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Recovery

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A Green Reconstruction of Ukraine Begins with Affordable Housing

Without safety, there can be no green. Ukraine's security must be a given. How this happens is up to others, but for us in housing and urban development, we act on the presumption that this will happen somehow—and sometime soon.

After 49 years of working on affordable housing (principally as an investment banker, lender, investor, and negotiator, with a minor in pro-bono technical legislative advice to the US and other governments), 23 years of them working internationally on multiple continents, nearly everything that I know about affordable housing, I've learned by observing and doing. I've brought that experience to bear during the 3½ years the non-profit I founded, the Affordable Housing Institute, has worked on Ukraine with many new Ukrainian colleagues and friends including the World Bank. Here's what it boils down to.

A.

Ukraine's future is green, but not in the way many people think.

A green sustainable society and high technology go hand in hand:

1. Urban is green. Cities are the world's future and Ukraine's future. For all your country's bounteous agriculture, Ukraine's economic growth will be driven by technology and innovation, and these will depend on reviving, reinvigorating, and reimagining Ukraine's cities.

2. Vertical is green. Ever since the electric elevator was invented just over a century ago, cities that led global economic and financial development went vertical early. Moreover, per-person housed, vertical living is also the greenest form of density—carbon usage, reduced fossil-fuel transportation, lowest energy (especially with good intra-building insulation), and the usage that preserves the most open and community space.

3. Affordable housing is green. Housing is where jobs go to sleep at night, and affordable housing is where foundation jobs—those that make the city work—go to sleep at night. When cities fail to build affordable housing into their urban planning and city centres, the urban poor must trade away convenience, cost, or quality, and live in vertical ghettos near the ring roads (Glasgow or Paris), sprawling horizontal informal communities (Los Angeles, Mexico City, or Cairo), or dirty and diseased pocket shantytowns, often alongside polluted marshes or rivers (Lagos, Manila, Dhaka).

4. Affordable housing must be baked in at the inception of redevelopment. If not, it is consigned to the city's periphery, isolated, forgotten, and failing both economically and socially. Instead, many states or provinces that depend on affordable housing to make their cities viable have imposed inclusionary housing laws (e.g., London, Boston), development linkage payments (e.g., San Francisco, New York), or transferable development rights (e.g., Mumbai, São Paulo).

5. Greener housing will be an important contributor to Ukraine's future security. The re-modelling of Ukraine's housing is a huge opportunity to help create a modern network of distributed energy generation and storage through housing-mounted solar PV and wind generators, plus community batteries to pool excess generated power. Re-modelling homes allows for cabling, insulation, and wider infrastructure to be built in from the outset. Decentralization and networking of energy generation and storage will strengthen Ukraine's resilience to attacks on energy assets.

B. Ukraine is unique and must build its own adaptations and innovations.

Ukraine is the only 21st-century European country to have been invaded for conquest and bombarded for over three years. Ukraine has the world's most digitally savvy diaspora of internally displaced people (IDPs) and refugees. This gives Ukraine the greatest ability to be networked and entrepreneurial of any diaspora in history. Ukraine is also a country where a fledgling democracy has, for more than a decade, been repeatedly and systematically assaulted by a thug aggressor, stymying the emergence of effective democratic institutions.

All this means that, though Ukraine is part of Europe and is pursuing EU admission, the EU takes for granted things Ukraine lacks and overlooks critical housing-related challenges that Ukraine faces and must urgently address:

1. Urban Unexploded Ordnance (UXO) must be cleared. The UN's Mine Action Service estimates that that over 20 per cent of the country's land—or 139,000 square kilometres—is contaminated by mines or unexploded ordnance. This is a major challenge in Ukraine's eastern cities that have borne the weight of Russia's invasion. Before re-development and rebuilding can occur, all bombarded land must be cleared of UXO, and certified as UXO-clear. This cost, akin to hazardous waste remediation in the EU or USA, will be a sunk cost whose value cannot be recovered through normal real estate development. It must, therefore, be funded from the national budget, preferably

with substantial foreign aid grants. Until this is done, the affected urban areas must be off limits to formal redevelopment.

