can help to cement their credibility in developing effective change and to ensure sustainable implementation.

We believe that the two bilateral processes could hold ministerial meetings along with stakeholders between the annual trilateral meetings, allowing for strong discussions on both bilateral and trilateral issues. Following these meetings, the ministers could give an annual progress report at the NALS.

Border Processes

Within trilateral discussions on border management, all three North American countries should create a modernized and uniform system of processing people and goods. Both the 2014 and 2016 NALS discuss objectives for improving cross-border processes. Current border processes such as preclearance, unified cargo processing (UCP), radio frequency identification (RFID) cards, joint inspection, and trusted traveler programs (NEXUS, SENTRI, Global Entry, FAST) have been effective in improving cross-border flows and should be expanded.

The 2016 NALS agenda specifically highlights the use of innovation and technology in border processing as an important way to improve cross-border flows. Cross-border movement on the Canadian and Mexican sides can be enhanced with preclearance systems that initiate processing for goods prior to a vehicle reaching the border, thus reducing wait times. Furthermore, using data-sharing processes will increase the efficiency of cross-border movement.

Technological tools aimed at addressing specific challenges at each border must also be considered. A major issue particular to the US-Mexico border is human, drug, and arms smuggling that can be targeted with advanced technology.

The team was told that both borders face the challenge of being understaffed, particularly among Customs and Border Protection (CBP), bridge officers, Mexican Customs authorities, and the Canadian Border Services Agency (CBSA)^{xxi}. These staff shortages prevent lanes from being able to run at full capacity and slow down cross-border traffic, according to the experts that were consulted. Data on border patrol staffing from February 2020 reports that 1,324 positions across the southwestern border patrol sector were unfilled and the staff is unequipped to use the technology that is in place^{xxii}.

Cross-Border Transportation and Infrastructure

The experts with whom the team consulted argued that all three countries need to modernize, expand, or create border infrastructure to enhance regional competitiveness. However, the completion of border infrastructure projects is put at risk due to their scale, time commitment, and inadequate funding. To manage these challenges, a trilateral working group focused on infrastructure planning should be established. Along with this, creating a North American border infrastructure development bank, perhaps by transforming the North American Development Bank, would build funding for projects and manage coordination between both sides of the border.

The Infrastructure Investment and Jobs Act signed by President Biden allocates \$3.6 billion for infrastructure modernization projects at border stations and ports of entry (POE)^{xxiii}. As the US engages in domestic interagency consultations, it should also coordinate with Mexico and Canada to identify the best places to invest in infrastructure. Existing groups such as the US-Canada Transportation Working Group and the US-Mexico Joint Working Committee on Transportation Planning focus on trade infrastructure, but their plans are at least two years outdated due to the lack of attention under the Trump administration and they did not collaborate sufficiently with the private sector.

Effective communication between local and state/provincial governments, and the private sector will facilitate the construction projects at the borders. Close collaboration on infrastructure projects would prevent a repeat of the “bridge to nowhere” between El Paso Texas and Ciudad Juárez, Chihuahua^{xxiv}, where the US built infrastructure on their side of the border, but Mexico did not follow through on theirs.

The existing infrastructure on the US-Mexico border is unable to meet the increased demand for crossings. Building new bridges and POEs, expanding lanes, and building stacked highways would accommodate more travelers. On both borders, investing money in intelligent transportation systems (ITS) to share data on traffic patterns and wait times to bridge users will ultimately help streamline traffic management. For example, the US and Mexico currently have separate ITS systems, which should be connected to share data that will allow for more holistic visibility of the conditions on both sides of the border.

In this connection, we welcome the commitments during the July visit of Mexico's President to Washington for a concerted investment program for border infrastructure and Mexico's pledge to invest \$1.5 billion as part of this effort during 2022-24.

Environmental Issues

The three countries should agree on prioritizing the environment when addressing trilateral border management. There are various groups between the US and Mexico that are committed to working on environmental issues at the border. The EPA and Mexico's Secretariat of Environment and Natural Resources created a US-Mexico Border Program called Border 2025^{xxv}. The North American Development Bank works on financing environmental infrastructure projects and collaborates on the Border 2025 program^{xxvi}. For example, the EPA recently distributed new air quality monitors to the Tijuana/San Diego region to address air pollution emitted by cars waiting to cross the border^{xxvii}.

