Roof Over Our Heads

CONSTRUCTION INDUSTRY ROUNDTABLE 2025

REPORT

SPARC

GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

Reimagining how sustainable, affordable and resilient building materials can reach the communities that need them most.

As part of campaign for ROOH, through our Labs across Asia, Africa, and Latin America, we have seen firsthand how vulnerable households design, build and finance their houses often without access to formal markets or support.

This roundtable is a call to action *to bridge the gap between the formal construction ecosystem and informal settlements and to forge new pathways that connect innovation, material and people.*

DATE
30 April, 2025

Watch the recording here

Introduction

This roundtable is not just another event. It is a moment to reflect on a simple but powerful truth the houses of the urban poor especially in informal settlements are built piece by piece, often under stress and mostly by the families themselves. Yet the construction ecosystem continues to ignore this reality.

Since the inception of the Roof Over Our Heads (ROOH) campaign, we have been learning from the ground up. Our ROOH Labs have documented how families across cities build their houses using what is accessible often from waste, from informal vendors from what the mason knows. 95% of the urban poor across Asia finance, design and construct their houses themselves. Not just build they navigate markets, find local contractors, stretch their budgets year after year. They build in parts a wall today a roof next year. But while they build incrementally, the systems around them are not designed to support that process. Materials are either too expensive too inaccessible or simply not known in these markets. That's the great disconnect.

In this roundtable, we want to bring three worlds into one conversation the innovators creating resilient materials, the waste-based local producers and recyclers and the mainstream formal industry. We believe this is not just about building materials it is about reshaping the ecosystem to support the way people actually build. We are not short on solutions. We are short on systems that make these solutions work for the people who need them most. Through this roundtable we invite manufacturers, recyclers, SMEs, financiers and policy makers to co-create a construction ecosystem that treats the poor not as beneficiaries, but as builders, customers and change makers. Because this is not just about materials. It is about access, about agency and about the climate future of our cities.

This roundtable aims to bring together companies and organizations involved in the production of affordable, durable and locally accessible building materials for residents of informal settlements in the Global South. The session focused on fostering collaboration, sharing knowledge and exploring innovative solutions to tackle the housing challenges faced by these vulnerable communities. By bringing together key stakeholders in the building materials industry, this web roundtable aims to drive innovation, foster collaboration and ultimately improve the quality of life for millions of people living in informal settlements around the world.

The challenge and opportunity is to engage material providers across all three sectors to explore how their products and techniques can become more affordable, accessible, and sustainable for the 30% to 50% of urban populations living in informal settlements across Asia, Africa, Latin America and the MENA region. The goal is not only to deliver materials but to strengthen local supply chains and systems so that resilient housing becomes a viable option for all.

Key Speakers

Ghayda Salameh
Executive Manager
Jordan GBC

Ghayda is an Architect by profession and Acting Manager of Jordan Green Building Council (Jordan GBC), with experience in the field of managing, coordinating, developing, and implementing different projects and campaigns and experience in team coordination and planning.

Session Title: **Inclusive Green Building**

Session focused on reframing green building standards and practices to better serve informal settlements, traditional methods and affordability needs.

Jayasankar Kentinkara
Head of Technical Services
Ultratech Cements

With over two decades of experience, Jayshankar has held various leadership roles at UltraTech Cement. He is actively involved in promoting sustainable construction practices. He has represented UltraTech Cement at various industry events, including the Green Building Congress 2024, where he advocated for clinker substitution and the use of alternative fuels in cement manufacturing.

Session Title: **Strengthening Conventional Construction Ecosystems for Informal Housing**

Session focused on integrating informal supply chains, bridging the affordability gap through innovation, enabling local production of resilient materials and building skills among local artisans and workers.

Daniel Ortiz
Social Area Manager for LAC
TECHO

Daniel is an Industrial Designer and Master's in Habitat, with experience in designing and implementing projects with a focus on Social aspects and engagement with various civil society stakeholders. Daniel and his team from TECHO managed to raise their own funds for the campaign and constructed ROOH houses in 6 countries in Latin America.

Session Title: **Building Disaster-Resilient and Evolving Housing Solutions**

Session focused on integrating disaster resilience into affordable housing, balancing immediate relief with long-term community development and empowering communities through adaptable housing solutions.

