S.U.iT.S
Smarter Urban iT & Strategies

MIDCITY.LABS
disruptive innovation for your city

Thematic Forum 1a: Using international standards to build smart sustainable cities and tackle climate change

The call for Impact & data-based Standards towards Building Back Better

Arch. Rafi Rich – CEO of SUiTS & Founder of MidCityLabs

Senior lecturer for Urban Strategies & Smart Cities @ Technion Institute of technology, IL.
Former Senior Director for building at The Israeli Planning Administration
& Founder of the Israeli Green Building Council.

The 15th Annual Session of Global Forum on Human Settlements

Post-Pandemic Recovery and Transformation:

Resilient Cities, Healthy Planet

Urban growth & resilience scenarios

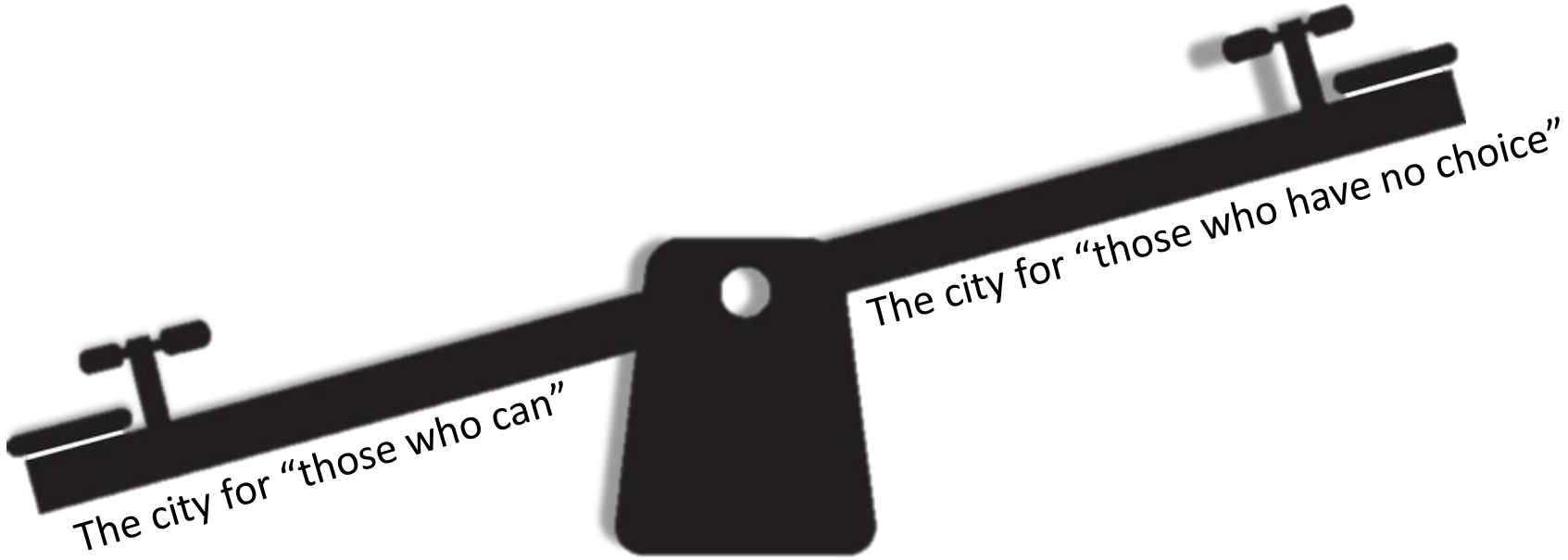
The Rational: the CITY cannot create inclusive growth, governance and services unless it modifies actions, rules and processes

physical & digital inaccessibility. Low access to needed aggregated data. Competition with the countryside and outer city business locations; and young adult exodus

THE CITY UNDER COVID19

Urban strategies & scenarios for Tel Aviv

Impact of irrelevant municipal interventions



Sufficient digital access for school and remote work

Large apartments/ small families

Lack of access to powerful broadband/ manual labor or essential service work

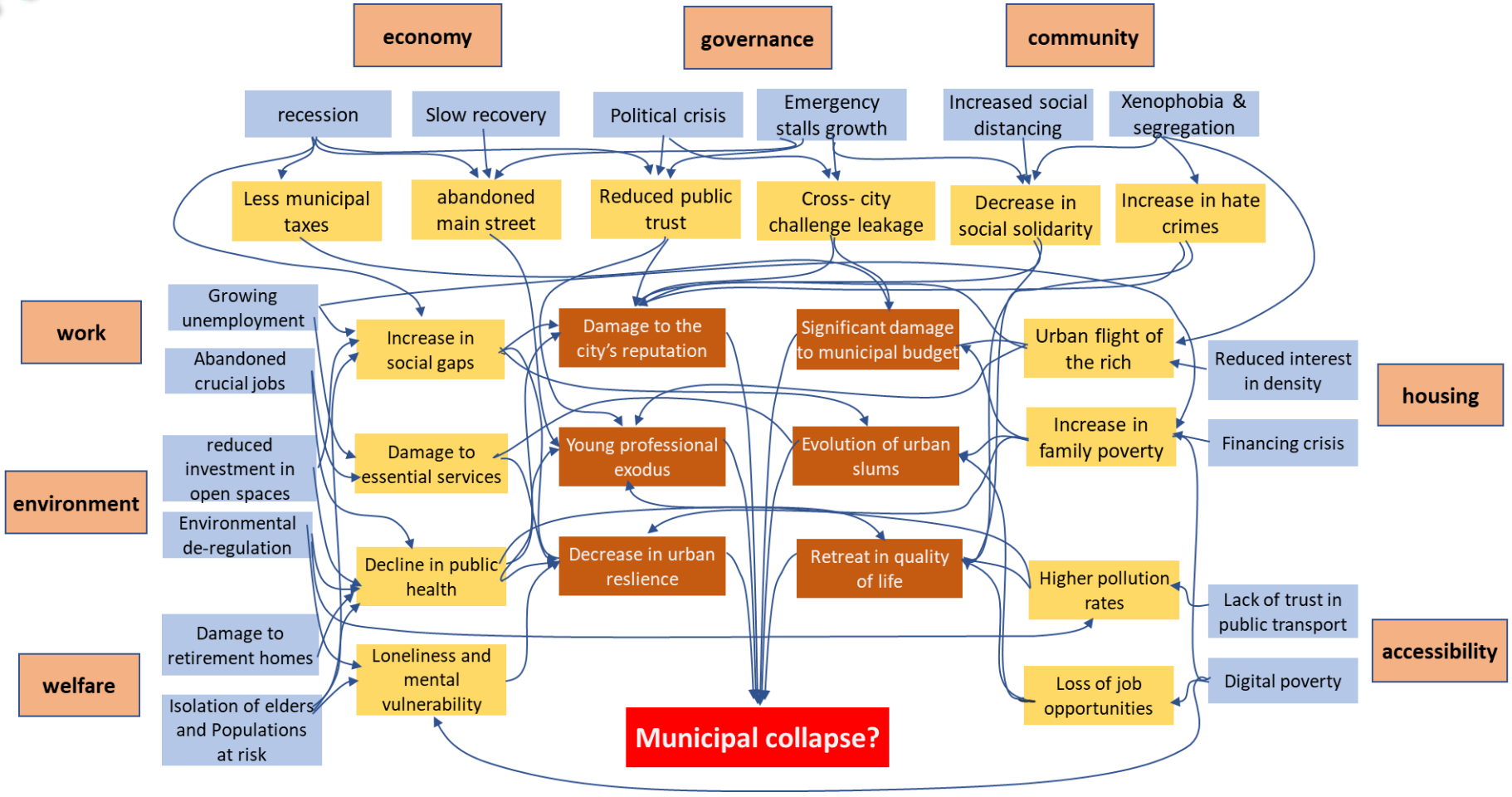
small apartment/insufficient space for all