2. Urban rubble must be cleared and repurposed. Normal calculations of green savings, or the embedded carbon/embedded energy costs of the built environment, ignore the reality that more than 6.4 million tons of war rubble has accumulated across Ukraine, mainly in urban locations. Most of this will be cementitious materials, and they cannot simply be hauled away. Instead, this rubble has to be repurposed into sandwich-panel-style aggregates and combined with new forms of carbon-fixing and high-albedo cement being developed by global cement companies. Any cost-benefit payback analyses of green improvements or carbon sequestration must then be modified to reflect the cost and carbon savings from reusing what was destroyed before.

3. The war's aftermath will be a major demographic shift toward new green-field development in Western Ukraine. Although most of Ukraine's major cities are in the East, along or near the Dnieper, these cities have also suffered the greatest damage, while western Ukraine has been largely spared. Major disruptions invariably trigger demographic shifts: twenty years after Hurricane Katrina swamped the city, New Orleans' population is 30 percent less than pre-storm. In addition, as Ukraine integrates and orients its economy toward Europe, it will shift away from industry and resource extraction to other types of higher-margin and more sustainable economic activities, including high-tech, information technology, and cutting-edge military

systems. As much as Ukraine wants and deserves to rebuild its bludgeoned eastern cities, for the sake of the country, housing and affordable housing also need to be built where the people and jobs will be.

4. Soviet-era laws and regulations have to be swept away. They are command-and-control, prescriptive, and more than thirty-five years out of date. Yet for these laws and regulations to disappear, they must be formally repealed. The law on the Fundamental Principles of Housing Policy, now pending in the Verkhovna Rada, will do this. It needs to be enacted as soon as possible; it's already overdue.

5. Enabling legislation for affordable housing and social housing must be enacted. In this context, affordable housing means housing benefiting from government resources, either cash (e.g., grants, favourable financing) or non-cash (e.g., low-cost land, zoning density bonuses); it is normally aimed at middle-income households (including soldiers and veterans) and usually encompasses homeownership as well as rental. These concepts need to be embedded in legislation (the Fundamental Principles law will do so) and then implemented via regulations from the Ministry for Development of Communities and Territories (MinDev).

Beyond affordable housing, social housing is the large subset of affordable housing, nearly all of it rental, that is further targeted to include lower-income households, the elderly, or the disabled. These people need not only quality housing at an affordable price, but also an income subsidy that enables them to pay the affordable rent. As the housing is intended for long-term affordability, it must be

regulated, usually by a municipality, and it can be owned or co-owned by a municipal agency that has both business skills and public accountability through its enabling legislation or its non-profit status.

6. Money, especially foreign hard currency, will be precious and must be tightly managed. Ukraine will need a decade or more for its GDP and household incomes to catch up with other EC member states—yet now the country faces unprecedented levels of required capital investment, most of which will need access to foreign hard currencies. Vienna's social housing system took 105 years to reach its current equilibrium; in the US it took 90 years; and most of Western Europe has needed 60 or 70 years. Priority among desirable green initiatives must go to those that have durable impact, and reliable post-inflation payback cycles. Most of the sizzly stuff that wins awards will, alas, have to be postponed because the country simply cannot afford it.

7. >European best practice< cannot be adopted wholesale, or right away. Many so-called best practices that work in the EU or the USA should not be adopted right away in Ukraine. High green standards for building materials, energy efficiency, or carbon neutrality are expensive luxuries that the EU nations believe they can afford, but Ukraine certainly cannot.

Although Ukraine's future is clearly as part of the Western European community, EU zone standards are expensive and predicated on green preconditions (e.g., no UXO, no rubble, a balanced government budget) that do not exist now and will not exist for many years. European best practice can be aspira-

tional and achieved in measured steps. European foreign aid that comes with too many green standards attached may in fact be uneconomic for Ukraine to take on.

C.

Social housing is a new modality of housing, and Ukraine needs a whole new ecosystem to support it.

