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**Science, technology and innovation for sustainable urban development in a
post-pandemic world**

Statement submitted by

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[The United States would like the floor.]

Good morning from Washington, D.C.

Thank you Chair for the floor. And thank you my distinguished colleagues for your presentations and participation during this session.

I am Calvin Johnson, Deputy Assistant Secretary for Research and Evaluation at the U.S. Department of Housing and Urban Development (also referred to as HUD).

I bring you greetings from HUD's Secretary Marcia Fudge and Deputy Secretary Adrienne Todman.

In the brief time I have, I want to draw your attention to just a few projects we have underway at HUD that align with the report submitted to the Secretary General.

In the report to the Secretary General – under ‘Applying Science, Technology and Innovation to Sustainable Urban Development,’ I want to share research HUD has underway in the areas of Housing as well as Protection from Natural Disaster.

- **Housing (3D Concrete Printing)**

HUD is conducting research with a housing innovation lab located in the suburbs of Washington, D.C. The lab is assessing 3D Concrete Printing construction techniques to identify best practices for residential building product systems integration. Once complete, the research report is expected to inform homebuilders on best practices for incorporating 3D printed concrete walls into a home including techniques for installing doors and windows, running electrical, and attaching the roof.

- **Housing (Digitalization of Operations and Manufacturing Processes)**

HUD has a project underway with a university and a nonprofit sustainable energy company that is using simulation models to aid the integration of lean manufacturing principles in a modular housing factory. Specifically, research is focusing on how to integrate solar panels and battery storage during the construction process in the factory rather than onsite after the house has been erected. Ideally, installing solar panels and battery storage at the factory will lower the cost of installation and result in higher quality installations as well as improve worker safety.

- **Protection from Natural Disaster**

In partnership with leading industry and academic experts in the field of disaster preparedness and mitigation, HUD is currently sponsoring the development of a guidebook entitled “Site Planning for Disaster Mitigation” that will assess lessons learned from recent preparedness planning and mitigation efforts ahead of natural disasters. The guidebook will provide communities across the United States with nature-based mitigation planning and analysis methods for urban planning.

To test the utility of the guidebook, HUD will be working with three communities and providing them assistance as they make enhancements to their comprehensive plans or other long-range plans to enhance community resilience by strengthening disaster preparedness and recovery.

In the report to the Secretary General – under ‘Suggestions for Consideration,’ I want to highlight work conducted by HUD in ‘Urban Digital Transformation.’

Specifically, HUD will be estimating the cost to provide improved broadband access within HUD-assisted households to further digital equity and inclusiveness, as well as further those skillsets needed for urban digital transformation. Along with research efforts to understand the need for and strategies to increase access to digital equity in low-income communities, we will be assessing the needs of special populations like the elderly and families with children as well as residents in rural communities and Indigenous communities of American Indians, Alaska Natives, and Hawaiian Natives.

In closing, I welcome the opportunity to engage agencies with a similar focus on housing and community development. There is so much learning we can do together.

Thank you!

[The United States yields the floor.]