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## Discussion with Senator Maria Cantwell

The Thompson Consulting Group and the Blueprint 2025 Coalition convened a productive discussion with Senator Cantwell and her staff to exchange views on the path forward for restoring the U.S.’ position as the country with the World’s best and most innovative infrastructure—opening the way for leadership and prosperity in the “Fourth Industrial Revolution”.

**The Objective** – This meeting convened on the day immediately following announcement of historic consensus at COP 28 requiring a “just, orderly and equitable transition away from fossil fuels” while protecting biodiversity, ecosystems, and other environmental values. The new agreement sets ambitious environmental and carbon reduction goals and sets out a menu of recommended mitigation approaches but it also, for the first time, recognizes the appropriate, to a large extent discretionary, roles of countries, communities, investors, companies, and consumers in the process for selecting and applying means of implementation. The companies at this meeting represent cutting edge technologies and implementation approaches recognized and encouraged by the COP 28 consensus. They participated in this meeting in order to explain these technologies and suggest a policy framework which will promote innovation to allow U.S. infrastructure to accommodate the COP 28 transition while, at the same time, developing our economy.

**Technologies and Projects** –The discussion focused on a host of energy and transportation and projects and reflects the work of a broad cross section of the innovators and developers who are leading U.S. infrastructure’s transition into a digitalized, electrified and data driven age. The discussions summarized below illustrate both the potential of innovative infrastructure to support continuation of U.S. global leadership and the need for policy refocuses to allow and encourage productive innovation.

**The Ohio Route 30 Opportunity Corridor** – (Tom Mosure, Chair, MS Consultants) This project will demonstrate the use of a New American Model approach embedded in innovative legislation recently enacted by the State of Ohio. The new law authorizes a regional transportation entity (RTIP) representing three disadvantaged and energy impacted counties in eastern Ohio to plan and manage the development of a mile wide extended corridor along a key segment of the historic Lincoln Highway between Canton, Ohio and Pittsburgh, Pennsylvania. By assessing and valuing the revenue streams which can be generated through concessions for productive right of way uses, the RTIP will convert the highway and its right of way from a single purpose pass through for cars, trucks, multi modal transport (rail) and busses to an engine for beneficial multipurpose development—motivating private sector investment to offset the public costs of the improvements and maintenance and, at the same time promoting development which benefits the affected communities through promotion of beneficial development and creation of continuing revenues. As conceived, the project will also develop and demonstrate advanced systems for community engagement and project planning, design, procurement and management. To facilitate the advancement of this project, an innovation encouraging attitude from the primary regulatory agency (USDOT) is needed. We need the Build America Bureau to be empowered and given the resources to provide advice and technical assistance to help RTIP finalize and implement its development and financing plan. Finally, we need USDOT authorization to

use the 2019 BUILD Act funds to demonstrate this innovative financing mechanism, thus allowing advancement of the 2019 BUILD Act's purposes.

**The West Virginia Advanced Energy & Economic Corridor**, a project focused on a stretch of highway in an energy impacted area south of Huntington, West Virginia is similarly in need of an innovation-friendly USDOT to provide advice, support and technical assistance to complete work to finalize and implement the project and the *Autonomy Institute* is collaborating with Texas cities and agencies to develop the corridor along **Texas' SH130 tollway** as an intelligent corridor supporting Public Infrastructure Network Nodes and an intelligent corridor to support automated freight and delivery, autonomous vehicles and advanced service communities.

These projects can work together to demonstrate an effective new paradigm for designing operating and financing not only highways but a wide variety of public and public/private infrastructure projects. We know that there are not enough public funds to maintain and upgrade even our conventional roads, streets and bridges, much less the infrastructure of the 21<sup>st</sup> century. Projects like this should be strongly encouraged and not handicapped by old ways of thinking or obsolete policy precedents.

**Par Pacific/U.S.** - Par Pacific Holdings is proposing a state-of-the-art renewable fuel production unit within its existing 42,000 barrel per day refinery located in Tacoma, Washington. They are also investing in a renewable fuel project in Hawaii that they own. The new facility in Tacoma will produce low carbon fuels to serve local and regional demand while supporting industrial decarbonization in Washington State. Par Pacific operates its renewable fuels to reduce lifecycle carbon emissions by greater than 50% when compared to traditional fossil fuels.