Border Emergencies

Emergency management of border crises are largely neglected due to their unique nature. Given the reminders of recent border shutdowns from truckers, the trilateral ministerial could beneficially create an MOU to address various types of emergencies at the border ranging from man-made to natural crises such as demonstrations, forest fires and floods.

Most recent, binational events, truckers protesting vaccine requirements to cross the border were disruptive to the flow of goods and people at the US-Canada border^{xxviii}. At the US-Mexico border, Texas Governor Abbott implemented extra vehicle screenings that significantly increased traffic and disrupted the usual trade flows^{xxix}. Additionally, the US-Mexico border experiences immigration challenges of greater magnitude than does the US-Canada border. And then, of course, there is COVID-19. Recently, the USMCA Competitiveness Committee signaled their intent to build a trilateral process to guarantee the flow of goods throughout the region even under emergency situations. The Committee is cooperating on the possibilities of increasing funding and attention to key infrastructure along the borders as well as enhancing communications between all three partners. This momentum for trilateral cooperation on border emergency management should be capitalized upon to create comprehensive plans as outlined in the recommendations below.

Health Crises

When COVID-19 shut down the borders in March 2020, there was much confusion as to which industries and travelers were essential enough to cross the border which impeded border operations^{xxx}. Additionally, providing health documentation at the border is essential to ensure that travelers are healthy and do not spread diseases during COVID-19 and future health crises. A standardized and mutually accepted process would be very useful. Canada has utilized the ArriveCAN app to provide health documentation such as proof of vaccination or a negative

COVID test which is especially effective because travelers can know beforehand whether they will be permitted to cross^{xxxi}.

The three countries have committed to combating COVID-19 at the last NALS by updating the North American Plan for Animal and Pandemic Influenza (NAPAPI). The NAPAPI had served as a baseline for past pandemic and health crisis scenarios, building from experiences during the 2009 H1N1 pandemic. During COVID-19, the NAPAPI helped facilitate contacts between health and government counterparts across all three neighbors, but it did not play a central role in cooperation, and there are multiple areas that can still be improved upon. As medical supply chain resiliency will involve the management of the flow of goods between countries during a crisis, it should be in a new plan's purview. Though critical infrastructure is included in the NAPAPI, medical supply chains are not specifically mentioned, nor are they incorporated into existing critical infrastructure action plans. Planning for intra-continental travel and guidelines for post-pandemic normalization would also be beneficial for cooperation given their criticality to preventing breakdowns during medical emergencies.

Recommendations:

Establish Trilateral/Binational Framework

- Developing a trilateral ministerial framework on border issues, under which shared objectives are defined, working groups are established, and progress is measured and reported to leaders. Separate bilateral policy and management processes should continue and be improved, consistent with the more limited trilateral agenda and process.
 - Implementing bilateral ministerial meetings between the US and Canada and the US and Mexico should take place between the trilateral meetings, possibly meeting twice a year to have ongoing discussions on border policy and identify areas for greater collaboration and engagement.
 - Developing binational working groups, one for the US-Mexico border and another for the US-Canada border, that meet more regularly to address specific areas needed to better manage each border.
- Including the private sector and other border stakeholders (border groups, innovators, private companies, border communities) that have invaluable knowledge about everyday border operations in the policy and management processes.
- Developing a cooperative research program, modeled after those run by the National Academy of Sciences, and composed of industry members, government officials, border experts, and academics.
 - The details of this program could be worked out with others, but the overall idea would be that public and private stakeholders could suggest problem areas for research, some of which would be selected for priority action. Funding could be federal, state, or from the private sector with the process to be developed.

Border Processes - some priority examples

- Utilizing funding from the Infrastructure and Jobs Act to fill staffing vacancies at POEs, as outlined in CBP's 2021-2026 Strategy.
 - Expanding the recruitment of CBP officers in border regions.
 - Increasing training for CBP officers on border processes and technology management.
- Expanding the use of technological tools for border processes and implementing pre-clearance systems to better initiate processing of goods and people prior to reaching the border.
 - Utilizing tools including Trusted Traveler Programs and data-sharing between countries.
 - Creating a North American Single Window Initiative (SWI) to establish a unified system for electronically importing regulatory information and streamlining shared commercial data between countries.
 - Expanding GPS tracking for trucks from their origin facilities to the border.
 - Increasing the use of facial recognition technology for travelers.

