The International Journal of Social Sciences World
TIJOSSW is Available Online at:
https://www.growingscholar.org/journal/index.php/TIJOSSW
Vol. 4 No. 2, July-December 2022, pages: 307~316
DOI: https://doi.org/10.5281/zenodo.7485139
ISSN2690-5167
growingsCholar Publisher

Change Management Model in The Era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) Using Scenario Planning Analysis

Agus Puji Widodo CK[1], Yandra Arkeman[2], Anny Ratnawati[3], Idqan Fahmi[4]

Article history:
Received October, 2, 2022; Accepted: November, 30, 2022 , Displayed Online: December, 12, 2022; Published: December, 30, 2022

Keywords

Management Models;

Vuca;

Scanario Planning;

Government Agency;

Abstract

This research was conducted to formulate a change management model design in government agencies in the Volatility, Uncertainty, Complexity and Ambiguity (VUCA) Era, Develop strategies in XYZ government agencies in the Volatility, Uncertainty, Complexity and Ambiguity Era (VUCA). XYZ government in the Era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) based on the results of this study is to recommend the formulation of a grand design XYZ towards World Class Organization, Strategy in XYZ government agencies in the Era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) based on the results of this study is to recommend compiling a long-term strategic road map.

1. Introduction

Every organization must understand the challenges and find solutions well from every element of VUCA they face in order to survive in the future. The challenges in each VUCA component are as follows: (1) Volatility which describes technological advances means that no activities are carried out stably. Rapid and ever-changing technological developments have affected innovation. Flexibility and adaptability are important elements to survive in organizational competition; (2) Uncertainty which illustrates that nothing can be ascertained in running an organizational rotation wheel. The existence of uncertainty makes it difficult for current conditions to be understood, predicted and overcome in situations that are changing at any time. Running in uncertain situations with learning directions is something that organizations have to work on in an effort to adapt; (3) Complexity which describes

[1,2,3,4]*School of Business, IPB University, Indonesia. Email: jokercandra@gmail.com*

organizational problems that are increasingly complicated. The ability of an organization's ecological thinking is needed to overcome this complexity, namely the ability of the organization to map and study various fields. The results of the mapping are capital to create a sustainable organization; (4) Ambiguity which describes an organization that is increasingly blurred so that it can trigger misunderstandings in various conditions. The risk that will be faced by the organization due to ambiguity is decision making based on limited experience. Organizations need to conduct experiments, simulations.

One of the changes that is happening rapidly right now is the Covid-19 pandemic. The challenges caused by the Covid-19 pandemic are very relevant to current world developments, namely VUCA. In accordance with the definition of each element: (1) Volatility is the speed at which current conditions change and the government's response to the Covid-19 pandemic; (2) Uncertainty is that the Covid-19 pandemic is not known when it will end and you feel that the handling is out of control because you have no past experience; (3) Complexity is that the Covid-19 pandemic has an impact and response, for example by the need for social and physical distancing which results in community business activities; (4) Ambiguity is the information obtained is uneven and changing, even experts are still debating about the Covid-19 pandemic (Holland, 2020).

The Covid-19 pandemic has fundamentally shaped new behaviors, for example how people carry out business activities from now on. Even if the activity restrictions end soon and the virus can be brought under control with the invention of a vaccine, the effect will still be there for the foreseeable future. Currently, the whole world has experienced real VUCA due to the Covid-19 pandemic, not only in developing countries but also in developed countries. Covid-19 is a disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus. This virus is known to have first appeared in an animal and seafood market in Wuhan City, Hubei Province, China on December 8 2019 since it was first noticed from a patient infected with the virus. Covid-19 can cause respiratory system disorders ranging from mild symptoms such as the flu to lung infections such as pneumonia. Societies and economies around the world are experiencing unprecedented exogenous shocks. Although the occurrence of a pandemic caused by a new virus was not surprising to virologists, infection control measures such as social distancing taken to slow the spread of Covid-19 put tremendous pressure on large parts of the economy. country. Most of the central actors in shaping the economy will recognize the current pandemic as a metaphorical black swan event,

The World Health Organization (WHO) declared Covid-19 a pandemic on 11 March 2020. As a result, people's daily lives are changing rapidly through restrictions on public events such as work, transportation, performing arts and sports. The Covid-19 pandemic has placed an unprecedented burden on many health systems around the world and infection control measures have caused an economic crisis by abruptly halting large amounts of economic activity. Moreover, while many other past crises have hit humanity at specific points in time and regionally or developed over a longer period of time with global effects.