The renewable fuels project will consist of two primary components. A renewable fuels unit and a green hydrogen unit. The two units will produce up to 15,000 barrels per day of low carbon fuels including sustainable aviation fuel, renewable diesel, and renewable naphtha. The world scale 65- megawatt green hydrogen unit will be one of the first of its size in the world. Overall, the project will be producing cleaner transportation fuels including sustainable aviation fuels for the military and Puget Sound region. The Par Pacific projects provide a clear model for the transitioning of traditional energy infrastructure to allow production of cleaner energy products.

**Hecate** - Founded in 2012 and headquartered in Chicago, Hecate Energy is a leading renewable energy developer with a pipeline of 40 gigawatts under development in the US, Europe, and Africa. Including battery storage, solar and wind. Hecate is investing in two major renewable projects in Washington State. *Offshore Wind:* Hecate is interested in building the Cascadia Offshore Wind Project off the coast of Washington near Grays Harbor and Pacific Counties. The Project has the potential to power nearly 800,000 homes in Washington State. They have submitted a lease request to the Bureau of Ocean Energy Management (BOEM). The project would include up to 134 floating wind turbines, each with an anticipated 15 gigawatts, resulting in a maximum of 21,000 megawatts produced. Washington State has an abundant wind resource and has the necessary energy infrastructure/transmission with enhancements to interconnect along the coast of Washington and Oregon. This project is very consistent with Washington State's Clean Energy Transformation Act that commits the State to powering

the grid with 100% carbon-free energy by 2045. Washington State will need twice as much clean energy as it currently does with high capacity, renewable energy generation projects.

*Clean up to Clean Energy – Hanford* -President Biden’s Executive Order has called on federal agencies to achieve clean electricity by 2030 by authorizing use of real property assets including land for the development of new clean electricity energy and storage. The Department of Energy declared 70,000 acres available for potential new renewable development including 19,000 acres at the Hanford site in Richland, Washington.

Hecate Energy is responding to a Department of Energy request for information to develop a solar project on the Hanford Reserve which has the potential of providing up to 2 Gigawatts of solar and storage on the site. Putting this land at Hanford to use for renewable energy development after decades of non-use is truly a remarkable transformation story which will benefit the entire Northwest Region.

**Pano AI** - Pano AI Wildfire stimulated awareness. Wildfires in the United States are rapidly increasing across the United States and Canada resulting in the loss of life and costing the public and private sector billions of dollars annually.

Pano AI combines expertise in software, AI and hardware to enhance situational wildfire awareness to public/private landowners, utilities, communities and first responders to combat wildfires. The AI detection is backed by human intelligence using cameras that monitor for the first indications of smoke 24/7 across the entirety of the geographic coverage area. Pano detects smoke by continually monitoring fields from Pano stations, satellites, and emergency services. They substantially speed up the emergency response through actionable intelligence.

Pano’s unique technology is deployed across the Western United States and Australia. Wildfire affects us all, but particularly impacts all our communities, forest and agriculture lands, utilities, insurance companies and transportation corridors. Their innovative technology is truly making a difference in our nation’s response to wildfires. Pano AI is also an example of the need for intelligent communication technology infrastructure investments similar to the need for energy and transportation infrastructure.

**The Federal Infrastructure Bank (William T. Nolan - Founder)** The proposal for legislation chartering a Federal Infrastructure Bank to channel private investment into U.S. infrastructure not only would establish an additional means of channelling private investment into public infrastructure projects without contributing to the national debt but would also provide a center of excellence or resource of expertise in putting states, communities, local entities and state infrastructure banks on an even footing with the large entities typically engaged in “P3s”. The Bank should be privately managed and embrace private funding, like the Federal Home Loan Bank. It could be an engine for sustained infrastructure investment -- channelling and leveraging Pension Funds and other private monies-- as well as a source of financial expertise and standards of fairness that will put states and communities on more equal footing in negotiating with project developers and financiers. A Bank with long-term performance thresholds could also strengthen and reinvigorate state infrastructure banks by lending to them, by supporting project funding for projects that cross state lines and by leading an expansion of State and Regional Infrastructure Banks’ functions beyond transportation only.