Lack of a sustainable restart may be devastating for the urban poor

THE CITY UNDER COVID19

Urban strategies & scenarios for Tel Aviv

Post Covid19 Business As Usual Scenarios



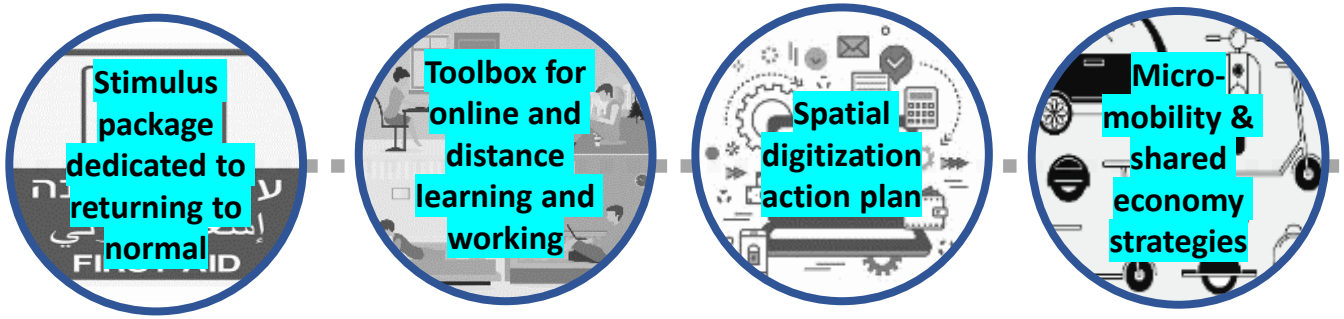
Not one theme - but a multi-layered complexity will determine how cities & communities will thrive and build back better

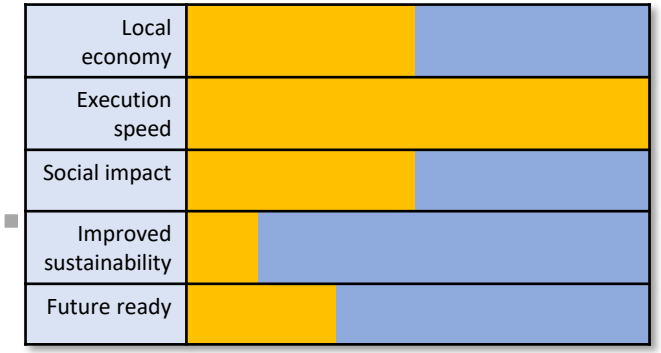
THE CITY UNDER COVID19

Urban strategies & scenarios for Tel Aviv

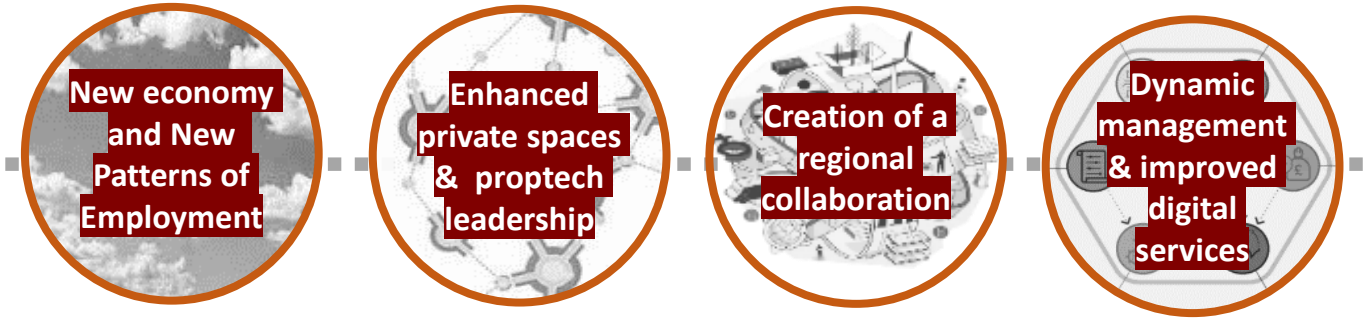
Proposed scenarios

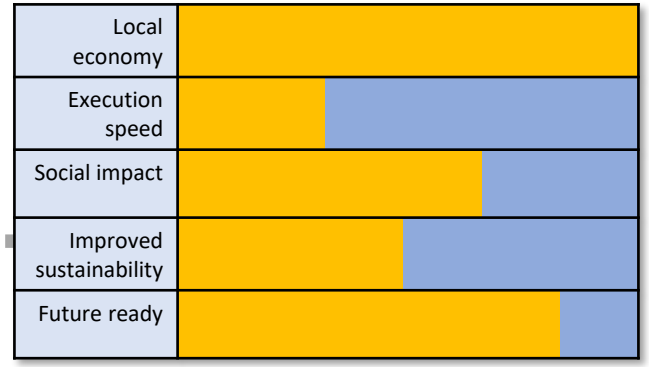
Scenario 1#
Back to the familiar



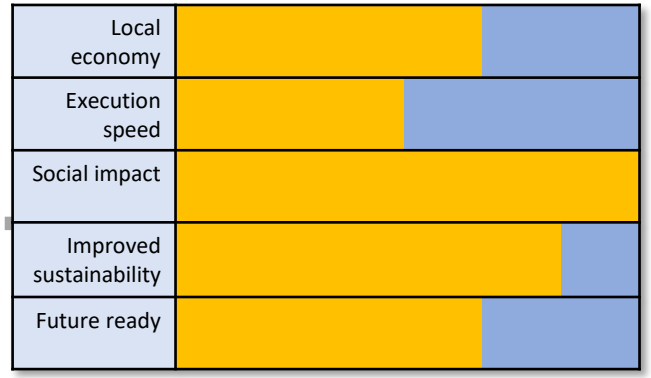


Scenario 2#
The new City





Scenario 3#
Facing the community



We need to utilize urban innovation (smart cities?) to create a sustainable restart of our cities,

without leaving anyone and any city behind.

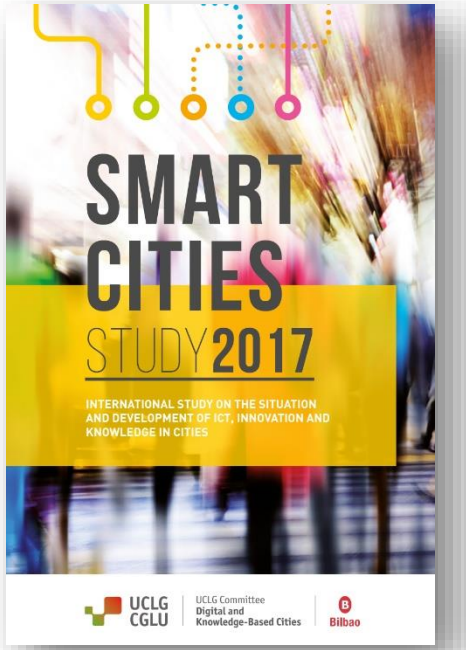
But how…?