Cross-Border Infrastructure and Transportation

- Coordinating infrastructure planning through the creation of a trilateral working group that would gather data on long-term infrastructure projects, develop funding, and build staffing capacity.
 - Seriously reviewing the pros and cons of establishing a North American Infrastructure Development Bank to fund infrastructure projects on both borders.
 - Developing stronger and more efficient binational border infrastructure working groups that coordinate closely on border investment and on the process of construction projects.
- Investing in ITS and connecting systems to share data on traffic flows and wait times bilaterally.
- Creating and implementing pilot projects to improve border flows. These projects should be developed and overseen through collaboration between bridge companies, border groups, academics, and the private sector.
- We welcome the US and Mexican commitments made during the July visit of Mexico's President to Washington and look forward to similar commitments on the US-Canada border.

Environmental Issues

- Creating an MOU to consider the environment as a priority when negotiating trilateral border management agreements

Border Emergencies

- Developing an overarching MOU to help address a range of emergencies at the border that could disrupt trade flows including the public and private sector.

- Include a virtual crisis center for better emergency communication between agencies and stakeholders.

Health Crises

- Creating a Trilateral Health Crisis Working Group under the new NACHPP that is adaptable to changes in COVID-19 and future health crises.
 - Defining what is considered an essential industry and essential traveler by the next NALS.
 - Requiring mutually acceptable health documentation in border processes utilizing modern technology for border preclearance and quick passage modeling Canada's ArriveCAN app.
- Revitalizing Border Health Commissions and Councils.
 - Increasing funding and attention to border health organizations, primarily the US-Mexico Border Health Commission and the Canada-United States Pan Border Public Health Preparedness Council.
 - Conducting joint lessons learned examinations of the Commission, with the aim of replicating Mexico's success in continuing operations during crisis.
 - Reopening both the Commission and Councils' websites and returning both to acting as forums for communication on a federal bilateral basis as well as on a local level between key stakeholders.
- Revising the NAPAPI to reflect lessons learned from COVID 19 and incorporating major stakeholders including private sector professionals into the new plan and processes.
 - Conducting internal research regarding each country's responses and relevant lessons from COVID that could be applied to the NAPAPI. The concept of revisions should be agreed upon in the 2022 NALS, to be followed by a ministerial level meeting. Under the leadership of the HHS, Department of Homeland Security, and the Department of Defense's Defense Health Agency, revisions can begin on the US side. Revisions should be completed within a specific timeline.
 - Preserving supply chains.
 - Incorporating language regarding the building of resiliency in medical supply chains.
 - Placing renewed emphasis on data sharing, particularly surveillance and surge capacities.
 - Planning for intra-continental travel
 - Including more language detailing regulations and planning for preventing spread intra-continent via air travel. Such should include more detailed health screening procedures, who is allowed to travel and what essential travel is defined as.
 - Planning for normalization

- Including guidelines for the normalization of borders and activities post-crisis, stressing cooperation and communication between all parties, and looking towards harmonizing timelines and regulations.

Energy, Conservation, and Climate Change:

Energy Security and Supply

The majority of North America still uses natural gas heating, and most people rely on high emissions energy sources. Policies that increase the use of renewable energy will further energy independence and will decrease costs for all North Americans. The convening power of US agencies working with Mexico and Canada have the capacity to increase the number of renewable projects that are underway. Consulting energy and utility companies on investments in large scale solar and wind projects are needed to meet the set goal of carbon neutrality by 2050. The Canadian government has been willing to work on energy, and the US must continue the push forward on that front. More work must be done to convince Mexican leadership and the Comisión Federal de Electricidad (CFE) that clean energy is cheaper and easily available when working with North American partners. Private procurement of renewable energy is the first step in driving innovation and demand in all three countries. Monitoring and reducing black carbon and methane emissions, particularly in the oil and gas industries, is crucial in protecting our environment. In this connection, we welcome the commitments made during President Lopez Obrador’s July visit to Washington on several environmental issues including methane and excess flaring from PEMEX facilities.

