



SMART CITIES ENABLING EFFECTIVE RESPONSE IN BATTLING COVID-19 PANDEMIC

Ibtessam Boubekeur

UniKL Busines School
Universiti Kuala Lumpur
Malaysia
boubekeur.ibtessam29@s.unikl.edu.my

Nazatul Shima Abdul Rani*

UniKL Business School
Universiti Kuala Lumpur
Malaysia
shima.rani@unikl.edu.my

K. Sarojani Krishnan

UniKL Business School
Universiti Kuala Lumpur
Malaysia
ksarojani@unikl.edu.my

*Corresponding Author email: shima.rani@unikl.edu.my

Submission: 05 April 2021

Revised: 30 April 2021

Accepted: 10 May 2021

Peer-review under responsibility of 5th ASIA International Multidisciplinary Conference 2021 (Online)

Scientific Committee

<http://connectingasia.org/scientific-committee/>

© 2021 Published by Readers Insight Publisher,

Office # 6, First Floor, A & K Plaza, Near D Watson, F-10 Markaz, Islamabad, Pakistan,

editor@readersinsight.net

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).



ABSTRACT

Covid-19 has subsequently given rise to a pandemic in early 2020. This virus is new and highly contagious; unfortunately, there is no specific medication to treat the virus. Thus, it has become an obligation for all countries in the world to take drastic measures to protect and ensure safety of their citizens. Moreover, technology has played an important role to help the government to implement measures and customize services effectively to contain the virus. Some of these measures include artificial intelligence or "AI", Internet of things, "IoT" and Clouds. Countries adopting the smart cities concept were predominately prepared with a technology platform, thus they were effective to react promptly and spontaneously to the threat. This paper discusses success stories of four countries from the Australia-Asia region which up to now have successfully contained the virus. From the literature review analysis, besides technology, other factors have contributed to fight the pandemic battle. These factors are core factors in the process of combating the virus and are related to managerial leadership, leadership, accountability, collaboration, and effective communication. These factors play an important role along with smart cities technologies in the battle to fight against Covid-19.

Keywords: *Smart Cities, Response, COVID-19 Pandemic, Battling*

RESEARCH HIGHLIGHTS

When Covid-19 hit the world in early 2020, cities with smart cities platform had reacted faster and swiftly in fighting the virus. Moreover, hightech companies contributing in smartcities have put all their efforts to tailor services and products that can help government and medical sector to contain the virus, such as tracing systems, thermal cameras, Robot patrol, CT scan image analysis for Corona virus diagnosis, science research platform based AI etc (Allam & Jones, 2020).

Several countries have succeeded to curb the corona virus within the first 6 months, example of: Vietnam, New Zealand, China and Singapore (Worldometer, 2020).

However, being smart cities is not enough, other core factors were identified which are Managerial Leadership (Alam, 2020; Heijmans, 2020), Leadership/ Shared leadership (BBC,2020), Accountability (Weekes, 2020), Collaboration (Alam, 2020), Effective Communication, and Smart Cities Technologies "Process Catalyst".

GRAPHICAL ABSTRACT

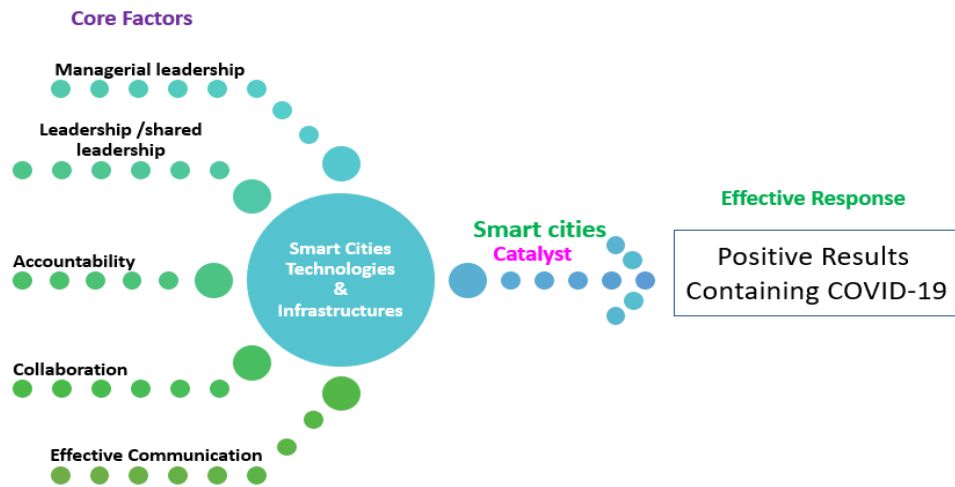


Fig. 1. Effective Response Proposed Process for containing COVID-19 Pandemic.

Research Objectives

1. To discuss success stories of four countries from the Australia-Asia region which up to now have successfully contained the virus.
2. To identify the relationship of Australia – Asia four countries adopting smart cities concept and their success in containing the Corona virus
3. To identify factors enabling the effective response in fighting covid-19 Pandemic.