Economists state that Covid-19 has caused a decline in economic activity with forecasts of recessions and depressions. Additionally mandated health policies have fueled demand for certain products while restrictions on international movement have impacted supply chains. The decline in consumer spending as a result of an increase in the unemployment rate also affected the economy. The Covid-19 pandemic has also affected the world economic downturn. The sectors most affected were aviation, transportation, hotels and restaurants. This completely uncertain situation will further exacerbate global financial stability.

The World Health Organization (WHO) released the number of world deaths caused by Covid-19 reaching 3,482,807 people with positive confirmations reaching 167,492,769 people (WHO, 26 May 2021). Another impact of this pandemic is the increase in the number of unemployed. The

International Labor Organization (ILO) estimates that the global unemployment rate will increase between 5.3 million and 24.7 million in 2021 (ILO, 2020). The Covid-19 case was officially announced by the Government of Indonesia on March 2, 2020 when two people were confirmed infected from a Japanese citizen. The transmission started from a dance at Club Paloma & Amigos, Jakarta. Participants in the event were not only Indonesian citizens but also multinationals, including Japanese citizens living in Malaysia. On March 11, 2020, for the first time, there was a case of death caused by Covid-19. The victim was found to have contracted Covid-19 after attending a seminar in Bogor in February 2020.

Currently, in Indonesia, the number of deaths caused by Covid-19 has reached 49,627 people with 1,786,187 people confirmed positive and 1,642,074 people recovering. For economic growth in Indonesia it is estimated that it will contract by 0.4 percent and there will be an additional unemployment of 5.23 million people, but if the economic growth is 2.3 percent then the unemployment rate is estimated at 2.92 million people. Currently in Indonesia the number of deaths caused by Covid-19 has reached 49,627 people with positive confirmations of 1,786,187 people and 1,642,074 people recovered. For economic growth in Indonesia it is estimated that it will contract by 0.4 percent and there will be an additional unemployment of 5.23 million people, but if the economic growth is 2.3 percent then the unemployment rate is estimated at 2.92 million people. Currently in Indonesia the number of deaths caused by Covid-19 has reached 49,627 people with positive confirmations of 1,786,187 people and 1,642,074 people recovered. For economic growth in Indonesia it is estimated that it will contract by 0.4 percent and there will be an additional unemployment of 5.23 million people, but if the economic growth is 2.3 percent then the unemployment rate is estimated at 2.92 million people.

Vanessa Ratten (2020) in her research details in more depth how entrepreneurs affected by the crisis must focus on certain types of entrepreneurship in terms of culture, lifestyle and social change. The results of the study show that entrepreneurs are basically resilient to crises but the prolonged Covid-19 pandemic has caused special challenges faced by entrepreneurs in adapting to a new environment. Entrepreneurs are responding to this era of uncertainty caused by the virus by adopting a flexible strategy but also through the support of the entrepreneurial ecosystem environment. Walakula (2020) analyzes the existence of Indonesian tourism during the Covid-19 pandemic and the result is that various tourist destinations are temporarily closed and will reopen after the Covid-19 pandemic ends.

Understanding strategic management can be defined as the art and knowledge of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals. As required by this definition, strategic management focuses on efforts to integrate management, marketing, finance/accounting, production, research and development and computer information systems to achieve organizational success. The aim of strategic management is to exploit and create new and different opportunities for tomorrow. According to Gupta (2020:23), "Strategic management can be defined as the art and science of formulating, implementing, and evaluating cross-functional decisions than enabling an organization to achieve its objectives."