Conservation

The goals set forth concerning conservation of land and waterways in the 2021 NALS have not been measured or reported. It will be essential to follow up on the targets set forth by North American leaders. The team believes that North America must recognize the intersectionality that conserving the land and water has with national security, foreign policy, economic prosperity, public health, and facets of everyday life. On the US-Canada border, the International Joint Commission (IJC) and on the US-Mexico border, the International Boundary and Water Commission (IWBC) manages border waterways. While US-Canadian waterways do not face the same drought risks as their Mexican counterparts, they still need persistent management to protect habitats and water quality that cross borders. Despite some advances, North America faces a list of risks to its waterways that include decreasing water quality due to nitrogen levels, new and emerging contaminants, water scarcity from record droughts, overdrawing aquifers, the hydro independence of the agricultural sectors, and deteriorating ecosystems among others.

Mexico faces serious challenges with waterways and groundwater that are subject to water theft and mismanagement from “big agriculture” that worsen the effects of droughts^{xxxii}. There have been improvements in binational and subnational collaborations such as the creation of the Mexican Water Reserve that is combined with the water reserves of the Southwestern

United States. This allows for increased data sharing, better regional water distribution and positive outcomes for the environment^{xxxiii}. Improvements also contributed to the prioritization of the environment as a “water user” and included a provision that let the United States finance flows of water and environmental restoration on waterways in exchange for water stored in the Mexican Water Reserve^{xxxiv}.

Recommendations:

Exploring energy supply expansions with a trilateral agreement to study the best locations for solar and wind development

- Use the efforts of the DOE and EPA in conjunction with agencies in Canada and Mexico to produce a report in a year's time. This can add extra rationale to the arguments for more “green” energy projects. Before any project can begin, there must be planning to help identify promising sites. Combining the efforts of energy agencies to find development areas that are environmentally friendly and having a list of these will make it much easier for projects to get underway.

Using diplomatic missions aimed at creating collaboration between the DOE and CFE with the technical assistance of companies to develop solar, wind, or other “green” energy projects.

- Continue high profile visits by Secretary Kerry, Secretary Granholm, and others to generate more awareness and further progress. Given the current state of the Mexican energy sector, an emphasis should be placed on diplomatic cooperation and collaboration at the working level. Encouraging such engagement and finding a middle ground could lead the way to a better US-Mexico relationship. In this connection, we welcome the indication that Mexico’s national oil company, PEMEX, will accept US technical assistance to reduce flaring from its facilities

Using tax incentives, financing programs to increase on-site renewable production

- Creating a trilateral working group to devise financing programs for North American companies to upgrade and implement on site renewable energy.

Establishing North American Standards on New Construction and Renovation

- Building on International Codes already widely in use to create an elevated standard for North America. Creating a trilateral working group to start conversations with a draft of standards due in 6 months. Solidifying the use of green energy technology in buildings by creating a set of progressive standards that allow adjustment periods for firms.

Developing a coordinated plan to expand the North American solar industry

- Subsidizing and giving tax incentives to companies who produce in the United States, Canada, or Mexico and prioritize cross border supply chains.
- Reinstating the 48C Manufacturing Tax Credits offered by the DOE and developing a nationalized renewable portfolio standard.

Creating more integrated grids across borders through work by the three energy ministers and cross border partners.

- Increasing the flow of Canadian hydropower by working with Canada's Office of Energy Research and Development as well as stakeholder utility companies.

Unifying standards for emissions monitoring, data collection and data sharing

- Focusing on emissions monitoring technology and reporting standards that are ubiquitous across oil and gas producers, along with regular evaluations of whether standards are being met.

Working to shift the Mexican investment landscape through public diplomacy efforts

- The state department could take the lead in developing a PD campaign targeting Mexican audiences. Emphasizing how large audiences can be reached with ease through social media and other new PD efforts. Informing both citizens and companies of the vast investment potential in Mexico is crucial in generating growth. Steps need to be taken to work with the Mexican government on this issue now.

