

# How to Collaboratively Research the Future of the Communicative City in a Post-Pandemic Age

*This article complements and supplements the above-titled presentation made during the CCRN webinar workshop, 11-17, Nov 2020, hosted by the NUS Cultural Research Center and the Communicative City Research Network. During the conference's follow up discussions, the concept of over-layering, inter-twining and intra-connecting existing urban communication **infrastructure grids** with the newly developing **social grids** of inter-change and ex-change was envisioned and is here developed.*

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The present pandemic's full year of catastrophic contamination waves has shown how some social network platforms have helped locked-down neighborhoods to self-organize and bridge the resulting urban turmoil as if in disaster-relief mode. They sustained their communities and businesses blindly tried to pursue their livelihoods. Delivery and distribution by smartphone, on-line conferencing, traffic rerouting ... health-condition tracking, real-time reports to relief and aid brigades, ... remote teleworking and schooling... all happening while governments struggled with science and business guiding or misguiding each other in national strategies. But the ability to have physical contacts and gathering was shown to be a crucial human physiological and sensorial necessity for any neighborhood's livelihood, let alone a city's. This turmoil has become the needed springboard for soundly reassessing new horizons.

Just as Brunelleschi's new perspective drawing experiments during the 1420s had established the principles and rules of measurable accuracy and opened the illustrating keys to the third dimension of an object's depth or a space's breadth projected onto a two-dimensional surface — so too have the recording methods and processes of today's digital-age tools. These tools are setting the principles and rules of *calculable outcomes* and make visual the fourth dimension of life-cycled functions in three-dimensional space-time illustrations. They are environments of sequences, connexions, cycles, exchanges and patterns. Furthermore, these functions are modifiable and adjustable to changing conditions and/or requirements that can be fully illustrated in a virtual reality world. More holistic involvements and results become more accurately predictable and programmable with broader outcome efficiency and versatility.

Our built environments - our cities where residents live and work - have reached critical mass conditions of density where, ever-growing clusters of packed and stacked humans as well as crammed-in livestock barely survive, but all more at risk with diminishing defenses. These conditions helped propagate the Covid-19 viruses and continues to.

The expansive scales of digital-age research open several ranges of capabilities leading to better analytical and comprehensive immersions that ultimately help figure out, untangle and propose specific solutions to increasingly complex urban livelihood issues. The most crucial of them is *shelter for its residents*, which is the foundation and springboard for any city and neighborhood activity. Illustration tools abound: Virtual Reality explorations, holograms, fractals, game-theory, 3D mapping... algorithm explorations, rhizome-like growth processes, life-cycled and recycled cradle-to-cradle production materials ... in short, all the various disciplines useful to urbanism research and evolutionary development.

As architect, my interest and research have focused on human settlements and their transformation processes throughout history together with their continuously evolving social, societal and cultural influences that physically reshape urban activity, prosperity and livability. I view the present Smart City offerings as having so far provided only complementary support to existing patterns and cycles of street-bound urban activities. Offerings that need to expand and become a means to responsibly organize support-networks or flash-mob movements that aim to supplement the aspects that define a city's prosperity and quality-of-living economies, instead of offering ways of destroying them.

This gradual but geometrical advancement of the digital age into the globally urbanized and built-world activities has affected social and societal behaviors. Personal data from our smartphone and twittered lifestyles - and livelihoods - have been set firmly in block-chained archives. In this dataflow lies the density so desired by businesses as source of dynamism and commerce, in short of currency. Our Post-Pandemic era must bring into play all urban-resident livelihoods as the world transitions from Post-Fordist economies of wasteful consumption toward broader fields of circular economies of local opportunities.

What can the future of urban living be for the 54% of the world's population that overpopulate our cities? At present, UN-HABITAT field reports show that one in three

urbanites lives in slum conditions, and the data forecast that it will be 2 in 3 by 2030, and 2 in 1 by 2050.

Quick math shows that, of the 7.<sup>800</sup> billion global inhabitants, 54%, or 4.<sup>200</sup> billion are urban dwellers, of which the 1 in 3 slum dwellers total 1.<sup>400</sup> billion individuals today – that’s 18% of living humanity and 33% of the world’s urban residents. What kind of living space will there be for future urban dwellers, if today’s overcrowded housing allocates to the lower-income and lower middle-income sectors barely 7 to 9 m<sup>2</sup> of living space per person, while parking spaces get a fixed globalized standard of 12m<sup>2</sup>?

As yet our present urban housing and employment activities have not progressed nor helped to socially integrate and interweave settlers collaboratively. This is where “communicativity” is needed. No affordable mass-produced living capsules or cages “available on short term mortgage plans of ownership” [much as automobile markets offer] can bring better livelihoods and living conditions alone. It isn’t price, nor style or “smartability” that can replace quality urban goods and services tailored to specific *local* needs with elemental and optimal day to day *local* employment, executed at sustainable *local* paces with more inclusive and transparent interventions. The pandemic has forced us to ponder the transformation of our future urban habitats and landscapes, not just physically but societally, socially and politically.