Strategic coordination is the activity of directing, integrating, coordinating elements of management and the work of employees in achieving organizational goals. The form of coordination is divided into two major parts, namely vertical coordination and horizontal coordination (Fernandes et al., 2018; Salmon et al., 2019). Strategic planning is a systemic process by which an organization agrees and builds engagement among key stakeholders about the intrinsic priorities of its mission and responsiveness to the operational environment (Barron & Chou, 2017).The human resource management department considers intelligence experience to be a plus, in part, because of the

intelligence officer's mission-oriented work ethic and quality management training. The planning related to the knowledge management program used in developing the training is quite comprehensive. The private sector can learn much more from intelligence, including more effective ways of applying information technology for remote learning and teaching (Frey & Osborne, 2017;Garcia-Lausin et al., 2019).

Change management is essential for the development, growth, success and survival of any organization operating in an ever-changing environment. Nevertheless, there seems to be a clear consensus among researchers and practitioners alike that the vast majority of organizational change initiatives fail. Some studies have found that 70 percent of change efforts are unproductive. One study highlighted that 90 percent of change programs fail if there is no change in the organization.(Nuhu et al., 2016).

According to Pistoni & Songini, (2017); John et al., (2018); Muthusamy (2019), Change management is a series of processes used to ensure that significant strategic changes in the organization are carried out in a controlled and systematic manner, to overcome resistance to change in order to increase engagement and achieve organizational goals for effective transformation. Achieving sustainable change begins with a clear understanding of the current state of the organization, followed by implementing an appropriate and targeted strategy.

To increase efficiency and effectiveness in government agencies, especially in improving employee performance, it is necessary to make changes so that employees can work well and optimally, one of which is by providing changes in policy due to the Covid-19 pandemic to all employees in XYZ government agencies which can boost employee enthusiasm in carrying out the duties and responsibilities of his work quickly and correctly. Overall changes and policies are one of the external factors that influence efforts to improve employee performance. The change strategy is one of the implementations of providing new policies and rules that are appropriate for the performance or work achievements of members of the organization.

2. Materials and Methods

This study uses data obtained through respondents, where respondents will provide verbal responses and/or written responses in response to statements given by researchers. This research aims to find a form of change management in dealing with the Covid-19 pandemic at BIN**.**This study uses a qualitative method with the analysis tool Scenario Planning. The method used in analyzing Scenario Planning is to analyze aspects of the external environment as well as the internal environment of the organization. The goal is toproduce a change management model design anddesigning a long term strategyat XYZ during the VUCA era. This Scenario Planning Analysis adopts fromPESTLE analysis (Politics, Economy, Social, Technology, Legal and Environment) put forward by Francis Agular. Analysis of the external environment at XYZ includes ideological, political, economic, social, cultural, defense and security aspects, then for internal environmental analysis includes aspects of organization, human resources, infrastructure and technology as well as intelligence activities. The technique of determining respondents uses a descriptive approach by collecting data through interviews and Forum Group Discussion (FGD).

3. Results and Discussions

Results of Scenario Planning (SP) Design Analysis

Based on the results of an analysis of external environmental aspects which include ideology,

politics, economics, social, culture, defense and security and based on internal environmental aspects which include organization, human resources, infrastructure and technology as well as operational activities which are then analyzed using techniques*Strength, Weakness, Opportunity and Threat* (SWOT). Furthermore, in this study, an organizational design is made in the form of a long-term strategic plan using Scenario Planning. The following is a picture of the Scenario Planning (SP) conceptual framework in this study:

Design Transformation Change Design Organizational Structure

In order to optimize the organizational structure at XYZ, a transformation plan is needed to change the design of the existing organizational structure. One of the strategic steps in anticipating potential threats and disturbances quickly and precisely is to change the organizational structure from a pyramid to a diamond. This aims to prioritize a flexible team-based culture to make it easier for work units within an organization to work faster. This diamond organizational structure is more decentralized with higher autonomy so that it can cut organizational costs to be efficient. There are two main things in order to transform changes in the organizational structure at XYZ, namely:

a) Reinventing organizational design

Leading to efforts to build a combination of pyramid and matrix organizations.

b) Reinventing the mechanism of action and focusing on structural reform (culture set), mindset reform and harmonization of policies.

Next, organizational structure of *diamonds.* This is a combination of a pyramid structure and a team that is thick with the principles of organizational and HR management in the 4.0 era, namely Agile Human Capital (AHC), which has the following characteristics: (i) fast, flexible, agile and digital talent; (ii) career paths and performance management shift to functional or expertise-based; (iii) competence and digital culture are mandatory for employees; (iv) technology support for remote working or work from the field; (v) participatory management in managing the organization; and (vi) patterns of special assignments with regional variations, intelligence functions and types of operations according to career paths and competencies.