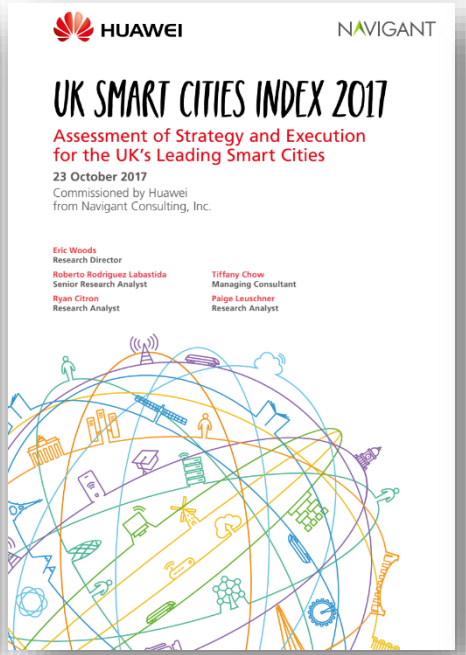
"A smart city is one that has digital technology embedded across all city functions."

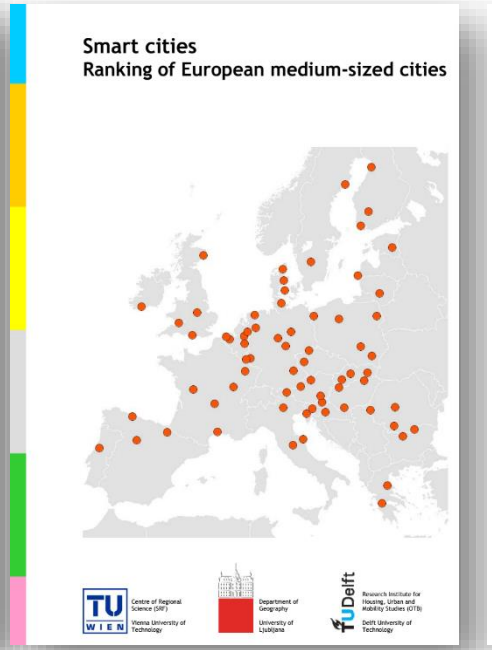
What about impact ????

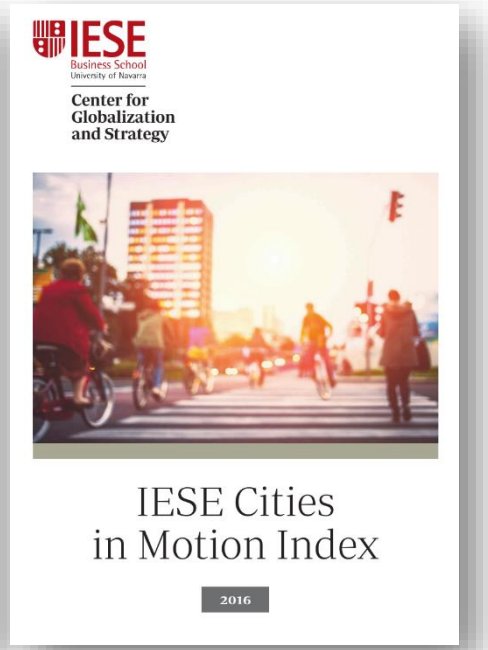
(and how do we make sure that 2008 doesn't happen again…)