Shobhit Aggarwal
Head of Building Products Division
Ultratech Cements

Shobhit oversees these strategic initiatives, driving product innovation and aligning the division's efforts with UltraTech's broader objectives. The Building Products Division at UltraTech Cement is known for its innovation in sustainable construction materials.

Session Title: **Strengthening Conventional Construction Ecosystems for Informal Housing**

Session focused on integrating informal supply chains, bridging the affordability gap through innovation, enabling local production of resilient materials and building skills among local artisans and workers.

Christoph von Toggenburg
Head of Human Rights and Social Impact
HOLCIM

Christoph leads the company's initiatives to uphold human rights and foster positive social impact across its global operations. n this role, he spearheads initiatives that uphold human rights and foster positive social impact in the communities where Holcim operates.

Session Title: **Adapting Innovation for Informal Construction**

Session focused on supporting safer more effective use of cement in informal communities, strengthening local supply chains and adapting climate-smart construction innovations for cost-sensitive, self-built housing.

Akbar Allahbaksh
Director - Strategy and Programme Design
Hasiru Dala

Akbar is the Director of Strategy and Programme Design at Hasiru Dala, where he leads strategic planning and programme development across multiple areas. His work focuses on informality, urbanisation, and deep community engagement. At Hasiru Dala, he integrates design, systems thinking, research, and community facilitation to promote equity and support the empowerment of waste picker communities

Session Title: **Circular Economy and Sustainable Materials for Informal Housing**

Session focused on exploring the use of recycled materials in affordable, resilient housing, empowering waste pickers in construction, building supply chains for recycled materials and introducing simple carbon literacy tools for more sustainable material choices.

Excerpts from the Sessions

Sheela Patel,
Director, SPARC, Global Ambassador to Race to Resilience (RtR)

Climate justice is not possible if housing for the poor remains outside the architecture of action. Sheela underscored that for those who live and build outside formal systems, there are no safety nets, no support structures and no access to materials or professionals that can offer protection from the intensifying impacts of extreme weather. What emerged was not a technical assessment, but a political declaration that dignity and safety in shelter cannot be deferred to the market or left to state inertia.

Sheela introduced ROOH as an intervention born not from theory but necessity. Learning labs were described as more than pilot houses they are instruments of experimentation, where women residents lead the diagnosis of their houses and codevelop viable, context specific upgrades. This work is granular working with micro markets, seasonal incomes and layered vulnerabilities.

The call to the roundtable was equally specific; shift the frame from innovation in isolation to partnerships that hold complexity. Move beyond one size fits all material interventions. Create bridges between those producing green materials and those building with salvaged scraps. Sheela asked the participants to understand that the poor do not reject solutions they reject risk. Hence trust iterative engagement and visibility of outcomes must precede scale.

"Communities who are locked in non-choice situations of using materials that they can, but which are not resilient which are not capable of providing them the secure comfort of temperatures and security against cyclones, terrible rain, wind and heat which we are all experiencing now. We hope that we can collectively produce at both global levels with big institutions, big market players and innovators and with small players a solution that is accessible to these communities."

- *Sheela Patel*

Asma Jhina
Senior Advisor, Global Covenant of Mayors (GCoM)

Speaking from the perspective of global city networks, Asma brought the weight of 13,500 cities and over a billion people into the conversation. Urban populations are at the frontlines of climate disruption, and yet the communities within them, especially those living in informality, remain at the periphery of urban planning frameworks. She drew a direct line from the streets of vulnerable neighborhoods to global emissions targets, highlighting that cities are responsible for 70% of global emissions.

What followed was a clear recognition that while climate ambition exists, it is often rendered inert by structural gaps chief among them, the exclusion of informal settlements from planning processes and the chronic absence of financing for inclusive interventions. The work of GCoM was presented not as policy advocacy alone, but as a mechanism to channel technical, financial and political resources toward cities prepared to act. Within this the ROOH campaign was acknowledged as a vital field partner documenting the lived effects of climate volatility on housing and generating practical, evidence based tools that city networks can absorb.