In addition to transforming the design of the organizational structure, it is also necessary to develop an adaptive work culture, strengthen organizational values and effective leadership to accelerate instrumental change and implement change inclusively in all work units. The success of this change in organizational structure was marked by a work process that was dynamic, fast and supported by advanced technology and effective information flow. Organizations can easily adapt to every new type of threat that emerges or with the keywords of success ie*solid structure*and agile processes.

Plan for Provision of Human Resources through Additional Levels of Higher Education and Development of Study Programs and Departments at Official High Schools (STK)

Efforts to provide human resources have been carried out by XYZ through the establishment of higher education institutions. The main task and function of STK is to organize academic and professional education. Currently STK alumni are the main source of HR provision at XYZ. In addition to efforts to provide human resources in order to meet the number of human resources that meet the ideal needs at XYZ in the future, it is necessary to design additional recruitment for all levels of higher education, namely: *Strata* 1 (Bachelor), *Starta* 2 (Masters) and *Starta* 3 (Doctorate); and development of study programs and departments in each higher education. The following is an image of the design

for the addition of an academic pathway for higher education at STK.

In order to build the strength of the Indonesian nation's self-sufficiency to face various health threats, it is necessary to develop the qualifications and competencies of human resources in the health sector to become the first line in carrying out early detection and early prevention of threats in the health sector. To have these qualifications and competencies, human resources in the health sector need to be equipped with health sciences and other relevant fields of knowledge. This synthesis will be implemented as the opening of the Applied Medical Masters Study Program to produce medical human resources capable of facing present and future challenges. This study program will become an institution that has excellence and strength in the field of medical science and is able to produce graduates who are broad (global) and ready to carry out their duties professionally.

The development of study programs and departments at STK will continue to be carried out as an effort to strengthen and meet the ideal human resource needs at XYZ. The design for the development of study programs and majors for the undergraduate academic pathway (Masters) in the future is:

a) Master of Applied Technology
b) Master of Applied Cyber
c) Master of Economics

Henceforth, the study program development plan for the Strata 3 (Doctoral) academic pathway in the future is Strategy Analysis.

Design for Provision of Laboratories at Official Colleges (STK)

Efforts to improve the quality of professional human resources continue to be carried out in stages through empowering human resources by increasing capacity; recruiting a team of experts and establishing cooperation with universities/research institutions; as well as the preparation of knowledge management facilities and infrastructure. The provision of knowledge management facilities and infrastructure is carried out by establishing laboratories at STK based on Government Regulation Number 60 of 1999 Article 56 Paragraph 1 that every tertiary institution must have infrastructure facilities, one of which is a laboratory to support the implementation of higher education.

To support the learning process, laboratories are needed to prepare human resources who can answer all the challenges and threats in the future. Provision of this laboratory includes:

a) Information Technology Laboratory
b) Cyber Lab
c) Nuclear Laboratory
d) Biomolecular Laboratory
e) Chemical Virtual Laboratory
f) Language laboratory
g) Drone Simulator Lab
h) Economics Laboratory

Health Facilities Provision Plan

XYZ's efforts to prevent health cases and anticipate various potential threats to the country through clinical, microbiological, disease outbreaks, viruses, nuclear, biological and chemical aspects in the future are to provide a health facility with the name*MedicalClinic*which is part of the facilities

and infrastructure in terms of health security issues (securitization of health) to analyze the collection, evaluation, analysis and interpretation of world health conditions that may impact the national interests of a country.