What Europe and the US call social housing emerged out of an ecosystem that took at least forty years to evolve to rough equilibrium. Ukraine has no social housing ecosystem (a parting gift from the late unlamented Soviet Union), and so everything must be built from scratch. There are a lot of pieces of the puzzle to assemble:

1. Successful social housing delivery, ownership, and sustainability usually depend on having an affordable housing ecosystem alongside it or in front of it, creating the liberal democratic enabling environment. With an urgent need for all types of housing in Ukraine, middle-income housing will be easier to deliver and less costly for government, and a high political priority. As returning IDPs and refugees will need to be reunited and to settle somewhere, it will be sensible to have affordable housing launched first, to create the conditions for social housing to be added alongside it. Even more pragmatic, affordable housing (a) always requires fewer government subsidies per household, and much lower downstream moral hazard expenditure risk, and (b) will bring in private investors (who can be regulated and harnessed for the public good),

that will come bearing precious foreign-currency capital that the government may not have.

2. Affordable and social housing development requires capital subsidies; in addition, social housing requires operating or resident income subsidies.

Affordable housing solves a cost problem—the housing costs more than middle-income households can afford. For this, capital subsidies (those that buy down the cost or delivery or reduce the cost of borrowing) are the most appropriate to use. Social housing solves a poverty problem—even if provided with affordable housing, some households cannot afford that lower rent by themselves. For this, there is no good substitute for a means-tested operating or resident income monthly subsidy.

The operating subsidies must be large enough to assure that the property always has positive Net Operating Income (NOI) and that it can cash flow to build up capital reserves. Some countries (e.g. Poland) initially set social rents too low, and as a result over time the buildings ran down and became dilapidated. America did this for sixty years before it became a national public housing crisis and required wholesale reinvention of the public housing system—at a cost approaching \$170 billion.

3. Social housing requires a new type of landlord: business-savvy and mission-oriented. Landlords of conventional rental property operate on market principles: charge what the market will bear, rent to those who can pay, evict those who cannot. This does not work on social housing, where the purpose is durable tenure, and residents need a sympathetic

landlord. Such thinking has led many countries, including most of Europe and the US, to try first with public landlords: council housing in the UK or public housing in the US.

Both countries discovered that purely public ownership and operation does not work, because being a landlord, even a sympathetic landlord, requires business skills and making hard decisions from time to time. Both countries eventually supplemented their public bodies with regulated private-sector companies, for-profit and non-profit, because they found that in a PPP structure, government can hold the private sector accountable, insist on quality housing and value for money, and terminate contracts with non-performing landlords. When government tries to enforce performance standards upon itself, none of these things are possible and the government-owned communities inexorably, and tragically, become slums.

4. Municipalities will need to grow new entrepreneurial muscles. Shifting from all-government ownership and operation to public-private partnership means giving up command-and-control regulatory burdens in favour of aligned economic incentives and effective contractual enforcement rights. These are skills, contractual structures, and a mindset shift that are not easy for oldsters to embrace and master. The transition can be painful and is often resisted by the incumbent management team.

The shift is best made by separating essential functions (must be retained by the government) because they are policy accountability from technical functions (that involve following the rules and efficiently administering and managing the property. How these

can be integrated into a municipal-private partnership, are shown in Figure 1 [→ p. 51] and 2 [→ p. 52], taken from an article I published in the US's national public housing trade association magazine back in 2007. I am happy to report that eighteen years later, most large public housing authorities in the US have shifted to this PPP model of governance, defined division of responsibility, delegation, and mutual accountability documented in legally enforceable contracts,

Conclusion.

Affordable and social housing are essential to Ukraine's future, and must be pursued as urgent national priorities co-equal and simultaneous with every other aspect of national reconstruction. The sector is complex and the challenges are many, but I have no doubt that the right Ukrainian leadership can adapt lessons from elsewhere into the unique Ukrainian context and deliver the future Ukraine needs and deserves.

↓ FIGURE 1

The technical functions associated with public housing

Activity	Why it is technical not essential	Examples outside public housing
Ownership	Govern via legally binding documents, can be separate from funding and control	Tax credits, military, universities
Property management	Concerned with maximizing NOI and improving property condition	Institutional owners, fee-only managers in tax credit properties
Maintenance	Physical, visible, performance-based	Contractors of all stripes
Asset management	Financial and quantitative	Large owners, equity syndicators
Program compliance	Following a procedure, and documenting it has been followed	Tax credit auditing, certifications

↓ FIGURE 2