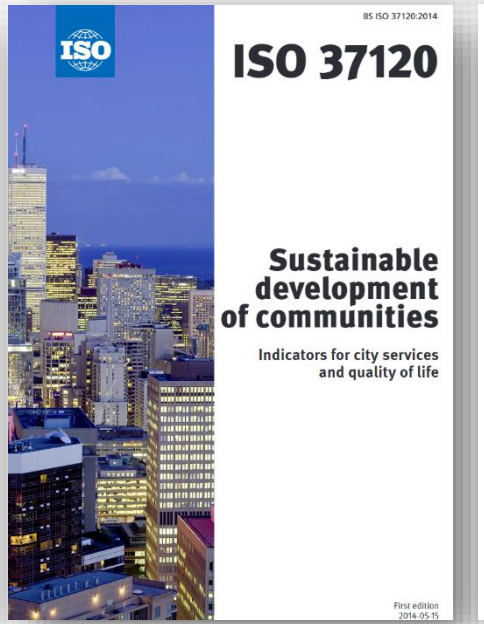
Existing rating tools

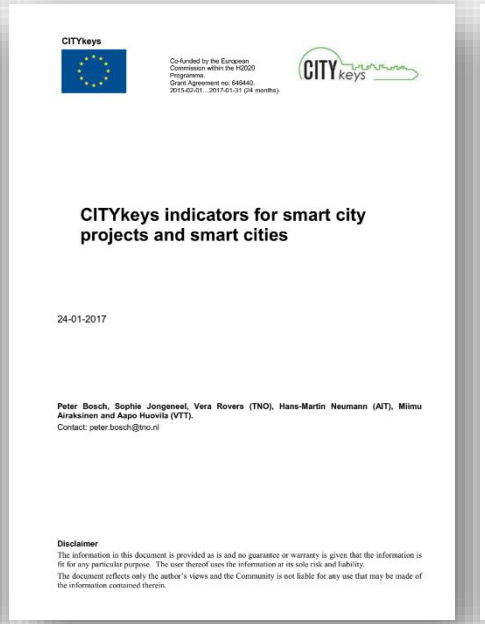


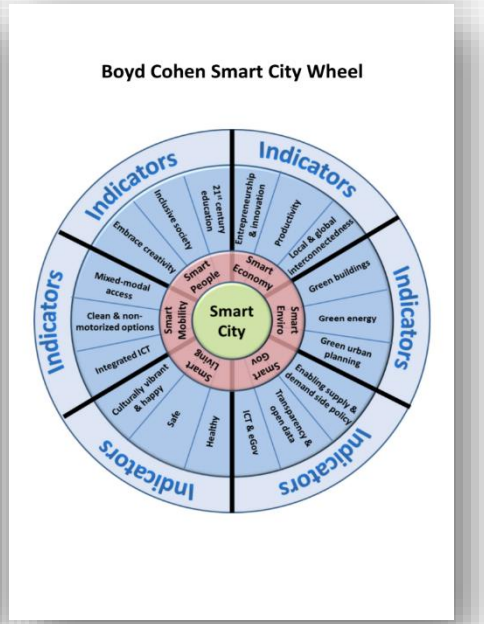


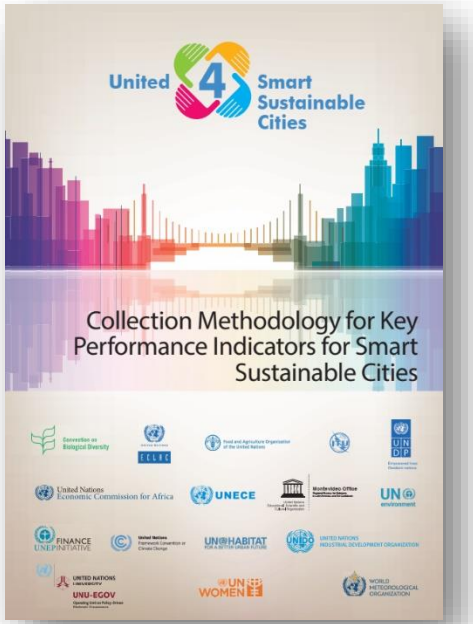




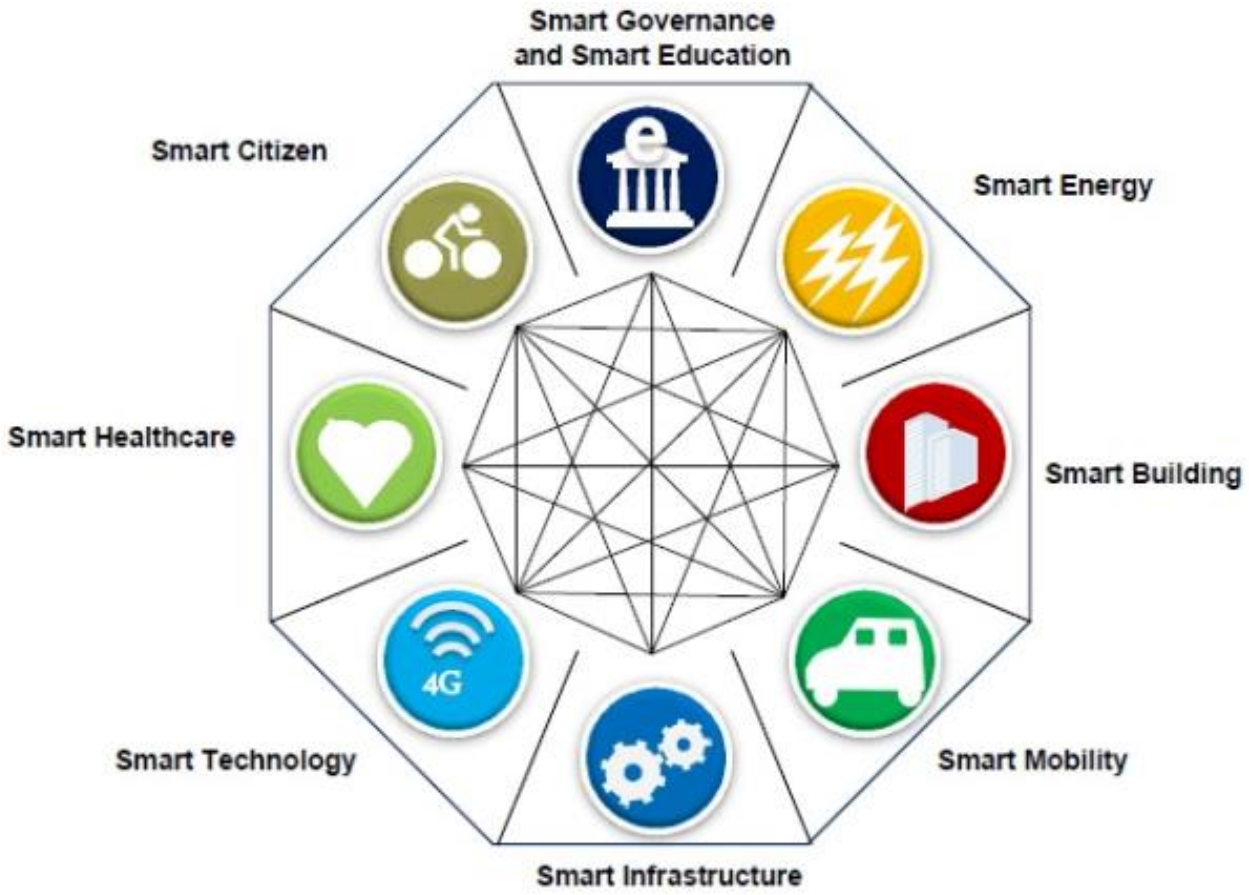


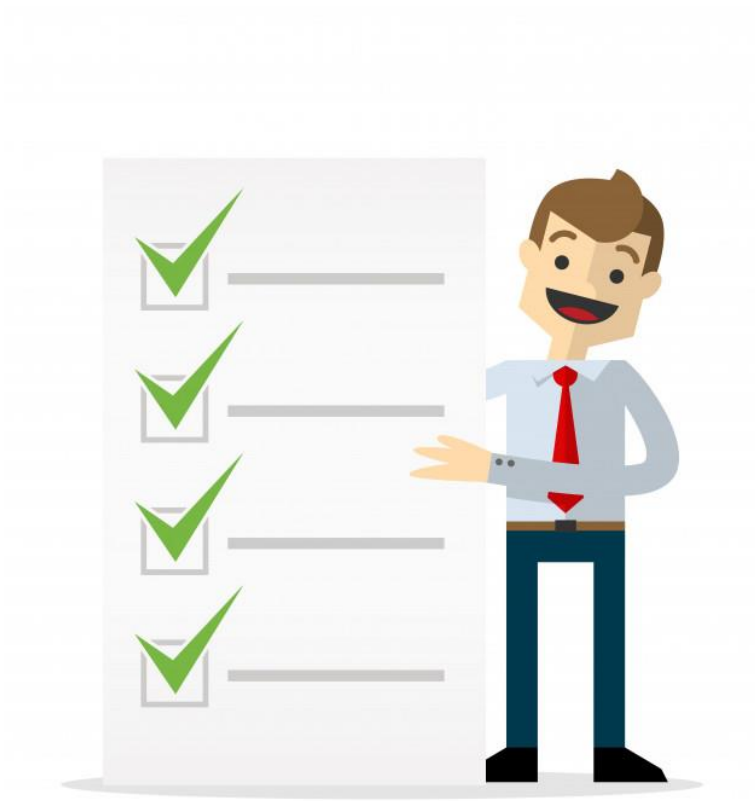




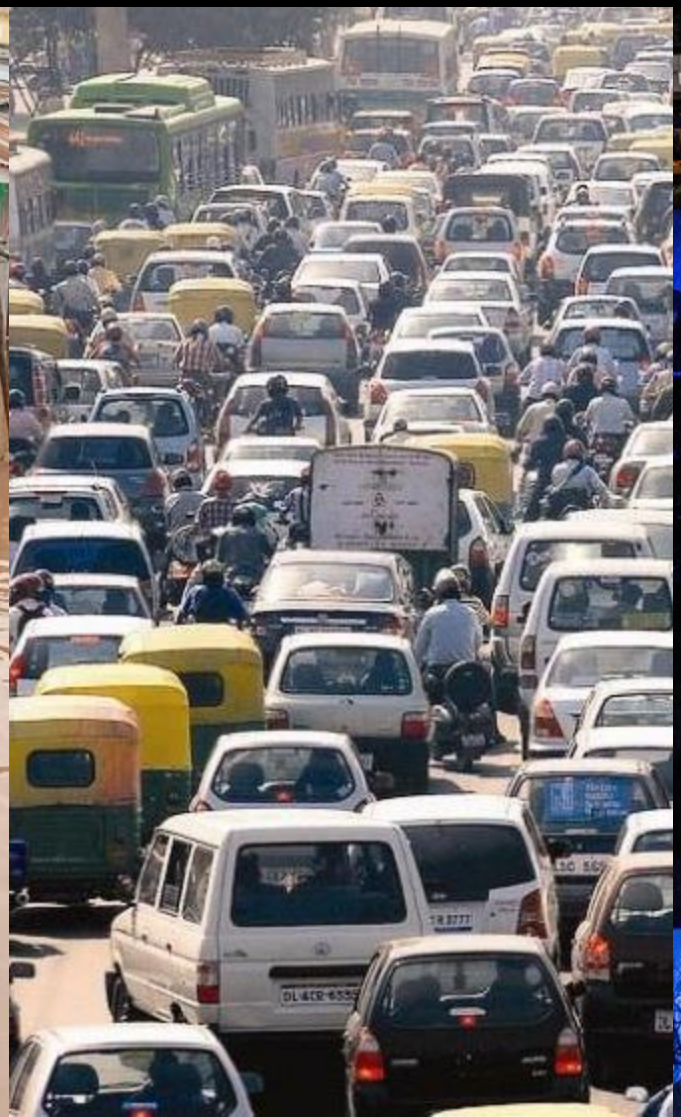
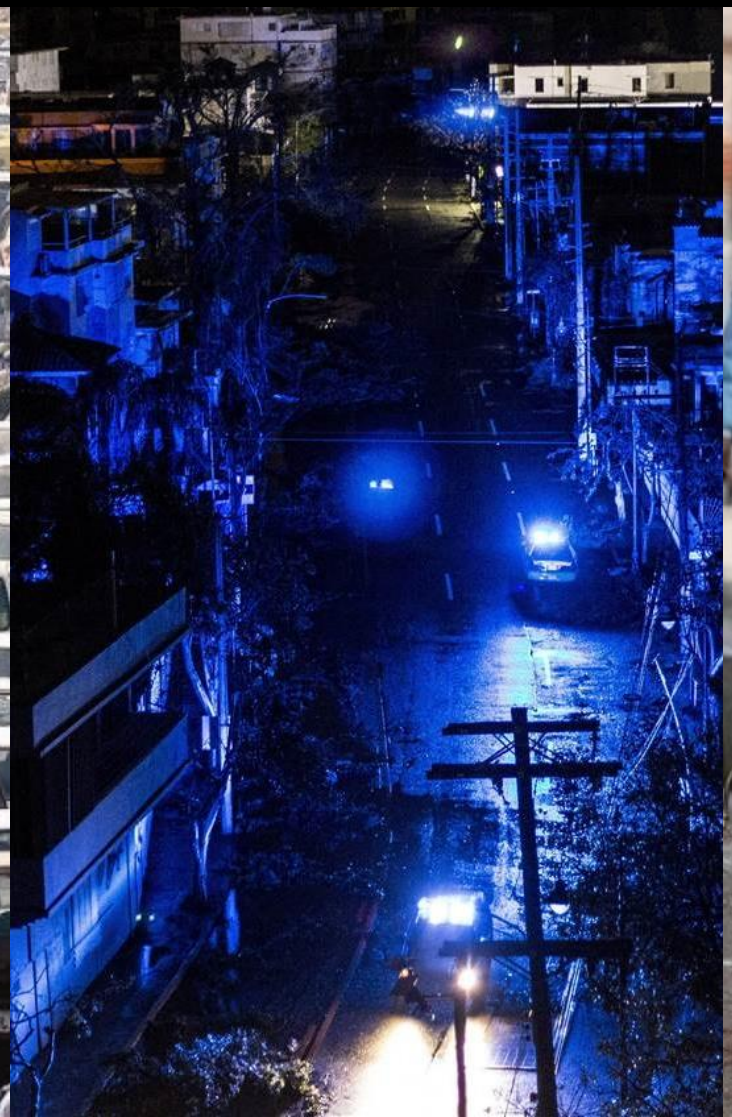


standards may promote common “check listing” instead of essential (relevant) qualitative change…





…& good indicators and solutions aren't always enough, since many localized cross-theme complex stresses are unsolvable with standard tools !

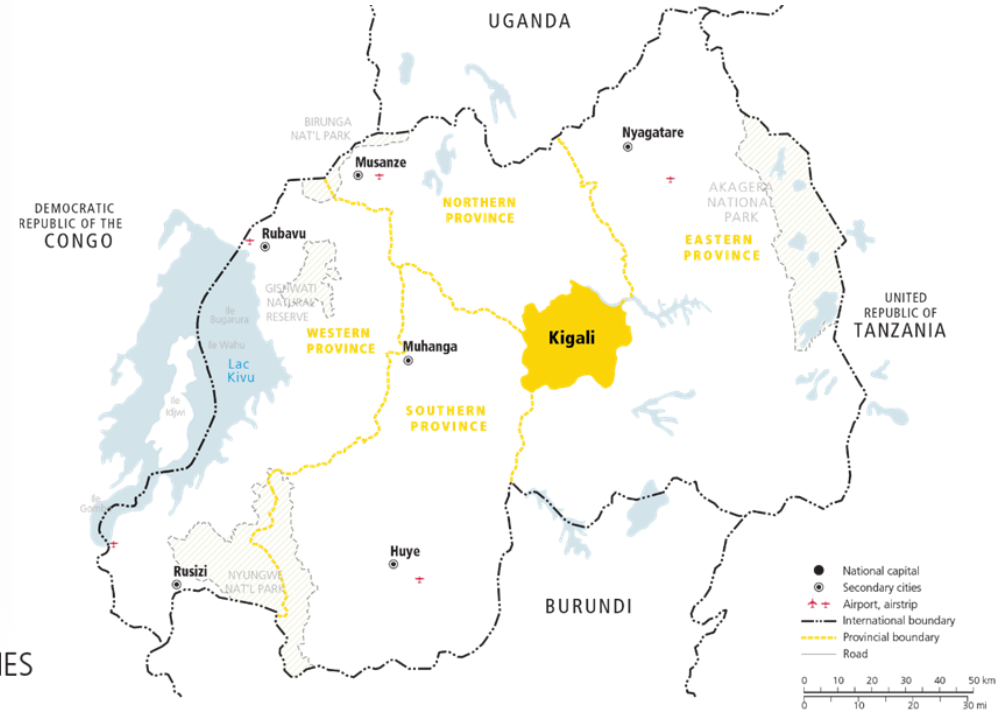





"The concept is not static, there is no absolute definition of a smart city, no end point,

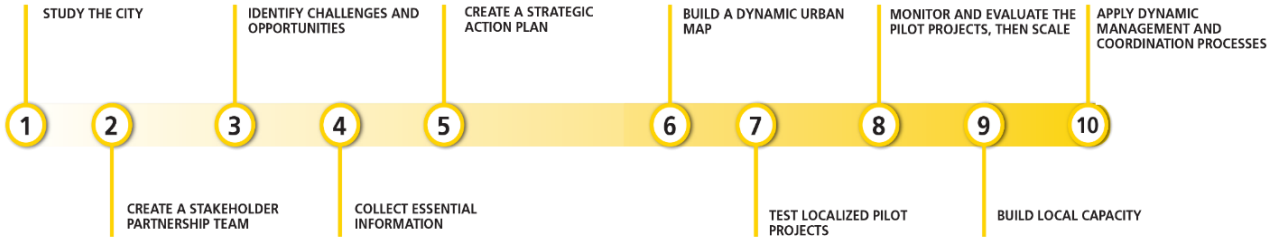
but rather a **process**, or series of steps, by which cities become more 'liveable' and resilient and, hence,
able to respond quicker to new challenges"

Arup & UK DBIS London 2013

Sustaining multi-level sustainable& inclusive urbanism for all



TEN STEPS OF IMPLEMENTATION



STRATEGIC INITIATIVES

PILLARS		BUILDING BLOCKS		INITIATIVES
1 Smart governance and planning	A	Data-led urban planning and management	1	Integrated, GIS-based urban management platforms
			2	Cross-ministry financial and project management platform
			3	Multi-stakeholder safer cities programme
	B	Smart policies and regulations	4	Dynamic data-supported urban master planning
			5	Enabling environments for urban technology testing
	C	Public engagement and open data	6	Data strategies including open data, privacy and cybersecurity