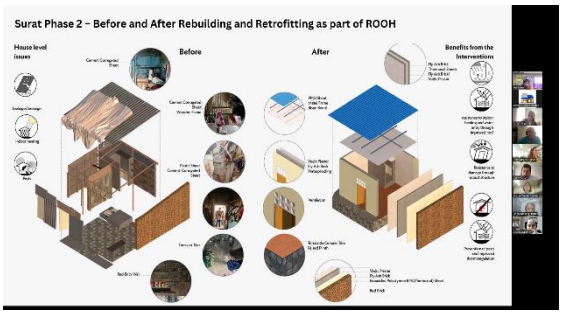
"Organizations continue to translate and generate, co generate knowledge across communities, Roundtables like this one are really important opportunities to surface challenges to identify trends, to pinpoint solutions and opportunities for collaboration that can benefit informal settlements and the construction industry simultaneously. We are also really keen in ensuring that women, children and vulnerable communities are not only part of but also active players in these solutions and collaborations."

- Asma Jhina

Asma located informality, gender and climate action in a single frame. Vulnerability was not described in generalities but named in relation to women, children and precarious labourers those least heard and most affected. She called for climate solutions that do not speak on behalf of communities but are shaped through their participation.

Siddhi Mehta,
Technical Analyst, Roof Over Our Heads (ROOH), SPARC

Taking the conversation into the realities on the ground, Siddhi laid out the ROOH methodology. The approach presented was not a case study but a systems approach layered, iterative and intentionally hyperlocal. Beginning with an analysis of material inventories used in informal housing, the labs unearthed key patterns; communities make decisions under constraint not from a lack of awareness, but because markets do not see them, vendors do not stock for them, and innovation rarely speaks their language.



"So if you walk into a material shop in the vicinity of the community and ask a vendor for anything like Vedic plaster or a solar reflective paint, they say that it is not available yet, not because people would not buy it, but because no one has stocked it before so our question through this roundtable is that How do we turn informal housing in a real investable market and how

do we build supply chain of finance model and production systems that work for the way people actually build?"

- Siddhi Mehta

The presentation moved from documentation, diagnosis to demonstration. On ground examples from the labs illustrated how the campaign upgraded houses with community inputs and roofing systems redesigned with thermally reflective surfaces, floors lifted to reduce flooding risk and walls replastered using a revived blend of Vedic materials. Every intervention was measured for thermal comfort, affordability and social acceptability. Post construction monitoring was core to validating what works.

Siddhi also added the fragility of supply chains in informal housing; vendors are structured around bulk demand, not kit of parts upgrades. This results in systemic invisibilization of climate appropriate materials. The roundtable was invited to help reverse this by treating informal housing as a real market and by building supply ecosystems around piecemeal, affordable construction.

Ghayda Salameh,
Executive Manager, Jordan GBC

Rooted in regional experience, Ghayda shared a decade long trajectory that connects green architecture with the day to day constraints of low income families in Jordan. Through the Green Affordable Houses initiative the Jordan Green Building Council shifted the idea of sustainability from elite certification to accessible application. Projects that began with a single household have now reached over 50 houses each shaped by local aspirations, passive design and community led adaptation.

Rather than deliver green outcomes as pre packaged standards, the council cocreated solutions training unskilled masons, linking households to ecofriendly suppliers and ensuring that cost did not exclude quality. The model presented was one of demonstration and diffusion. Early adopters became informal ambassadors their houses proof that resilience is not out of reach.

Beyond technical performance, the initiative tracked tangible dividends; water bills dropped by 30%, electricity consumption fell and overall comfort improved. These were not pilot metrics they were household budgets made less precarious. The program's scale and replication potential now stretch beyond Jordan with new partnerships emerging across MENA.

"It's actually prior areas and it have a very high poverty range. So, we supported these family, we spread knowledge. We tried to show an example of how actually green is affordable. We had about 300 beneficiaries we are profited about 50 houses and we have trained around 20 people non educated builders and we had two initiatives."

- Ghayda Salameh

The contribution closed with an invitation to see climate action as embedded in housing justice to view each improved

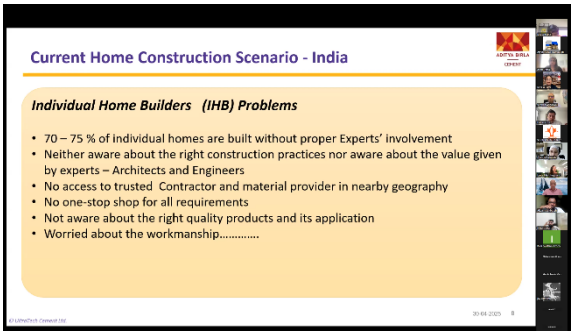
house as a node in a much larger distributed infrastructure of resilience.