Creating a trilateral task force designated to track and regularly report on conservation efforts

- Engineering a mechanism to measure progress on conservation efforts laid out in NALS 2021
- Working within the IWBC and IJC to expand Binational Water Scarcity Contingency plans, protect water quality, conserve water habitats along border areas and downstream regions.
- Convening regularly with EPA, DOI, Natural Resources Canada and the Mexican Secretariat of Environment, Natural Resources and Fisheries to expand data and information sharing on conservation and preservation challenges within North America.
- Building upon the program that links protected lands across Canada, Mexico and the US that can share techniques or strategies to combat challenges from climate change and pollution.
- Expanding dialogues between city and state leaders and the North American Commission for Environmental Cooperation to exchange knowledge and practices for climate change action.

Information and Communications Technology Sector:

The current ICT sector in North America can be summed up in two groups. The first, the US and Canada, already possess some of the most well-developed ICT spaces in the world and are currently focused on improving their coverage of 5G broadband networks. Mexico still has a significant number of its population that does not have access to the internet. The current Mexican administration has launched a promising initiative, *Internet para todos* that seeks to give all Mexicans free access to the internet as a human right. This initiative comes with both drawbacks and potential, as there are several factors in Mexican ICT development that are worrying to the US and Canada in addition to several opportunities for investment as Mexico cannot achieve this goal alone. If the internet systems in Mexico are not improved, North American companies and manufacturing networks will likely suffer, with negative effects on potential investment in Mexico.

The Mexican ICT space is becoming increasingly undesirable for foreign investment. Much of this diminished faith stems from the President's critical position towards the Federal Telecommunications Institute (FTI), Mexico's independent ICT regulator. He has neglected to appoint any new FTI commissioners, leaving few people on the board. If the trend continues, it could lead to no commissioners on the board, leaving the organization essentially paralyzed^{xxxv}. The administration has also considered merging the FTI under other agencies such as the Institute for Access to Information and the Federal Commission for Economic Competition. These policies limiting the FTI's power are happening in combination with cuts to Mexican federal spending, one of the Mexican administration's campaign promises, and lobbying on the part of the private sector actors like America Móvil, which wants to maintain its advantageous market position. One negative side effect of this hostile environment is the recently implemented spectrum fees which further undermine competition. Spectrum fees must be paid in order to use a given "spectrum" of a wavelength. Mexico now has the highest spectrum fees in Latin America^{xxxvi}.

Another serious concern for the North American continent is Mexico's shift towards Chinese companies for investment in its ICT sector, notably Huawei. In Mexican markets that are not dominated by America Móvil, Huawei is developing ICT infrastructure at cheaper rates. However, many US experts worry that Chinese officials are embedded in their administrative structure, which will give the Chinese government an avenue to exercise control over Mexican ICT networks. This threat is demonstrated in the recent FBI discovery that Huawei made hardware could have the potential to disrupt US Nuclear capabilities. While Chinese companies may be efficient in respect to the bottom dollar, Chinese control over another country's ICT sector poses a variety of security risks, especially a close neighbor and partner like Mexico^{xxxvii}.

Mexico also has the weakest ICT sector in North America and the poorest cyber security system. The role of the private sector is thus especially important in Mexico, however, because of the public's general distrust of the government and because companies have much to lose from weak cybersecurity defenses and poor internet systems.

Recommendations:

Trade Mission:

- Sending trade missions to Mexico and taking other steps with the goal of bolstering investment in the Mexican ICT sector.
 - Giving the private sector a seat at the table to ensure deals are economically dynamic.
- Urge lowering spectrum fees for foreign investors.
 - The proliferation of the fees makes investment from foreign companies unattractive.
- Trying to gain Mexican support for a trilateral plan *to build a stronger North American ICT system*.
 - Framing the proposal to achieve *Internet para todos*, where progress has recently stalled.

- Clearly identifying where investment could best be used and considering what if any incentives might be used.