			7	Accessible internet zones in strategic and residential areas
			8	Digital citizen engagement tools accessible to all
			9	Urban Data accessible to all
2 Smart and efficient services and utilities	D	Shared local infrastructure	10	Digitally monitor and manage utility networks
			11	Explore smart micro grids based on the prosumer model
	E	Efficient, demand based services	12	Regulatory frameworks for virtual power plants and other demand-based management solutions
			13	Smart data-led 'door-to door' mobility solutions
			14	Digital service points for rural settlements
			15	Smart urban agriculture projects
	F	Sustainable and resilient resource management	16	Sensor-based environmental data
			17	Green and smart building labs
			18	Smart, sustainable and shared neighbourhood pilot projects
3 Localized innovation for social and economic development	G	Education, innovation and digital literacy	19	Innovation in education, from primary school to higher education
			20	ICT skills training in education, for local authorities and the general public
			21	National fund to encourage challenge-based innovation
			22	Innovation teams in ministries and local authorities
	H	Localized and challenge-based financial opportunities	23	Promote local digital business platforms
			24	Create collaborative community co-working and digital excellence centers
			25	Establish collaborative urban innovation acceleration labs with academy, community and industry
	I	Digital transformation of financial services	26	Introduce personalized e-finance platforms for all life-time services
			27	Electronic due-diligence and business loan systems for SMEs

