

## Blueprint 2025: 10 Recommendations for 2024

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*Getting infrastructure right - making national improvements - will require a 'whole of country' transition around three forces: clarity of mission; speed of project development; and the eventual confidence that comes from successfully building on our strengths* - Norman Anderson, Forbes, Aug. 31, 2021.

Our Founder Norman Anderson created Blueprint 2025 (“BP2025”) in 2015 as a collaboration among infrastructure professionals, leading infrastructure development companies, and public sector project managers, including the managers of state infrastructure banks. The BP2025 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. Our country - and the world - remain at a crucial point where technology and innovation are driving a critical and continuing need for unprecedented policy changes. Collaboration and communication between federal, state, and local governments and the private sector must be nimble and efficient in responding to this changing environment. Coping with climate change has become a necessary element of national security. Our country continues at a critical moment where digitalization, artificial intelligence, and electrification are demanding transformation of our infrastructure and offering the potential - through American innovation - to ensure the U.S. leads the 4<sup>th</sup> industrial revolution.

BP2025 was created to address these issues that represent the largest industrial shift in 120 years. Norman’s *Vision* and the recommendations and philosophy flowing from it continue to contribute to the enactment and implementation of groundbreaking legislation such as IIJA, IRA and the CHIPS Act as well as far-sighted and innovative new policies at both the federal and state levels. These recommendations seek to build on the previous years’ recommendations and continue the progress to date.

### *The Recommendations*

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- 1. Use Advanced Technology to Expedite and Improve the NEPA Process:** Reform of the NEPA process is a necessary precondition to Infrastructure improvement, and the essential role of Digital Technology and AI in achieving that reform, have been central Blueprint themes since its inception. We are pleased that the *Fiscal Responsibility Act*, signed by the President in June, not only includes provisions to expedite and improve NEPA reviews but also specifically opens the way for “E-NEPA” by directing the conduct of a study:

on the potential for online and digital technologies to address delays in reviews and improve public accessibility and transparency under section 102 (2) (c) of the National Environmental Policy Act of 1969.

We see the technologies called out in this “E-NEPA” mandate as the only way that the reforms in this Act, or others which have been proposed for the future, can be effectively implemented. Absent this sort of engine for NEPA reform, U.S. infrastructure will continue

to lag that of other countries and the objectives of recent major legislative initiatives will not be achieved. BP 2025 recommends aggressive conduct and enhancement of the work called for by this provision. Demonstration of digital technologies, be it through pilots or brown-field projects, in this context can also open the way for efficiencies in other governmental functions such as assistance programs and the procurement process.

- 2. Promote Private Investment:** Public funding sources are clearly inadequate to support maintaining and updating of the nation’s public infrastructure systems and roads, streets, bridges, and related infrastructure, much less the advanced infrastructure needed to open the way to the coming revolution. Moreover, these projects as currently designed and conceived do not maximize public benefits but instead may adversely impact local economies. Properly designed and conceived public infrastructure (e.g., highways and their rights of way) can generate revenues and support sustainable communities. We recommend collaboration with states, communities, and the private sector to facilitate projects such as the *Ohio Route 30 Opportunity Corridor* and the *Texas SH130/Route 66 Project*. These projects will demonstrate new models for maximizing community benefits and minimize public cost through private investment attracted through planning driven by digitalized and transparent community input.
- 3. Promote Monetization of Natural Capital:** While marketable carbon credits, environmental diversity credits, and other monetized natural values can play an important and beneficial role in mitigating climate change, preserving species diversity, and protecting environmental values, their utility is limited by the absence of clear and generally accepted standards, monitoring methodologies and oversight of validation systems. BP2025 recommends active leadership in the global effort to establish and enforce consensus standards and taking these values into account in international and domestic assistance programs through mechanisms such as debt for nature swaps, monetization of project related benefits, and accepting monetized natural values as payment. Monetized environmental values can be an important mechanism to provide fair treatment to the countries which have minimally contributed to the causes of climate change but are suffering disproportionate impacts. If well structured, these mechanisms will have the added benefit of promoting US engineering and technology exports to countries that would not otherwise be able to afford engineering and building to attain environmental credits.
- 4. Promote Resilient Infrastructure:** Recent disastrous fires, storms and related events highlight the need for *Resiliency* for both new and existing infrastructure. Resiliency standards need to be updated to include technological resiliency, financial resiliency, and environmental design resiliency too, expanding resiliency beyond “just” environmental and material concerns. The *American Society of Civil Engineers* has devoted extensive efforts to the development and maintenance of new consensus engineering criteria for Resilient Infrastructure. The US must incentivize a market for risks to be adequately assessed and mitigated, where the Federal Government should consider incorporation of standards like these into building codes and infrastructure funding programs (including using our world-class R&D to advocate for equally stringent international standards). Insurance and finance companies should be allowed and encouraged to take resilience standards into account in their ratings, charges and coverage decisions.