Economies of Scale imply speed, precision and simplicity to fulfill investment returns to *shareholders* [or comply with state budget limits] in the shortest possible timeframe with minimal waste. They are linear economies. Closed Circuit, Circular and Scaled Economies imply transparent attention and care to quality-controlled results, from start to finish, at all levels, with up-cycled, recycled and cycled production methods and more flexible assembly and disassembly processes.

The basis of circular economies is to implicate all *stakeholders* within it and to keep the exchanges thriving in the daily, weekly, monthly and yearly operations of its cycles that enhance each neighborhood’s living and trade operations: *vacant and rooftop lot farming, soup kitchens, clinics, parks, playgrounds, schools, clinics...* all satisfying local demands with collaborative planning thus opening plenty of labor opportunities for remunerated tasks, jobs and employment to local residents. The inter-cultural proverb “It takes a village to raise a

child” becomes *it takes a network to raise a neighborhood*. One general urban guideline scale for a neighborhood’s planning size is defined as the area encompassed by a 10-minute walking radius ( $\pm 500$  meters) in all directions from a resident’s front door, which averages to  $1 \text{ km}^2$ . Its densities vary progressively over time.

All human beings, physiologically speaking, need for survival equitable access to the *three daily essentials of life*: 8 hours of sleep [which implies a fixed and secured shelter from cradle to tomb],  $\pm 2500$  calories of nourishment and 2 or more liters of drinking water for any body’s optimal basic functions. Thus, the shelter space needed is an inherent and universal need to which all have rightful and equitable access.

A stable, equitably shared and unalterable *and* non-speculative measuring-unit of constant value is that of *time*. An hour is the same anywhere on earth, it is invariable and is shared equally by every single human being. It is plentiful and constantly available at will until our last breath.

The world’s governances also adopted, in 1936, a maximum 40-hour standard workweek and set retirement age at after  $\pm 4$  decades of useful productivity, totaling some 80 000 accumulated hours of labor over an individual’s lifespan. This quantifies the value of a human being’s life-time assets and estate that must sustain the family’s survival during those 4 decades and also for about 2 more decades of retirement. For shelter, economists recommend a family-housing-budget should total no more than  $\frac{1}{4}$  of the family’s total income - or the value of  $80\,000 \text{ hours} \div 4 = 20\,000 \text{ hours}$  of a head of household’s lifetime potential. In a country where the minimum labor wage is set at  $\$ 15.00/\text{hr}$  or  $\text{€ } 10.00/\text{hr}$  for example, that value translates into a housing unit with a market-value potential of  $\$ 300\,000$  or  $\text{€ } 200\,000$ .

The 20 000-hour value needs to reflect a certain global standard of optimal spatial allotment which for the worldwide *average family of 5 members* would represent a living unit of around  $180\text{m}^2$  where all typical household activities are tagged to the global standardized sizes of furniture and fixture items with code-required clearances of handicap and wheelchair access, etc. This averages at around  $20\,000\text{hrs} \div 180\text{m}^2 = 111 \text{ hrs/m}^2$ . Such a housing-unit value per  $\text{m}^2$  can be *paid off* in hours to be worked in the closed-circuit circular economy [instead of a cash value mortgage-payments to a bank that end up often doubling one’s debt]. This positioning sets equitable trade-offs immediately since any person’s hour of labor is valuable

to someone in a circular economy within settlement operation schedule. The schedule of “time-payments” is accumulative and can be distributed out over each year with, for example, a 500-hour a year maximum of services, or 10 hours a week for 50 weeks a year, which is equivalent to a daily 2-hour/5-day a week commute to and from work. “Repayment” can be done by one or divided between both members of the family couple over a maximum span of 40 years.

That habitat’s space is what a family uses, and *its use* becomes their life-long usufruct right of ownership. In a closed-circuit, circular economy that use of the contained space becomes the naturally inherent value that each individual possesses as opposed to the container that encloses it. The space then has a non-speculative value and the returns-on-investment opportunities remain in the closed circuit as hours of labor available to the settlement. At the end of a couple’s lives, the living container returns on the closed-circuit market.