Learning from green building standards (the good parts…)

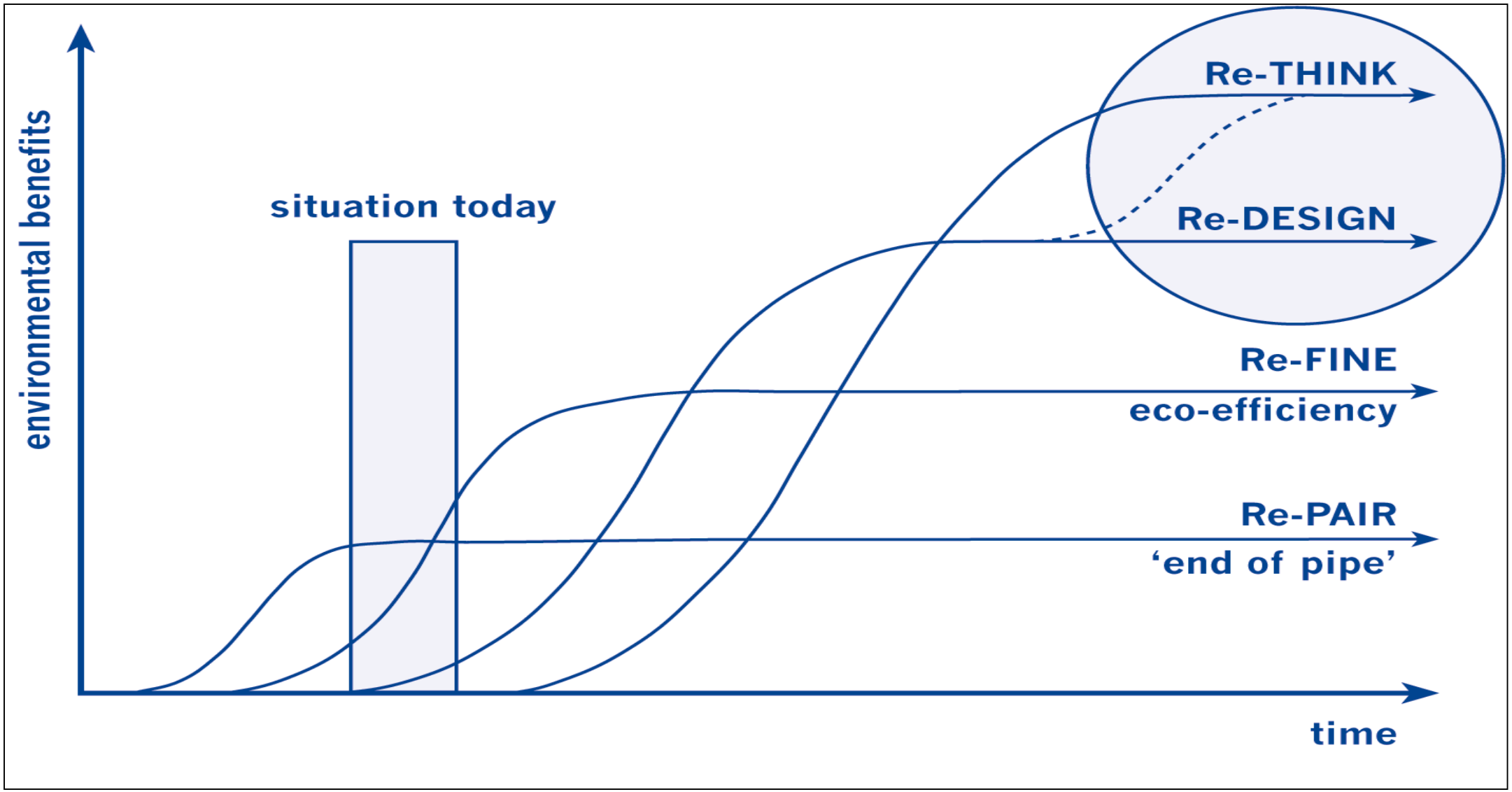
from 1993 to today…
from light green to zero impact buildings