Shobhit Aggarwal
Head of Building Products Division
Ultra tech Cement

The first part of the UltraTech intervention focused on strategy from the manufacturing end. Shobhit outlined the imperative to embed performance into construction materials reducing water, improving application efficiency and adapting to the resource constraints of informal builders. It was not just about a new cement blend or a binder it was about systematising solutions that can be handed to small contractors and masons with confidence.

Shobhit walked through case based product innovations that respond to real site challenges from rapid setting plasters that cut water use by 40%, to floor tiling adhesives that prevent future cracking. Each solution came backed by field data as well as deployment protocols for regions prone to flooding or high humidity. These materials are designed not for optimal conditions but for real life non ideal contexts.
He described a new vision that locates sustainability at the convergence of performance and affordability. Green cannot remain a boutique domain it must become embedded in the everyday logic of building.

"If you build the house right the first time around, then it is much more sustainable. The challenge, what we see in India is that people when they are building houses, they do not have the right advice. I think this was alluded to in the opening remarks also. This ranges from lack of knowledge around what



the right building products are what is suitable for my area who can apply those? What's the right way to be putting in? So, who are the right masons or workers who can get the house constructed? And as a company, we said, what can we do to democratize this knowledge. What can we do to make house building an easiest journey and it's necessarily not about cement or some of the products which we make but across the entire life journey of the house. And I think that has that core thinking to make this knowledge accessible, available to all."

- *Shobhit Aggarwal*

Jayasankar Kentikara,
Head of Technical Services
Ultra tech Cement

Jayasankar brought operational precision to the discussion grounding the previous material vision in real time, on ground technical support. His intervention centered on UltraTech's Mobile Concrete Labs vans equipped with tools, product samples and bilingual technicians trained to engage with both formal and informal actors. These labs do not just run quality tests they run live workshops inside communities.

"So, one of the most important critical things we found in this whole journey is that how will you do skill building of the people because you don't know a good product if it

is not applied properly, it will not give the good results. So, training for the mason's contractors, we have got almost some 80 centres of excellence is where we have got the infrastructure to train the people."

- *Jayasankar Kentikara*

He described how these mobile units are now operational across 24 states, reaching peri-urban and rural sites that typically fall outside formal delivery ecosystems. They have been instrumental in reducing construction errors, increasing uptake of improved material practices and serving as feedback loops for product refinement.

Jayasankar also mentioned about capacity building not as a CSR add on, but as core to the UltraTech ecosystem. Masons and contractors are trained in their regional languages; design briefs are adapted to household income levels; and engineers stationed across geographies work directly with families.

He also described collaboration, noting how partnerships with organisations like SPARC create legitimacy and ground trust among communities. The ask was clear large scale resilience requires proximity not just in delivery but in dialogue.

Christoph Von Toggenburg,
Head of Human Rights and Social Impact
HOLCIM

Christoph shared a grounded on private sector responsibility. The intervention was not led by scale metrics but by stories of families rebuilding after disasters of 3D printed schools constructed in 18 hours, of artisans trained to use circular building materials. Christoph positioned Holcim's role as more than manufacturer it is a social actor with an operational imperative to bridge material science with justice.

The work shared reflected wide deployment low carbon cement, disaster resilient prototypes and partnerships with NGOs across Latin America and South Asia.

"I think one of the things that is very important to know, again, as we are working in construction and building materials is that we generally speaking produce everything locally. That means not only that we are locally embedded, but it means also we have local leadership. And we are very much committed to our local communities. We do a lot around skill buildings. We have an online academy. We run one of the largest skill building academies in In Latin America, we very much support female entrepreneurship for example, we run a program around the world which is called Women on Wheels."

- *Christoph Von Toggenburg*

It was clear that the innovations presented were not about future pipelines they are field tested houses that use construction debris to cut emissions, female led microenterprises that produce modular bricks and community cooling solutions for heat vulnerable areas. Christoph reframed performance through people not only how materials behave but whom they serve and under what constraints.

As housing becomes a frontline for both climate adaptation and equity Holcim's engagement was offered as an evolving alliance not a fixed model.