**Analytics, Intelligence and Assessment (Jennifer Schmitz – CEO, Lattice Industries, Inc.)** Measuring the effectiveness of emissions reduction activities is challenging. The multitude of interrelationships between technology and implementation strategies makes assessing performance a complex process. A clear, sophisticated approach to data acquisition and analysis is necessary to facilitate both the selection of the correct technology to achieve project sustainability and to identify the proper benchmarks to gauge adjustments over time.

The Ohio Center for Intelligent Infrastructure, a proposed anchor in the Route 30 corridor, will respond to these needs by providing public and private stakeholders with a facility dedicated to the pursuit of transparency and accountability in infrastructure planning. The Center's mutualized technology, data-as-a commodity (DaaC) marketplace, advanced data analytics & AI services and connected AR/VR jobs-of-tomorrow training facilities provide stakeholders with the proper technology and data management support for processing the mass of information that supports their sustainable infrastructure goals.

The successful digitization and carbon neutrality of America's infrastructure is a necessary for American innovation and progress. The Administration, and its Departments and Agencies should be encouraged to support the development of the Center. In return, the Center will partner with stakeholders to build an efficient ecosystem that organically drives America's digital equity and future workforce development.

**Mobilizing Engineers - Atlas Initiative for Climate Resilient Infrastructure (Jan Hartke, Mike Sanio)**

– The Atlas Initiative facilitates collaboration among global engineering organizations and the engineers they represent regarding the application of proper standards for sustainable, resilient and adaptive infrastructure.

The American Society of Civil Engineers has long been a trusted source of infrastructure expertise and advice. It has provided the authoritative Infrastructure Report card which has traditionally been used by the Congress to assess infrastructure needs, formulate legislation and establish budgets. Engineers are professionally and ethically responsible for planning, designing, and building every infrastructure project in the U.S. and the world---transportation, telecom, water, sanitation, and energy system.

After five years of intense negotiations with the private sector, ASCE recently published a new, ANSI approved, performance-based Sustainable Infrastructure Standard that can be applied to every infrastructure project, of any type, of any size, anywhere in the world. Application of this breakthrough consensus standard, through the coordinated efforts of the world's engineers, can lift the quality of infrastructure around the world.

With the participation of the global engineering organizations and the engineers they represent, this new sustainability standard can be applied as a screen in front of every dollar spent on infrastructure, approximately \$3 trillion annually worldwide. It can be applied to U.S. funded programs as well as those funded by the multilateral financial organizations. It will attract private capital and better insurance and reinsurance because it reduces risk and climate disasters. It is an action program with an embedded Innovation Engine that can engage every mayor and governor, every community, urban and rural, the broad spectrum of the private sector, financial and insurance and reinsurance institutions, multilateral development banks, heavy industry, supply chains, businesses and unions, and the whole host of organizations involved in infrastructure, climate, equity, and the environment.

Building on success of the Sustainable Infrastructure Standard, Atlas also expects to work with global engineers' organizations and the World Federation of Engineering Organizations to further assist in the development of standards, monitoring systems and methodologies to support reliable validation and orderly trading of carbon credits in U.S. and international markets.

### **Participants' Recommendations**

- Private Investments, focused through decisions and initiatives driven by countries, communities, investors, companies, and consumers, are essential elements of the “just, orderly and equitable” global transition towards clean energy.
- We need to cultivate “innovation friendly” attitudes in the private sector and, also importantly, in the cognizant federal agencies. There is an urgent need for reassessment and revision of policies that impede innovation or private investment. Agency elements focused on encouraging innovation should be emphasized and fully funded. Congressional directives focused on innovation and private investment should be rigorously followed. Private Businesses, particularly the small and medium-sized companies represented here, are critical resources in developing and implementing the transition technologies called for by the treaty. They must be encouraged and supported.
- There is a need for a broadly accepted platform to facilitate listing, assessment, and analysis of developing technologies.
- There is a need to reform the Federal, State, and local permitting system through the use of technology. It will also be essential to provide necessary funding to reduce the timelines for environmental review. A special focus should be given to the establishment of an integrated Federal – State and local management team to manage the environmental review process to both improve the timelines and the transparency of the process.
- Federal tax incentives to spur investments in new technologies and renewable energy and transportation projects is essential.
- Data, and the use of data through smart systems, are key elements of an “organic” process for assessing, selecting among, focusing and evaluating the effects of innovations and transitional technologies.
- The Global Community of engineers and engineering organizations is deeply committed to the implementation of standards for resilience and the application of the best incentive structures and methodologies to protect the environment and achieve the transitional goals. Coordination of those efforts globally can promote progress towards common objectives.