Private Sector Outreach Events

- Holding at least three events, one in each nation, where conversations are facilitated between businesses to create goals and understanding, give presentations on the ICT landscape and international trends, and deliver briefs on global threats that firms may otherwise be unaware of, specifically China's attempts to control ICT sectors.
 - Events could be hosted by each nation's Department of Commerce. The agenda will be set to cover security and economic problems.
- Taking steps to spread awareness for the importance of the ICT sector and what can happen if their security is not taken seriously through public diplomacy efforts, perhaps working with business chambers.
 - Making points about the future of all economies being digital, and that potential cyber threats will only grow.
- These events can lead up to a final ministerial mission/event. Discussion points gathered from attendees will be placed on the agenda of the ministerial mission.

Threat from China

- Creating a detailed argument on the Chinese security threat to the Mexican government.
 - Discussing and providing intelligence, further streamlining, and making a more convincing argument, to help Mexico understand the ramifications of a Chinese-run ICT sector.
- Agreeing on an intelligence sharing agreement in relation to Chinese activities and how they affect actors.
 - ICT infrastructure being used to help China gain insights on a nation's negotiating stance.
- Developing similar means to share concerns and facts more broadly in Mexico via public diplomacy efforts.

Improving Cybersecurity:

During NALS, the three countries have agreed to hold a Trilateral Cyber Experts meeting to address growing concerns in 21st century economies. While this is an important step, it is underscored by Mexico's lack of an independent cybersecurity agency, comparable to the US Cybersecurity and Infrastructure Security Agency (CISA), and the absence of a National Cyber Security Strategy. The US and Mexico have agreed to work together to strengthen their mutual cybersecurity, using the "Framework for Improving Critical Infrastructure Cybersecurity" published by the National Institute of Standards and Technology^{xxxviii}. Strong faith in a nation's cybersecurity is important, something that is underscored by Mexican's general distrust of their

government^{xxxix}. The private sector is in the current moment a better contender for holding the trust of the Mexican people^{xl}.

Recommendations:

Cyber Security Meetings:

- Agreeing to a regular policy dialogue among appropriate interagency representatives of the three governments including from the State Department, Canadian Ministry of Foreign Affairs, Mexican Ministry of Foreign Affairs, American CISA, Canadian CCS, and the Mexican National Guard.
- Discussing and agreeing upon the role of the private sector so firms know what to expect across all countries.
 - Similar to the ICT outreach event, it is important to include them in these discussions. The emphasis on this event will be best security practices, rather than the threat of China as a stakeholder.
- Urging Mexico to spend increasing money on cybersecurity, with the long-term goal of having an independent Mexican cyber security agency.
- Deploying an information campaign to encourage private companies to accept more responsibility for cybersecurity is important in making the market more palatable to investors.

Conclusion

The US, Mexico, and Canada constitute the often overlooked force that is North America. It should be stressed that analyzing challenges and finding solutions through a North American framework rather than solely a US lens is beneficial in a world that is increasingly organized around regional blocks for economic and commercial activity. The issues the continent faces today do not stop at the borders - they are pervasive.

North America's plan for enhanced competitiveness should include more than the priority areas incorporated in this report. Our team hopes that the three countries agree to commit to the North American Leaders Summit as an annual meeting. A cooperative trilateral agenda is crucial to having a well-informed North American public that have a vested interest and are willing to engage in regional issues. It is going to take more than one annual meeting to engage with the people of the region. Serious public outreach efforts by all three governments are crucial to build a trustworthy relationship among neighbors and to explain the value of cooperation among Canada, Mexico, and the United States. The recommendations in this document can help pave the way for a more integrated and competitive North America that can maintain its economic edge in the world.

List of Key Recommendations

Supply Chains

- Developing stronger initiatives to understand and reinforce multiple resilient supply chains within North America in key areas such as critical minerals, batteries, electric vehicles, clean energy, semiconductors, and other sectors identified to be essential.
- Issuing regular reports on progress and offering opportunities to evaluate work underway, with a updates issued before the next NALS.

Critical Minerals

- Agreeing on and implementing a North American critical minerals strategy that outlines mineral exploration, processing, and refining; and standardizes permitting and regulations across North America.
- Ensuring that stakeholders, environmental groups, indigenous people, and local communities are regularly involved in discussions and kept well informed with progress reports.
- Increasing research and development of clean mining technology, mineral waste recovery, and the forecasting of future critical minerals needs.