Methodology

This research was performed based on reviews of journal articles, consulting studies and online web sources. Mainly the researcher was looking at the role of technology used by smart cities in fighting Covid-19, as well as examining different factors that helped Asian-Australian countries to contain the virus, examples of smart technology services and strategy plans used by governments and citizen's compliance were discussed also on real cases from different countries. Based on the outcome of the research, an effective response process model to contain COVID-19 Pandemic is proposed.

Results

This research has allowed the identification of six enabling core factors in battling covid-19 as below:

1. **Managerial Leadership:** Drastic objectives and measures for everyone to follow (Alam, 2020; Heijmans, 2020; BBC, 2020).

2. **Leadership:** Strong & kind messages from leaders to support citizens during the pandemic (BBC, 2020).
3. **Accountability:** IT companies responsible to delivered swiftly adaptable technology products to help fight the COVID-19 (Huawei, 2020; Weekes, 2020).
4. **Collaboration:** Collaboration with countries on the findings of COVID-19 outbreak (Allam & Jones, 2020; Alam, 2020; Sagar, 2020).
5. **Effective Communication:** Leaders and medical experts updating citizens on the current situation of COVID19 on daily basis (BBC, 2020).
6. **Smart Cities Technologies “Process Catalyst”:** Presence of core technologies are essentially Internet of Things “IoT”, Clouds, Artificial Intelligence “AI” and 5G networking (Khan et al, 2020). For example, smart cities data platforms; smart infrastructure (camera identification and location data), transportation (safe transportation protocol), optimizing healthcare (integration of hospitals data), Digital City Services (integration of departmental data to serve citizens remotely), and buildings (tracking behavior to ensure social distancing).

Findings

Four (4) countries identified which are Vietnam, New Zealand, China, and Singapore (Worldometer, 2020). In fact, several factors have contributed to fight the pandemic of Covid-19 successfully. Being only a smart city will not stop the spread of the virus, indeed it is combination of other factors that were identified during the paper analysis, these factors can be classified as core factors: Managerial leadership concept, Leadership/ Shared leadership Concept, Accountability Concept, Collaboration Concept, and Effective Communication Concept. However, the core factors will not work effectively if there is no contribution of smart cities technology and infrastructure, therefore smart cities are a catalyst in the process (Fig. 1).

Acknowledgement

We would like to acknowledge Universiti Kuala Lumpur for providing scholarship to Ms. Ibtessam Boubekeur in funding her studies and supports the publication of this research.

References

- Alam, S, (2020). *Vietnam: A success story in fight against COVID-19*, [online], Retrieved from <https://www.aa.com.tr/en/asia-pacific/vietnam-a-success-story-in-fight-against-covid-19/1866670>.
- Allam, Z., & Jones, D. (2020). On the Coronavirus (COVID-19) Outbreak and the Smart City Network: Universal Data Sharing Standards Coupled with Artificial Intelligence (AI) to Benefit Urban Health Monitoring and Management. *Health care Journal*, 8 (1), 46.
- BBC, (2020). *Coronavirus: How New Zealand relied on science and empathy*. [online], Retrieved from <https://www.bbc.com/news/world-asia-52344299>.

Heijmans, P. J. (2020). *Singapore Contained Coronavirus. Could other countries learn from its approach?*, [online], Retrieved from <https://www.weforum.org/agenda/2020/03/singapore-response-contained-coronavirus-covid19-outbreak/>.

Huawei enterprise. (2018). *Leading New ICT: Creating a Smart City ' Nervous System '* , 23, 1-18. [online] https://e.huawei.com/sg/publications/global/ict_insights/.

Sagar, M. (2020). *UK and Singapore work together on fighting COVID-19 with science*, [online], Retrieved from <https://www.opengovasia.com/uk-and-singapore-work-together-on-fighting-covid-19-with-science/>.

Weekes, S. (2020). *How 5G powered robots are helping China fight coronavirus*, *Smart City World*, [online], Retrieved from <https://www.smartcitiesworld.net/news/news/how-5g-powered-robots-are-helping-china-fight-coronavirus-5154>.

Worldometer., (2020). *COVID-19 Coronavirus Pandemic*. [online], Retrieved from <https://www.worldometers.info/coronavirus/#countries>.

Author's Biography



Ms. Ibteessam Boubekour, is a PhD (Management) candidate at Universiti Kuala Lumpur, UniKL Business School. She has ten years working experience in oil and gas industry as geologist and technical lead.



Dr. Nazatul Shima Abdul Rani, is a Senior Lecturer in UniKL Business School, Universiti Kuala Lumpur. Her areas of expertise include management, strategic management, organizational behaviour, entrepreneurship, small business management, and other related business field. She has 2 years industry experience and more than 20 years in higher education industry.



Dr K. Sarojani Krishnan, is currently a Senior Lecturer at Universiti Kuala Lumpur Business School, UniKL. She has more than 20 years' of teaching experience at the university. Her areas of research interest include language testing and evaluation, assessment, language performance, teaching and learning, motivation and demotivation, entrepreneurship and leadership.