### Senator Cantwell's Remarks

Senator Cantwell spoke eloquently about the need for innovation, creativity, and renewed commitment to building the world's best smart infrastructure. She complimented the individuals who spoke about new ways of building projects with new technology and innovative ideas to address the challenges of the future. She noted how encouraged she was to hear of some of the exciting new efforts underway across the nation.

It was clear when Senator Cantwell spoke that she is a true thought leader in the United States Congress on the need for new ways to build our nation's transportation, energy, and communications infrastructure. Her past and present leadership on these issues and her ability to articulate the need for a new generation of innovation was inspiring.

#### **Thank you!**

Senator Cantwell has long been the *Champion* of our innovative infrastructure community and has probably done more than anyone to promote the culture of research and innovation that is so needed as a foundation for restoration of the U.S.' leadership. She deserves our continued and enhanced support as we work together to continue progress in the Fourth Industrial Revolution.

It is clear that the Blueprint 2025 coalition needs to redouble its efforts to grow the coalition with members like the ones that participated in the meeting. We need to bring in additional thought leaders in the private sector to broaden our scope to include transportation infrastructure as well as digital, energy, communication, and artificial intelligence infrastructure since they are all interrelated.

To follow up on our successful meeting with Senator Cantwell, we need to further the development of a broad-based policy framework focused on the three aspects of infrastructure discussed and incorporate 5-10 dedicated major policy recommendations Blueprint2025 could champion as initiatives to be accepted by the Administration and Congress. Some of them could be pilot programs and others could be long term program initiatives.

It is important that we follow up with Senator Cantwell and other Members of Congress with these specific

recommendations. Since we live in a very divided political climate, it will be essential that we build a diverse and effective coalition that enhances our effort to successfully implement our recommendations. While we have the power of innovative ideas, we must also have enough bi-partisan political support to implement these ideas into actions.

We should schedule a follow up meeting with Senator Cantwell's staff to discuss a further developed draft policy framework.

### **Advisors**

Qualifications and backgrounds of the advisors who participated in the workshop or assisted in development of its agenda are summarized below:

**Blueprint 2025** [gordon@sinfpi.org](mailto:gordon@sinfpi.org); [anand@sinfpi.org](mailto:anand@sinfpi.org)

Blueprint 2025 is a collaboration among infrastructure professionals, leading infrastructure development companies, and public sector project managers. Its objective is to restore the U.S.' position as the nation with the world's best, most technologically advanced, most climate resilient, and most productive infrastructure.

**Thompson Consulting Group** [tim@thompsoncg.com](mailto:tim@thompsoncg.com)

TCG is one of the premier boutique government affairs and mediation/facilitation firms in the Western United States. They have been brought in to successfully resolve complex regulatory disputes between multiple parties on transportation, energy, forestry, and major environmental development issues. TCG has built their reputation on finding innovative solutions to complex and contentious problems facing their private and public clients. Their ability to successfully navigate winning strategies in Washington DC and areas around the country is well established.

**Tom Mosure, MS Consultants** [tmosure@msconsultants.com](mailto:tmosure@msconsultants.com)

Tom Mosure is founder and Principle of MS Consultants Inc. a major architect, engineering and consulting firm based in Ohio with offices in six states. Mosure is former President of the Ohio American Consulting Engineers Council and active national member of that organization.

Mosure has long been a strong supporter of the Ohio Route 30 Opportunity Corridor project and has contributed substantially to formulation of the New American Model. He is particularly interested in the IRS' new requirements regarding R&D tax credits.

**T Nolan, Federal Infrastructure Bank** [wtnolan2@devhold.com](mailto:wtnolan2@devhold.com)

T is a "Wall Street" investor who is leading the effort to establish a government-chartered infrastructure bank to serve as a source of financing for infrastructure projects as well as a source of expertise and knowledge to put states and communities on an even footing in the formulation of public private infrastructure projects.