Batteries and Electric Vehicles

- Expanding recycling programs for batteries and other electronics with similar and compatible approaches across the three economies, as the continent progresses toward wider battery use.
- Engaging in a dialogue among North American governments to reach an agreement on a united approach to, and an agreed upon definition of, the concept of a North American electric vehicle (EV). Then, working together to explain this concept to key stakeholders and the public.
- Upgrading EV charging infrastructure with as much coordination as possible and agreeing to have similar consumer incentives across the three countries.
- Creating new investment avenues for EV industry development, enhancing related research and development programs and cooperation, and creating agreed norms and standards across the region to facilitate development of the sector.

Health

- Establishing a trilateral North American Committee on Health and Pandemic Preparedness under the NALS framework which would meet annually.
- Building and maintaining a live database of medical supply chain maps, border health capacities, and of good manufacturing practices for use during normal functions and during demand surges.
- Enhancing cooperation between the trilateral pharmaceutical and medical regulatory agencies through exchange programs as well as considering the establishment of a Mutual Recognition Agreement on finished pharmaceutical and biological products between the US and Canada and an expedited review process between the US and Mexico.

- Assuring that private sector actors are well integrated into these efforts.

Borders

- Establishing a regular trilateral ministerial meeting, as well as reinforced bilateral processes, to address border issues. The border dialogues should include the private sector and sub-federal governments in policy deliberations.
- Holding frequent bilateral meetings on border management to create dynamic dialogues that help solve existing problems, promote strong plans to modernize the border including implementing new technology, produce efficient and compatible regulations, and encourage well-coordinated decisions on infrastructure and related resource allocation issues important for well-functioning and “cutting edge” borders that enhance security and prosperity.
- Assuring good and rapid implementation of the recent US-Mexico announcement on border infrastructure and doing something similar on the US-Canadian border.
- Developing an overarching Memorandum of Understanding (MOU) to help address a range of emergencies at the border that could disrupt trade flows including the public and private sector and including a virtual crisis center for better emergency communication between agencies and stakeholders. Building on the welcome July commitment of trade ministers to task the USMCA’s Competitiveness Committee to begin work in this area.

Energy, Conservation and Climate Change

- Exploring energy supply expansions by researching rapidly the best areas for solar and wind development and ways to support “green” energy investment. Again, welcoming US-Mexican commitments in July in this regard
- Creating more integrated grids across borders by working with US, Mexican and Canadian authorities, and cross border partners outside of government. (This will require more coordinated planning work.)
- Establishing mechanisms to monitor and assure that climate-related goals in the 2021 NALS are achieved and ensuring a process to build trilateral cooperation on additional areas to help all three countries meet Paris agreement targets.
- Increasing data sharing, expanding cross border dialogue, and funding research into the effects of climate change, water insecurity and deforestation, to meet and advance the goals set forth in the 2021 NALS.

ICT and Cybersecurity

- Developing specific programs to enhance internet connectivity across the continent with a special focus on bolstering ICT systems in Mexico, all while working in close partnership with North America’s private sector.
- Developing a robust trilateral process to address key cyber threats, including holding a trilateral Cyber Security meeting, as agreed upon.
- Agreeing on plans and steps to enhance cybersecurity across the continent and within the interconnected production and commercial networks that are so important to shared prosperity.

- Building a close partnership with the private sector in cyber initiative implementation and encouraging help for Mexico to develop a cyber infrastructure that better supports the USMCA marketplace.

Endnotes

Note to go at the bottom of the first page or at the start of the endnotes.

The authors of this report, Leon Cao, Nina Ellard, Kyle Homschek, Nathan Hurner, Ana Pereyra, Paul Sutton, Noemí Wilson, did their research in preparing a Diplomacy Laboratory project during the spring semester of 2022 at American University’s School of International Service sponsored by the Department of State, under the supervision of Distinguished Diplomat in Residence Earl Anthony Wayne. After finishing the Diplomacy Lab project, the authors continued to refine their research and update the report over the summer with the support of Ambassador Wayne. Kyle Homschek deserves special recognition for his dedicated work in coordinating the continued research and editing to make this enhanced and updated report possible.

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