Daniel Ortiz,
Social Area Manager for LAC
TECHO

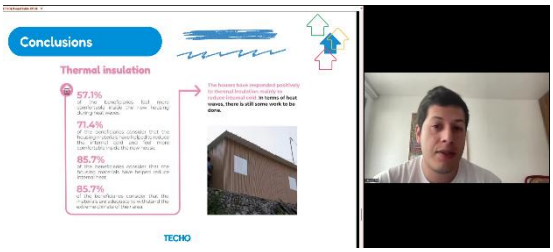
TECHO is an international nonprofit operating in 18 countries across Latin America and the Caribbean brought forward a structured model of resilient housing innovation grounded in participatory development. Daniel articulated a clear methodology design and implement low cost, replicable housing solutions using environmentally conscious materials and construction techniques. These are not standalone shelters but nodes of social infrastructure, ready to be adapted across geographies.

The work model presented relies on four core phases the identification and recognition of informal settlements, a diagnostic exercise carried out with the residents, the construction of action plans and project development and finally, the elevation of these initiatives into tangible, scalable interventions. This model promotes community skill development and centers the social production of habitat ensuring not only structural integrity but local ownership and continuity.

In the second phase design and development Daniel laid out the criteria used to create TECHO's housing prototypes: simplicity, scalability, affordability and climate responsiveness. The intent is not only to respond to today's climate events but to anticipate them embedding resilience into form, material and method. Each prototype, from bamboo clad units to plastic composite designs, responds to local realities while maintaining core principles of thermal performance and strength.

"We identify deficits in construction materials, infrastructure and adaptation to local conditions in informed settlements. But we found that the community, the residents in the community have developed creative, resourceful solutions to protect their houses."

- *Daniel Ortiz*



The intervention positioned every house not just as a shelter but as the start of community resilience, woven from the

knowledge of residents and the technical scaffolding offered by the organization.

Daniel also presented a dynamic approach to co design that centers both process and place. With over 400 surveys, 21 community labs, and 6 built housing prototypes, the intervention surfaced the voices of thousands from hillside settlements in Peru to flood prone favelas in Brazil.

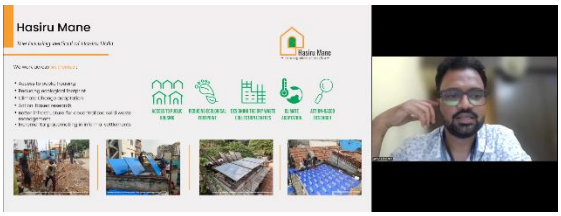
What was shared was not an innovation sprint but a distributed research system where households document their own living conditions and participate in every design choice. Each prototype was not a solution it was a question, posed in local materials, climate logic and affordability limits. Some were bamboo based, others used reclaimed plastic, all were context rooted.

Daniel also drew attention to institutional constraints. Informal settlements across Latin America face persistent exclusion from land regularisation, public services and urban budgets. In this landscape, housing is not just construction it is political visibility. TECHO's work, then, is to make each structure a platform for rights claims, partnership invitations and municipal engagement.

What works in Ecuador will not work in Paraguay. But the process the rigor of cocreation, the centering of community knowledge, the iterative prototyping is universally transferable. In a sector saturated with generic blueprints this approach demands listening, redesign, and local authorship.

Akbar Allahbaksh,
Director, Strategy and Programme Design, Hasiru Dala

The intervention from Hasiru Dala recalibrated the conversation toward circular economy practice within the informal sector. Akbar brought to light how waste pickers are often excluded from urban systems have become key actors in housing innovation.



The model presented was unconventional but effective houses constructed using 60% salvaged materials tin sheets, scrap metal, reusable timber assembled with design input and labors from the communities themselves. What emerged were not temporary shelters, but thermally functional, cost conscious and structurally reliable houses.

Akbar detailed how multi-layered plastic, long deemed unrecyclable, has now been processed into durable boards for roofing and partitioning. These are now being scaled for clinics, creches, and anganwadis. More than just environmental benefit, the innovation redistributes value recognizing waste pickers not only as collectors but as manufacturers and urban service providers.

"So, we kind of like focus on six thematic areas where we kind of like work with access to public housing so we work very closely with local government to enable public housing and land entitlements for waste pickers and we also do because we also have design expertise. We also look at how do we kind of like help base pickers to Build their

houses which they aspire for, so we are focused on reducing ecological footprint. How do we kind of use reuse a second material."

