



# **Future Cities Advisory Outlook 2021**

*Building New Urban Resilience: Smart Urban Technologies  
Applied in Fighting COVID-19 in China*

The 2<sup>nd</sup> Report of UN-Habitat China Future Cities Council (CFCC)

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CSTD 2021-2022 Inter-sessional Panel: Science, Technology and Innovation for Sustainable  
Urban Development in the Post COVID-19 World  
Geneva 18 Nov. 2021



## Unknown Pneumonia

Since December 2019, patients with unknown pneumonia appeared. In more severe cases, the infection can lead to pneumonia, severe acute respiratory syndrome, kidney failure and even death. This pneumonia has been found to be caused by a novel coronavirus infection.



## COVID-19 Drived Rethinking on Urban Regeneration

Throughout history, outbreaks of diseases such as plague and cholera have led to a re-examination of the relationship between the urban environment and public health. It can be argued that urban public health issues have driven modern urban planning and infrastructure renewal.



急性冲击 Acute Shocks

新冠  
疫情

Chronic Stresses 长期压力

威胁生命健康安全 Threat to health and life

Impact on urban development 影响城市健康发展

社会恐慌蔓延 Causing social panic

Increasing disparity between rich and poor 贫富差距加剧

民众社会交往受限 People's socialization is limited

Economic depression 全球经济萧条

医疗挤兑/医疗物资紧缺 Medical runs / Medical supplies shortage

Poverty, hunger 贫穷、饥饿

日常生活受影响 Life is affected

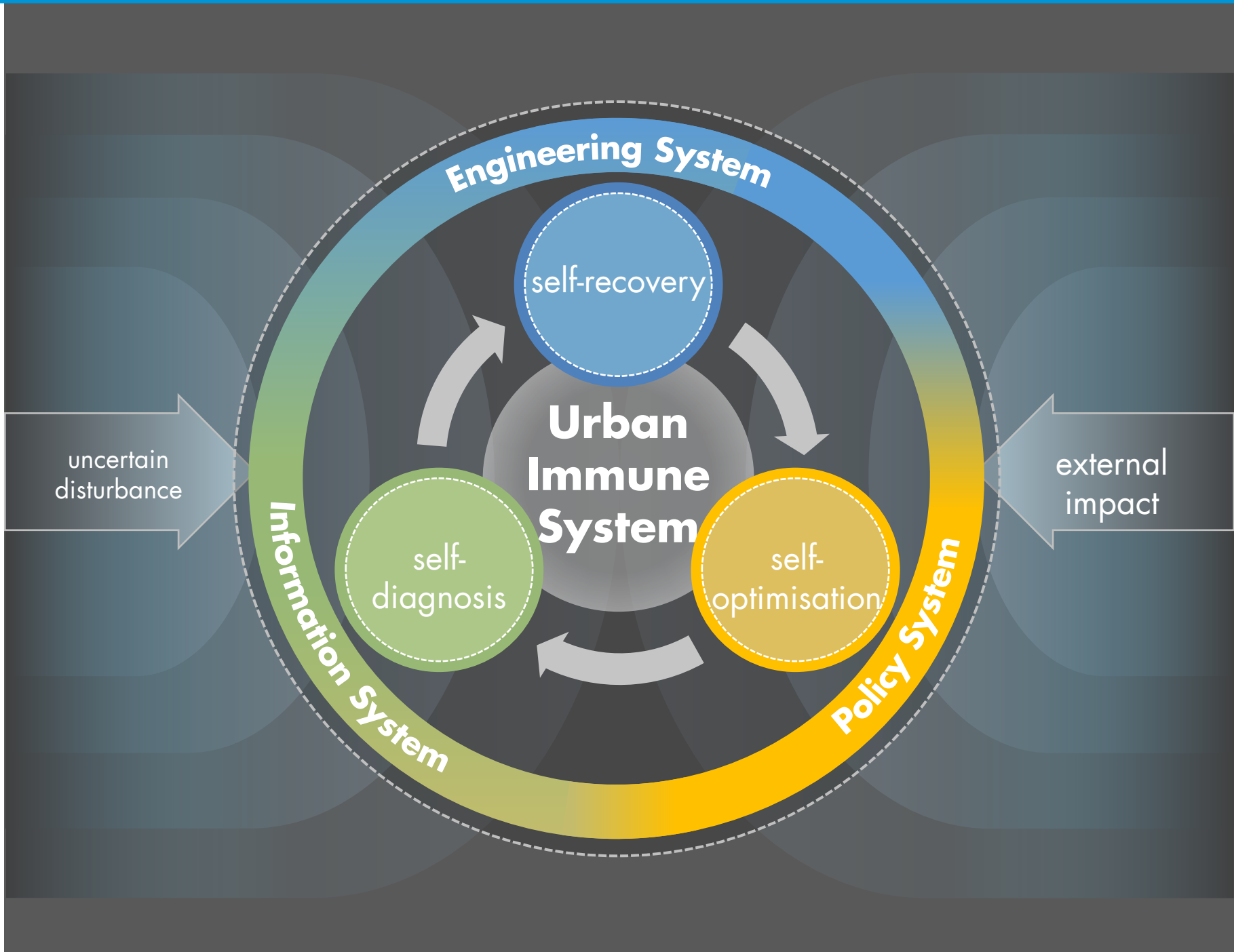
Social unrest/rising crime rates 社会动荡/犯罪率上升