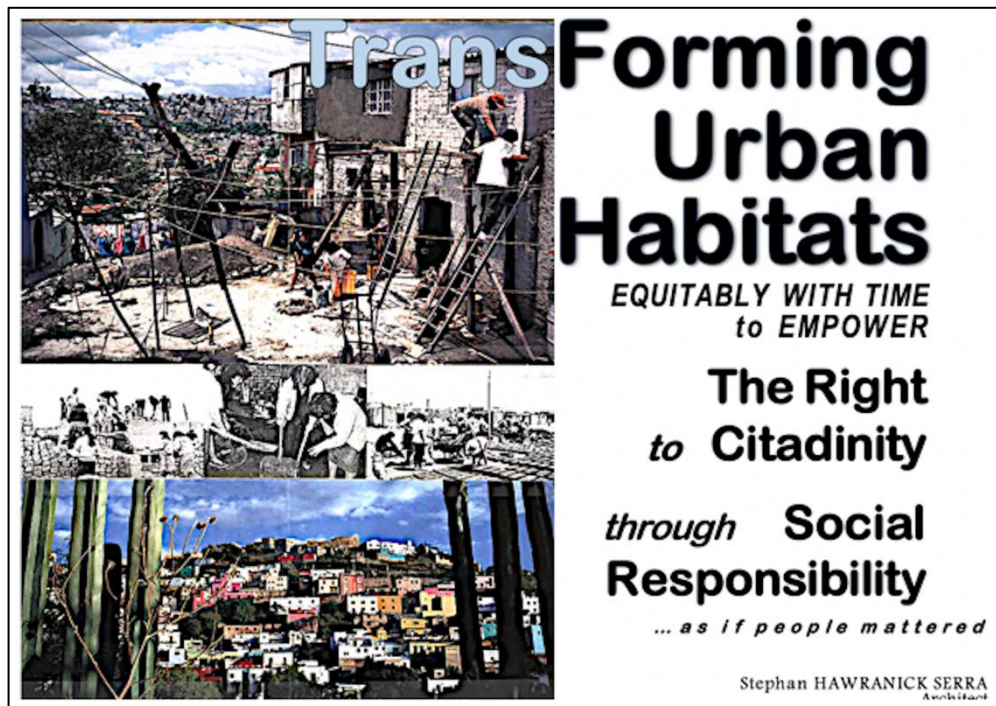
The challenges of this approach to housing and community development need more close study on how to structure the inter-connection exchanges of support, control, use and transfer of hours within long-term sustainable closed-circuit cycles of a settlement’s continuous function.

In the field, different scales of Local Exchange Trade Systems (LETS) have evolved into participative and contributive homeostatic, neuronomic and rhizomatic types of economic activity with some experimental success. Several were with complementary and social currency set-ups and have been showing efficacy of their use in cooperative projects: i.e., local upgrading of public spaces just for starters. The engendered cycles of local daily, weekly, monthly and yearly operations of a transforming settlement, tackling its basic needs progressively, can be “engineered” or “algorithmized” with the help of all sciences, “soft and hard”, and whose analytic capabilities can establish adjustable patterns and processes that help develop each neighborhood’s participative solutions and schedules. Many procedures and governance guidelines have been well established in the Right to City’s New Urban Agenda unanimously adopted at QUITO’s 2016 Third UN-HABITAT World Vicennial Summit.

A new frontier needs to open up for our world to become habitable, again. Our new Smart Cities, or rather our new Urban Communicativity must be able to complement and

supplement each city's operation within its existing structures of governance and economic livelihoods while transitioning toward the new frontiers of sustainable quality-living with its residents and local labor-forces, from cradle to tomb. Our cities, towns, neighborhoods and residences are globally linked and can find the best of ways to improve and expand themselves with better use of nature's local forces and resources. The need to expand into less confined spaces with less frenetic paces can be the new global economic system agenda.

This first year of the global pandemic has exposed many failed points of our socio-economic structures with systems that Politics [derived from the Greek POLIS = City > Citizen] and Governances have not handled well. First responder citizens responded admirably and proved collaboration delivers its aims. Now, the battle of setting pathways into the future needs to escape the public and private monopolies and make our cities habitable for all aspects of human, social and urban livelihoods. Two parallel and complementary economic systems can work collaboratively in developing the overlay and integration of the urban infrastructure grids with its social grids of sustainability in all fields of urban living. Some of these may have aspects that need trusteeship councils for protection from the darker-side threats but mostly for guidance on the universal issues of rights and responsibilities of our persistent Right to Communicate with and for our urban settlement evolvments.



**Trans**forming  
**Urban  
Habitats**  
*EQUITABLY WITH TIME  
to EMPOWER*  
**The Right  
to Citadinity**  
*through Social  
Responsibility*  
*... as if people mattered*  
Stephan HAWRANICK SERRA  
Architect

These ideas have been further outlined and developed in a Creative-Commons publication at Academia.org. To view and download it, do a Google search with the tag: *Stephan HAWRANICK Right to Citadinity*.

Citadinity here is coined in English with the French and Spanish sense of representing the urban resident's rights and obligations toward the city and toward fellow 'citadins' with respect for all universally declared Human and Civil Rights. Citadinity is to a City as Citizenry is to a State.