- *Akbar Allahbaksh*

The core proposition was circularity with dignity. The labor is paid, the data is tracked and the products are certified. The strategy is not to romanticize informality, but to show that when properly supported, it can produce resilience that formal systems have failed to deliver.

Sheela Patel,
Director, SPARC, Global Ambassador to Race to Resilience (RtR)

The work shared in this roundtable is precisely the kind of joined up thinking and doing that changes aspects. We are experimenting with solutions across the world, and if something works in one context, it can travel. The challenge now is to ground this experimentation in systems that can replicate outcomes without depending on philanthropy.

We must invest in developing very local businesses that can carry this work forward not as charity but as functioning, sustainable enterprises. What emerged from the presentations was a clear call; build resilient, scalable models with measurable outcomes and then multiply their impact through networks. ROOH is one such effort that shows what becomes possible when experimentation meets community energy and material innovation. The imperative is to develop mechanisms for translation not just across geographies but across systems.

This roundtable is a reminder that we are part of an evolving ecosystem one that must design for dignity, iterate with community and scale with intent. When we co own experimentation, the learnings become everyone's. That is how we build momentum not just for policy or products, but for systems transformation.

Nihar Johari,
Technical Lead, Roof Over Our Heads (ROOH), SPARC

Nihar reflected on the broader ecosystem of partnerships necessary for climate responsive housing. He acknowledged the ongoing collaboration with C-Balance and about aligning material innovation with scalable construction technologies. His remarks underscored the value of integrating learnings from grassroots partners like Hasiru Dala and Development Alternatives. Nihar reflected on working with Arup through its collaboration with ROOH. He underlined the importance of learning labs, not just as demonstration spaces, but as participatory, iterative environments where design decisions are

stress tested against community realities. Highlighting past experiences from other cities the contribution positioned Arup not as an external consultant but as a technical ally working in proximity with local builders, women led groups and market actors. While global knowledge is important, it must be restructured to serve informal and climate vulnerable settlements.

...Finally, the closing trio brought the conversation full circle from field, to material to the systems. Vivek Gilani from C Balance advocated for a redefinition of comfort using passive, low carbon, locally fabricated techniques. Mohak Gupta from Development Alternatives mapped a pragmatic path to green housing at scale through enterprise led supply chains and circular material innovation rooted in community. Laura Marcheggiano from Arup grounded the discussion in real time collaboration emphasizing the relevance of using earth and other locally available materials, not only for sustainability but for thermal and structural performance. She underscored that cocreation and embedded technical partnerships are key to designing for resilience. Together they made clear that transformation is not hypothetical, it is already happening, and what is needed now is the ecosystem to sustain and scale it.

The First Step in a Long Build: Concluding the Roundtable

The roundtable concluded with a reflection from Sheela Patel, grounding the conversation in the lived realities of communities facing deep housing insecurity and climate vulnerability.

Each exchange like this helps us connect the technical with the contextual from materials analysis to the realities faced by communities on the ground.

Too often, new materials generate excitement without enough consideration of their environmental costs or social impacts. In India, for example we have had to move away from traditional brick kilns, not just due to emissions, but because of their reliance on exploitative labor and deforestation. So, the search for alternatives is not just about innovation it is about ethics, resilience and acceptability, especially in fragile contexts where many houses are built to be dismantled before they are destroyed.

These conversations matter because they give space for honesty about what works, what doesn't, and why. We have gone over time, but perhaps that in itself reflects the depth of the challenge. There is no simple solution when we 1re talking about designing houses for families with limited means families who are unlikely to benefit from subsidies or formal finance. What we build has to work in the real world it must be affordable, buildable, maintainable and locally sourced whenever possible.

We want this to becomes more than just a one off exchange. That through this emerging network of practitioners, researchers, communities, enterprises and institutions we continue to share openly not just our successes, but our questions, failures and workarounds.

If we can do this consistently and collectively we believe there's real potential to shift policy and practice. To move from piecemeal improvements to coherent strategies. And to ensure that houses in the informal city are not just shelters, but resilient, dignified spaces people can rely on.

On behalf of the ROOH family, our partners and all the communities that have opened their doors and lives to this process Thank you to everyone who made this dialogue so rich. We look forward to building together layer by layer, house by house, idea by idea and continuing this journey with all of you.





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