**Antonino Ferrera, ACEA** [aferrera@aceainternational.com](mailto:aferrera@aceainternational.com)

Antonino Ferrera, a U.S. and Italian citizen, a civil engineer with an MBA, for more than 20 years has worked worldwide, as senior executive of ACEA Group, a major Italian Multi utility, in developing projects and opening new markets in water, energy and environmental sectors getting important economical results for the company he represented.

He is now leading a U.S. based advisory firm focused on capitalizing the network and experience, acquired in the above-mentioned sectors, by helping European and Middle Eastern high-tech companies enter the U.S. and LATAM market on one side, and U.S. governments and companies to structuring and developing projects either in U.S., Latam and Europe on the other side.

His aim is to promote a closer relationship between Europe and the United States and encourage value creation and exchange of know-how and technology between the two continents.

**Jennifer Schmitz, Lattice Industries** [jschmitz@latticeindustries.com](mailto:jschmitz@latticeindustries.com)

Jennifer Schmitz, the CEO of Lattice Industries, Inc. began her career as a member and floor specialist at

the Chicago Mercantile Exchange and the Chicago Board of Options in the mid- 1990s. For the past 25 years, Jennifer spent her career advising on development of multi-party data transactions and systematic deployments for digital network risk solutions for the world's largest financial institutions and payment systems. Prior to founding Lattice Industries, Inc., she worked with Visa Inc.'s Advisory Services and later became Visa's executive risk product liaison to their largest client, JPM Chase. As Lattice's CEO, she promotes universal data commodification and institutional marketplace governance for global data-sharing success and is recognized as an expert in data system risk and smart city networks.

**Jan Hartke, Atlas Initiative** [jahartke@gmail.com](mailto:jahartke@gmail.com)

Jan Hartke was for 12 years Global Director for Clean Energy at President Clinton's Climate Initiative, a Senior Adviser to two UN Secretary Generals, founder of Ceres which provides climate disclosure to its \$60 trillion investor network. He was commended by Nelson Mandela as well as Prince (now King) Charles for his supportive role on poverty reduction, conservation, women's inclusion, and childhood environmental education. Hartke is Chairman of the Atlas Initiative for Climate Resilient Infrastructure and Chairman of the Stimson Center's 230 member Alliance for a Climate Resilient Earth.

**Michael Sanio, Atlas** [michael.r.sanio@gmail.com](mailto:michael.r.sanio@gmail.com)

Mike Sanio is Executive Director of Atlas and the key link with all the major engineering societies whose members annually build the \$3 trillion of infrastructure for energy, food, water, transportation, and sanitation, formerly Sustainability Director for the American Society of Civil Engineers and official with the Global Environment Facility and the World Bank.

**Sarah Vilms, Squire Patton Boggs (US) LLP** [Sarah.Vilms@Squirepb.com](mailto:Sarah.Vilms@Squirepb.com)

Sarah Vilms, after experience with the U.S. House and Senate and the Australian parliament, joined the iconic policy practice of the Patton Boggs firm in 1998. Since that time, she has logged more than 25 years of experience in energy, environment, natural resources and related policy fields, including participation in Norman's Network and the CG/LA Forums. Sarah addresses issues on behalf of major entities concerning renewable energy generation, including solar, hydrogen, geothermal, renewable fuels, energy storage, lithium production, infrastructure and transmission, greenhouse gas emissions, permitting and federal lands issues.

**Pierce Homer, Moffatt & Nichol** [phomer@moffattnichol.com](mailto:phomer@moffattnichol.com)

Pierce Homer has served since 2010 as the Transportation Director for Moffatt & Nichol, a global infrastructure advisory firm specializing in the movement of goods across all modes of transportation. In that capacity, he assists clients in the planning, funding, design, design-build, and optimization of highway, bridge, rail, and terminal facilities and their interconnected networks. He has served, or is serving, on the boards of several public and private entities providing transit, highway and related transportation services.

Prior to joining Moffatt & Nichol, Mr. Homer served as the Secretary of Transportation for the Commonwealth of Virginia, overseeing the highway (VDOT), transit & rail (VDRPT), port (VPA), aviation (VDA), and motor vehicle (DMV) agencies, and implementing the most successful public-private partnership program in the U.S., delivering the Dulles Metrorail, I-95 and I-495 Express Lanes, the Heartland Corridor Freight Rail program during his tenure, and numerous additional private partnership projects during succeeding administrations.