MEASURING IMPACT

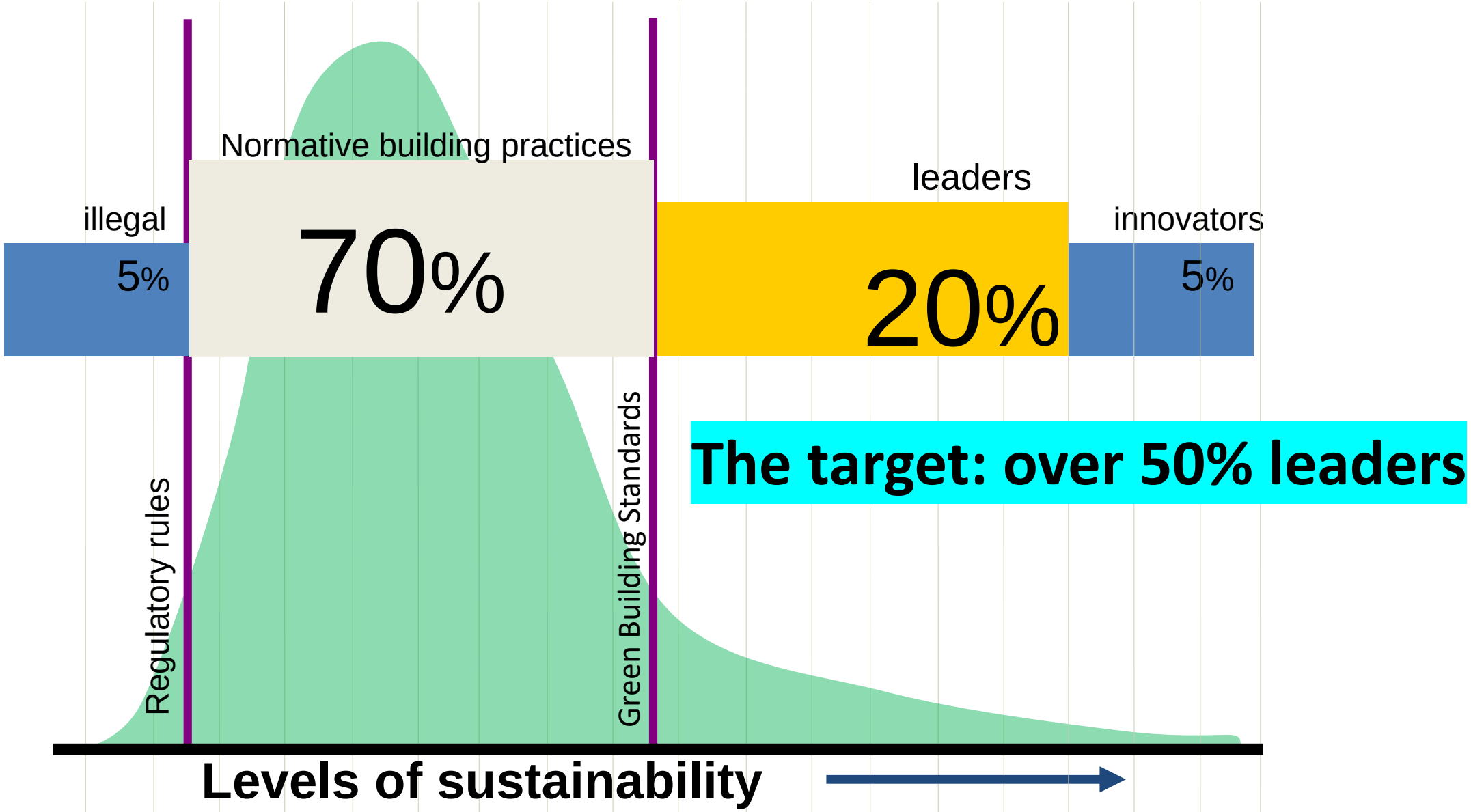
PERCEIVED ADVANTAGES OF BUILDING GREEN

- 8-9% decrease in operating costs
- 7.5% increase in building values
- 6.6% improvement in roi
- 3.5% increase in occupancy
- 3% rent increase

CELEBRATING SUCCESS


environmental benefits
situation today
Re-THINK
Re-DESIGN
Re-FINE
eco-efficiency
Re-PAIR
'end of pipe'
time

LONG TERM VISION



The target: over 50% leaders

/ORLD
REEN
UILDING
OUNCIL

Search

ABOUT GREEN BUILDING | ABOUT US | OUR GREEN BUILDING COUNCILS | OUR WORK | NEWS, MEDIA & REPORTS | CALEN

uilding rating tools

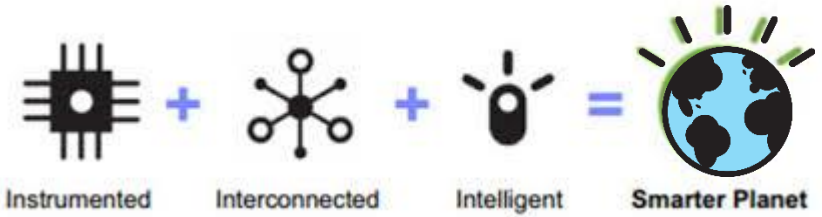
of rating tools (in alphabetical order) that are administered by our Green Building Councils.
omprehensive list, as there are a number of green building rating tools and certifications that
ot administered by a World Green Building Council member Green Building Council.

stem	Assessment Standard for Green Building o
	BERDE
lential	BREEAM-LV
	BREEAM-NL
	BREEAM
ia)	CASBEE
	DGNB System
ierk	EDGE
	GBC Brasil CASA
	Green Building Index
	Green Key Global
	Green Star
	GBC Home
Building	GBC Quartieri
ni	Green Star SA
Kenya	GRESB
nance Index	HQE
	ILFI Zero Energy and Zero Carbon
	INSIDE/INSIDE
uilding Certification	LOTUS
	Miljöbyggnad
	OMIR
n Building Guideline (PGBG) BD+C	Parksmart
habi)	PEER
en Building Product/Services	SITES
	Swiss DGNB System
	VERDE
lding Standard	Zero Waste

TAILORED SCALING

So how should we measure and implement smart & sustainable cities?

The 3 i's of a 'Smarter Planet' by IBM,



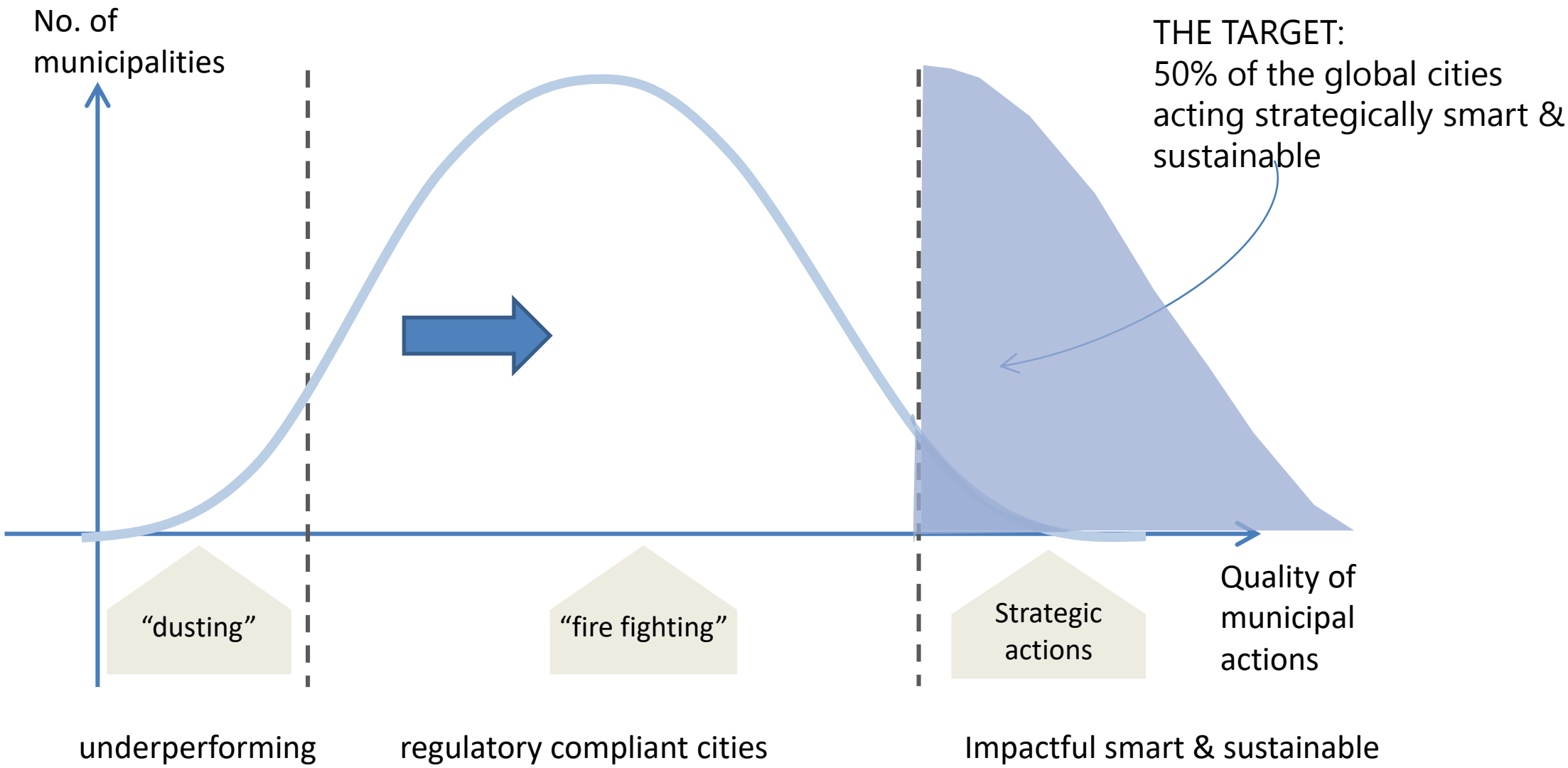
or

the 3 i's of the smart & sustainable city process :

Localized innovation,
inclusive actions, and
Long term & ongoing impact

How can they be included in standards?