学校停课 School closure

Children and youth out of school 少年儿童失学

工厂、企业停工停产 Factories stop working and production

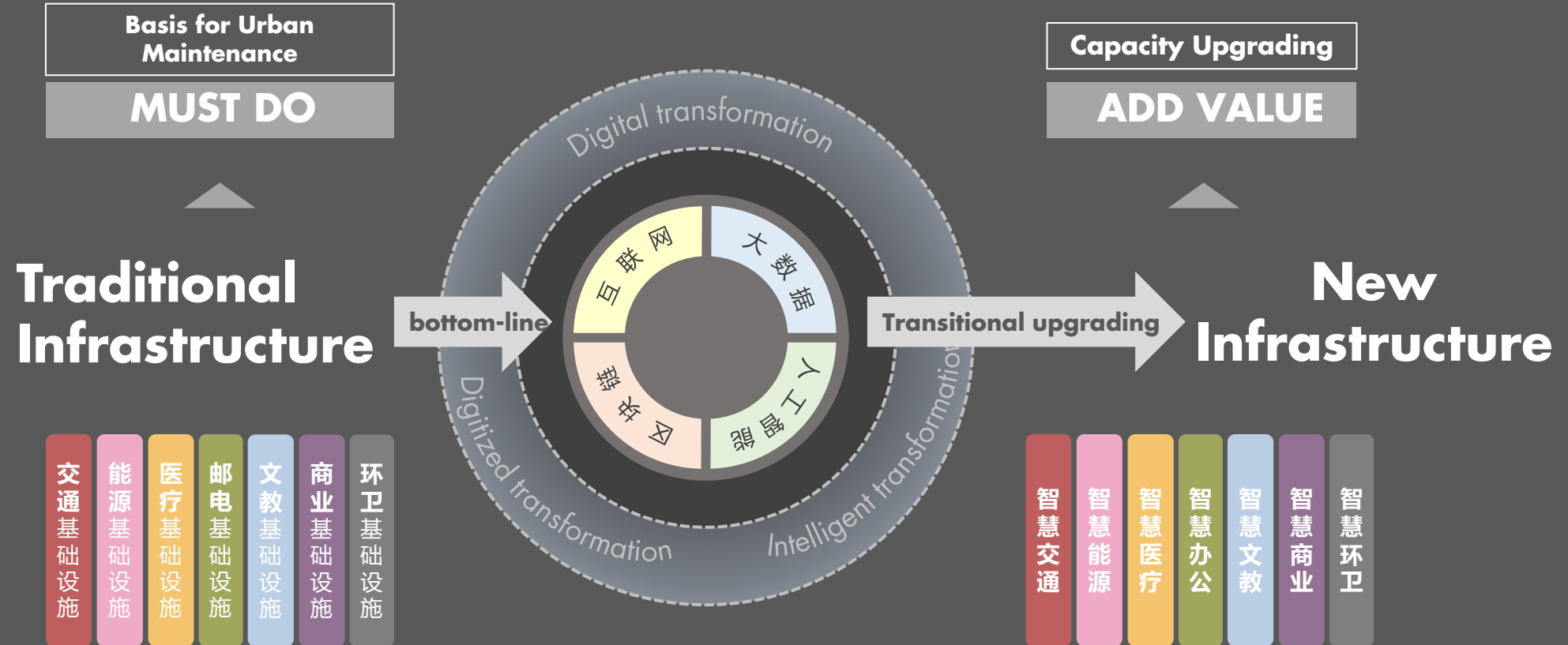
Homeless 无家可归



## 4 Key Points of New Urban Resilience



# Transformational Thinking on Infrastructure



# 3 Characteristics for New Urban Resilience

## 物质流与信息流并存

COEXISTENCE OF MATERIAL FLOW AND INFORMATION FLOW

Realize the effective interaction between the physical world and the virtual world

### Digital twin cities

Digitalization as the core



## 常态化与普遍性

NORMALIZATION AND UNIVERSALITY

Strengthen the normal operation and management of the city to improve the emergency capacity

### Urban big data monitoring

Analysis, simulation, adjustment



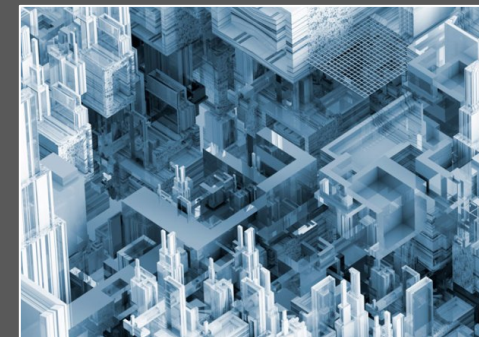
## 适应性与迭代能力

ADAPTABILITY AND ITERATION ABILITY

Simulate the iteration and evolution process of virtual city under different development strategies