- 5. Enhance Access to Infrastructure Finance:** Previous *Recommendations* have supported creation of a chartered Federal Infrastructure Bank to channel private investment into U.S. infrastructure without contributing to the national debt. 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 -- channeling 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.
- 6. Adapt Federal Programs to Community Needs:** Federal Agencies are inherently single-purpose and have difficulty with projects designed to advance multiple objectives. The states and their communities should be empowered to define their priority projects and access the resources needed to deliver them. The transition to more modern infrastructure will require decisions based on holistic assessment of the needs of the affected communities. Infrastructure projects - even traditional roads, streets, and bridges - can no longer be single purpose but must serve multiple objectives including communications, robotics and autonomous vehicles, data transmission, analysis, and storage—all in addition to energy-efficient transportation. States, their communities, State Infrastructure Banks, CDFIs and similar entities should be enabled to provide effective inputs on the full range of these issues, identify and create pipelines of priority projects and bring in private funding. The federal approach to project authorization and funding needs restructuring to take these realities into account. Again, effective deployment of digital technologies' such as feasibility study funding tied to digital twins, is essential to this effort. BP2025 recommends strong commitment to a flexible and far-reaching effort applying modern technologies to make federal infrastructure programs more effective in serving the public good.
- 7. Fully Empower the White House Infrastructure Office:** BP2025 has consistently advocated the establishment of an infrastructure office in the White House and are extremely pleased with Mayor's Landrieu's appointment to lead that office and its world-class staff. All of that being the case, it remains to be said that the Office is not readily accessible by the public and does not seem to be fully empowered to deal with the silos in the line agencies or to adequately advocate for States that need to break new ground to effectively serve the needs of their communities. As a result, the potential of innovative new laws like the IJA, IRA and Fiscal Responsibility Act has not been realized. BP2025 recommends that the Administration clearly assign a leadership role to this Office and issue directives to the cognizant agencies fully empowering the Office to effectively perform that function.
- 8. Continuously Evaluate and Improve Infrastructure Policies:** IJA, IRA and CHIPS Act, empower the Administration to develop something akin to Industrial Policy in advancing the broad-ranging objectives set out in those laws. The policies announced by the Administration to date will likely result in major changes in our infrastructure, the ways

in which U.S. companies operate and the lives of people in communities. As noted last year, there is no federal Agency charged with the responsibility of reviewing these infrastructure transition policies. We need not focus on post-mortem results, but rather a more real-time review process, allowing for recalibration of projects, their funding and their tariff and fiscal reviews. There has been no Life Cycle Analysis of the transition from fossil fuels to “renewables” such as wind and solar, for utility scale vs distributed wind and solar, for wind and solar vs natural gas transitioning to hydrogen, for Carbon Capture (mechanical or natural) vs shutdown or curtailment of facilities, for distributed generation vs long distance transportation etc. Project prioritization, through subsidies or permitting decisions, has - up to this point - been determined largely through intuition and politics. There is clear potential for policies that are extremely costly in terms of both money and economic impact, but which may be less than optimally effective in minimizing carbon emissions, protecting the environment, or improving lives in communities. Infrastructure decisions have long lived effects and may affect lives in communities for generations. Adverse unintended consequences will be difficult to remedy. BP2025 recommends that the White House Office be empowered to oversee continuous review and Life Cycle Analysis of significant infrastructure policies, particularly in the energy sector. We further recommend that digital systems be made available to organize and assess input into this process by States, Communities, the Private sector, and the concerned Public.

**9. Reassert Leadership in Helping Build a Better, More Sustainable and Resilient**

**World:** As observed last year, U.S. Infrastructure technology is in many respects the world’s best and is recognized as such. There needs to be more robust support for U.S. firms in the global infrastructure marketplace. The Build Act, which the Congress enacted in 2019, provides tools to do this without major expenditures of federal dollars, (though its scope still needs to be expanded and OMB (Office of Management and Budget) scoring policies still need to be corrected). Additionally, the current PGI Partnership for Global Infrastructure that builds upon the Build Back Better World initiative President Biden and the G7 leaders announced in June of 2021 could greatly magnify the force of these efforts, particularly if combined with the monetization of natural capital proposed in recommendation 3 above. BP2025 supports and encourages reinvigoration of these and similar efforts to provide an alternative to China’s Belt and Road Initiative and enable U.S. business to again play a leading role in global infrastructure development.

**10. Digitalize Procurement in Foreign Aid and Military Assistance Programs:**

The conventional procurement process, like the permitting process, produces substantial delays in the execution of important projects and, at least in international contexts, lacks transparency and allows corruption to drain funds which might otherwise be productive. The possibility of corruption also may deter participation by ethical companies and disadvantage their potential participation. BP2025 recommends broad exploration of the potential for digital technologies to reform Aid, military assistance, and reconstruction programs, expedite processes and project management, and provide additional transparency. Such an effort would also be responsive to increasing concerns in the Congress and elsewhere regarding the need to assure that financial aid in Ukraine and elsewhere is properly spent and equipment is properly deployed and accounted for.

These Recommendations seek to carry forward Norman Anderson's *Vision* for U.S., Infrastructure and to build on the previous years' recommendations, most of which address important objectives that have yet to be fully achieved. They represent a broad consensus among the members of the infrastructure community that support the *Blueprint 2025 Initiative*. We also believe that most of them will have appeal to the public in general and on both sides of the Congressional aisles. We sincerely hope that this is the case and that anyone who is interested will feel free to call on us if anything further is needed.

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