Improving ability of all cities to be smart & sustainability instead of celebrating the best of the best



IDC HERZLIYA
School of Sustainability
Founded by Israel Corp., ICL & ORL

Where Environment & Green Entrepreneurship Meet

A new model of smart & sustainable city standards:

Simple. Dynamic. Self improving. Impact-based

Strategy (6 indicators)

do you have a localized, comprehensive & measurable strategy for a smart & sustainable city?

Management (8 indicators)

How, when and why do you use data, tech & smart processes

Infrastructure (16 indicators)

What actions are designed and implemented to improve sustainability, resilience and access to services & resources?

Innovation (10 indicators)

what activities are introduced to improve stakeholder ability to reduce their challenges while promoting growth

40 impact based & localized indicators

Section	Subject	Sub-sections	Max score	My City
Part I: Strategy, resilience and sustainability			15	
1	A smart city masterplan		4	
2	Stakeholder engagement		2	
3	Urban sustainability action plan		2	
4	Urban resilience strategy		2	
5	Management of innovation & strategic processes		2	
6	Urban data strategy		3	
Part II: Management, planning and governance			20	
7	data-based management and planning	Using GIS as a multi-departmental tool	2	
		Data-based decisions in municipal operations & services	2	
		Data based evaluation of success or economic efficiency	1	
8	Smart policies and regulation		1	
9	Digital municipal services	Frequent & efficient use of the municipality's website/app	2	
		Essential services accessible through the municipal website	4	
10	Municipal transparency		4	
11	digital public participation and engagement		4	
Part III: Infrastructure, construction and environment			45	
12	Green and sustainable buildings and neighborhoods	Buildings meeting green building standards	2	
		Policies to improve sustainability in existing neighborhoods	2	
		New neighborhoods planned according to sustainable community rating systems	2	
13	Housing for all		2	
14	Public health and wellbeing	Smart initiatives to improve health, welfare, and wellbeing	2	
		Sensors to measure & inform of noise and pollution	4	
15	Smart and sustainable physical infrastructure	Smart control & management of municipal infrastructure	2	
		Systems to improve energy efficiency in public areas and buildings	4	
		Community based management of infrastructure	4	
16	Smart and demand-based municipal services	Smart Initiatives to encourage behavior change in the use of services and resources	3	
		Smart Initiatives aimed at improving urban mobility	3	
		Smart Initiatives aimed at improving public safety	3	
		Smart Initiatives aimed at reducing waste	3	
		Innovative projects to improve access & use of public spaces	3	
17	Inclusive Digital infrastructure	Free Internet in public areas	2	
		city-wide Internet infrastructure strategy	4	
Part IV: Innovation, education and local economy			20	
18	Education and digital literacy	Digital literacy and 21st century skills	2	
		Digital training for municipal employees	2	
19	Educational excellence	Educational initiatives geared to answer to local challenges	2	
		Cooperation between the municipality and research institutes	2	
20		Focus & branding of employment, entrepreneurship and innovation processes to local urban issues or challenges?	1	
21	Smart urban economy	Municipal support in innovation among local businesses	2	
		Digital tools to support local businesses	2	
		Shared economy initiatives in the city	4	
		Total	100	

17	Inclusive Digital infrastructure	Free Internet in public areas	2	
		city-wide Internet infrastructure strategy	4	

Theme 17: Digital infrastructure for everyone (maximum score - 6 points.)

The basis of a significant portion of online services is an extensive and reliable city ICT network city, including an open wireless network. But a communication network is not the goal in itself. Installing such a network must aim to provide for real needs, reduce gaps and ensure that communication is accessible in the places that is required most.

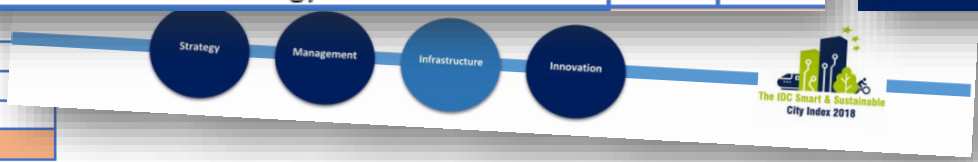
Therefore, a Smarty City must set up an ICT network that will, first and foremost, support goals such as promoting sustainability, resilience and equality. This network will encourage using public buildings or open spaces and will provide services to residents in the public sphere (such as more information to citizens or tourists).

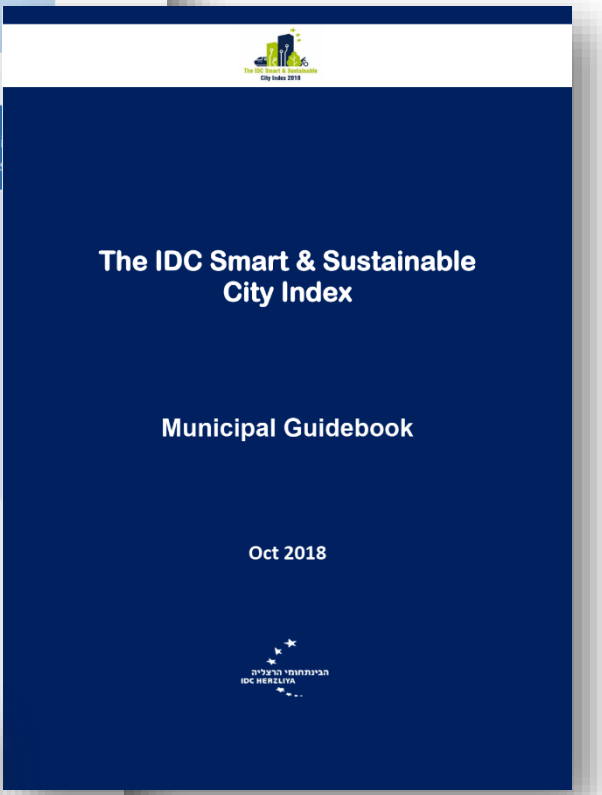
The infrastructure and Digital Services must be accessible to all members of the public, and support also those in disadvantaged neighborhoods or needy populations (for free or subsidized) -- alongside focus points of economic growth.

Essence	Scoring properties	Max score
Broadband Internet and communications available for all populations in the city.	a. An initiative to provide free open web in major urban public areas (schools, libraries, clinics, open spaces such as public squares and parks, etc.) for general use and without the need to register in advance	2
	Strategy and implementation of broadband Internet access in public buildings in the city, 1 pt. Broadband Internet access open for public use in open public areas, 1 pt.	
	b. Urban strategy to implement broadband Internet in strategic areas in the city, such as disadvantaged neighborhoods or near subsidized populations	4
	A systematic urban plan to deploy high-speed broadband Internet in strategic areas, which is approved and budgeted by the city, 2 pts. provision of free or subsidized high-speed Internet access to challenged communities 2 pts.	

Answers to UN's Sustainable Development Goal (SDG)no. 10: **Reduced inequalities**. ***"Reduce inequality within and among countries."***

In addition to this goal (and of course goal 11) this section reduces cost of living based on improved urban infrastructure, and therefore also addresses Goal 1 (No Poverty), Goal 6 (Clean Water and Sanitation), Goal 7 (Affordable and Clean Energy), Goal 9 (Industry, Innovation and Infrastructure) and Goal 17 (Partnerships for the Goals).





So to answer the question…

Urban Standards may have limited effect, unless…

- they don't try to portray a "perfect" city;
- they measure process over quantity; and
- they enable open & localized innovation that will allow for inclusive change and impact for all.

For questions, remarks and collaborations:
rafi@thesuits.net www.thesuits.net

S.U.iT.S Smarter Urban iT & Strategies | MIDCITY.LABS disruptive innovation for your city