### Simulate iteration and evolution

System optimization and comparison





# new urban resilience can be of great significance to SGDs





Early Stage  
27 Dec 2019 – 19 Jan 2020

Accurate information collection

City Brain: Using AI and big data to "visualize" the epidemics

Government and enterprise collaboration: digital technology to guarantee material production scheduling

Interim Stage  
20 Jan – 28 Apr 2020

Digital health care: rationalization to avoid "crowding out" of health resources

Online collaboration

work and study from home

Later Stage  
29 April 2020 - present

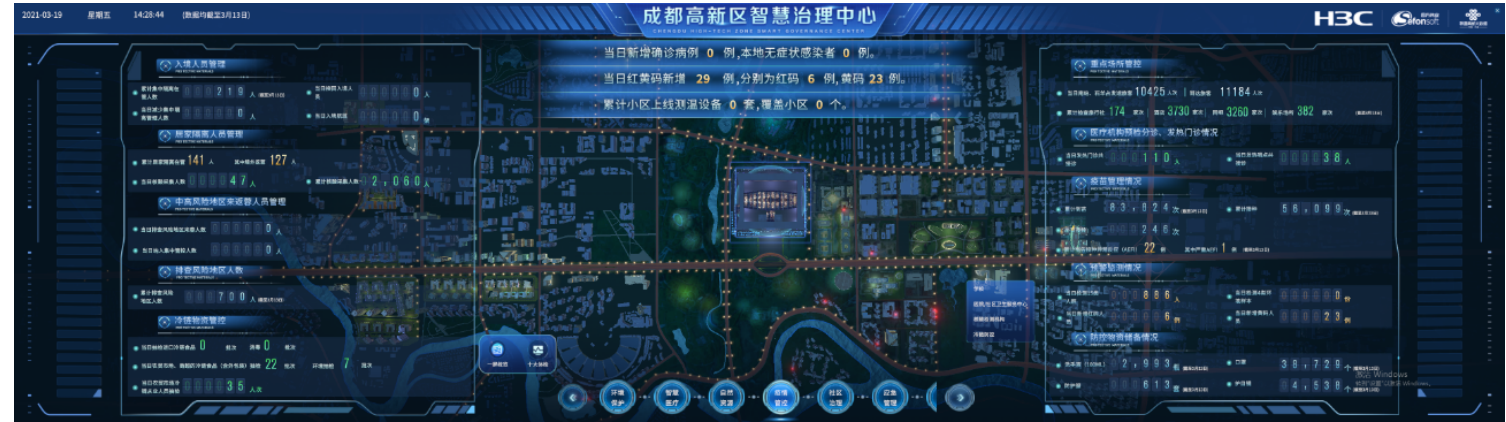
New economic platform: digitalization for livelihoods and employment

Health Code: Big data helps win the economic battle to resume work and production

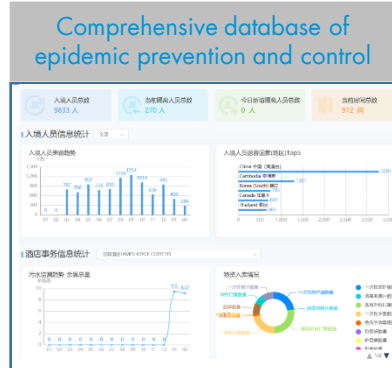
# "1+5+N" System of Chengdu High-Tech Zone

## "1" Screen

Based on the 3D visualization platform, the priority work, data, video and GIS of each module and system can be presented and displayed



## "5" Cores



## "N" Modules

Prevention and control in hospitals and individual clinics

prevention and control to cold chain food

Traffic port prevention and control

prevention and control to special key institutions

prevention and control to Communities

Reserves of prevention and control materials

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# WeDoctor Online Medical Service Platform of Wanxiang



COVID-19 real-time assistance platform

23 Jan 2020

Global platform against COVID-19

14 Mar 2020

Psychological aid

traditional Chinese Medicine platform

charitable diagnosis

convenient clinic service

maintain supplies to combat the epidemic at affordable prices

# Achievements

until 12 Oct. 2021

Build an "air barrier" for epidemic prevention and control

## COVID-19 real-time assistance platform

100,000+

Online doctors

*Become the main force of the medical fighting the epidemic*

280,000+

Daily peak reception

equals almost the capacities of 3 hospitals

246 million+

online visits

reduced cross infection

# Achievements

until 12 Oct. 2021

Build an "air barrier" for epidemic prevention and control

◆ Global platform against COVID-19

**170+**

It has been recommended by over 170 Chinese embassies and consulates abroad

**3.6  
Million+**

Providing epidemic prevention services to 3.6 million people in more than 200 countries and regions

**500+  
35,000**

Shared China's experience in epidemic prevention to more than 500 medical staff from seven countries in Asia, Africa, Europe and the United States and nearly 35,000 overseas citizens



UN-Habitat China Future Cities Council was launched in 2019 in Beijing

## **Future Cities Advisory Outlook 2021**

*Shaping New Urban Resilience: Smart Urban Technologies Applied in Fighting COVID-19 in China*

*Will be launched in World Urban Forum 11 in 2022.*

*Thank you for your attention!*