*Medical Clinic*s taffed by employees and professionals with international repute and have advanced equipment such as Next Generation Sequencing (NGS). This is a sequencing method developed through the Sanger method for deep, high-throughput and parallel sequencing. The use of NGS allows researchers to sequence millions to billions of DNA nucleotides in one run. The following is NGS work schemes with different platforms (Gupta & Verma, 2019):

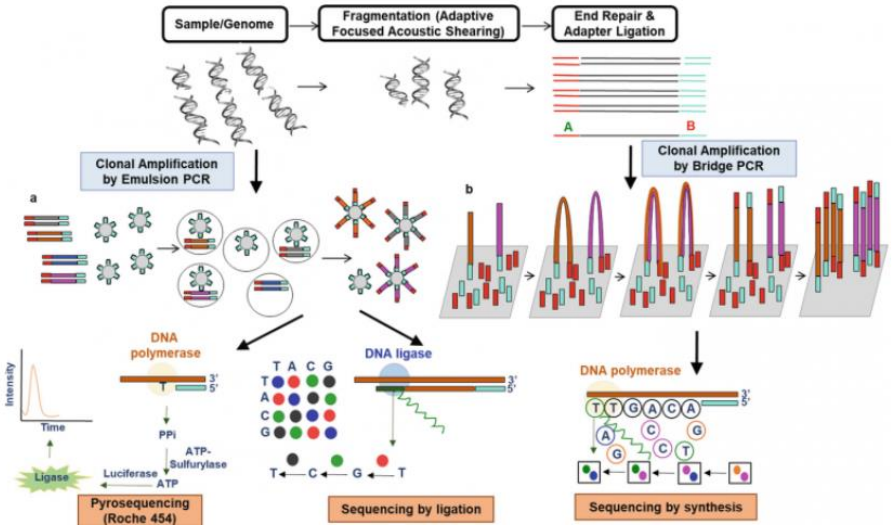


Figure 1. NGS work scheme with various platforms
Source: Gupta & Verma, 2019

Medical Clinic also has a Bio Safety Level (BSL) certificate which is designed to follow standard laboratory protocols by an International Certification Body, namely World Bio Haztec from Singaporeso that it meets world-level biosafety and biosecurity standards. The existence of the BSL 3 facility enables researchers to culture dangerous diseases such as lassa fever virus, MERS, nipah, rift valley fever and dengue fever. BSL 3 also allows researchers to safely store cell cultures, viruses and infectious disease genetic material. Furthermore, the existence of BSL 2 allows researchers to isolate and identify disease-causing pathogens such as bacteria, viruses, fungi and compounds to treat these diseases.The existence of this Medical Clinic is expected to be XYZ's foundation for carrying out the next stages and challenges, namely providing other health facilities in the form of hospitals to serve the general public.

Infrastructure and Technology Development Roadmap Phase Design

In the first phase, infrastructure and technology development efforts aim to increase capabilities*collection management*in the form of OpenSource Intelligence (OSINT), Imagery Intelligence (IMINT), Signals Intelligence (SIGINT) and Measurement and Signature Intelligence (MASINT) accompanied by a balanced development of Human Intelligence (HUMINT). Implementation of the results of infrastructure and technology development is expected to be

optimally applied and strengthened in each work segment in the XYZ environment. Changes in the system and work mechanism as a whole will occur so that the adaptation and adjustment process must be aligned with the development and recruitment of human resources, technology and policies that can be used as a reference to legitimize the development of infrastructure and renewable technology.

In the second phase, it is hoped that the system and working mechanism of employees will be built in collecting information digitally so that success will be measured from the ability of XYZ employees to adapt to new work patterns and performance systems that are more effective, fast and fully based on information technology so that it is expected that the operational cycle will start from giving Main Elements of Information (UUK), collection of information materials, data processing, analysis and production of intelligence, to the distribution of reports have also fully utilized technological advances but with access and media that are sterile from the results of technological engineering.

In the third stage, XYZ is expected to have completely transformed into a center for innovation and technological engineering in the world. The outline of the development and updating of infrastructure and technology at this stage concerns the exploration of new contemporary scientific domains to increase the range and depth of capabilities of renewable technologies so that it is hoped that the operational cycle will be supported by the inherent technological sophistication of every XYZ employee.

Operational Activity Phase Design

At the first stage this is expected*blueprints*XYZ operational activities can be implemented optimally to regulate composition, authority, boundaries and balance in each technical unit to prevent overlapping and inefficiency of organizational resources. Furthermore, in the second stage, it is hoped that operational activities will expand in terms of area, number of cases, types of threats and various levels of difficulty in reducing threats. Operational activities carried out independently or in collaboration with other communities have penetrated to the international level. The goal is that XYZ is able to become the leading institution in mastering regional and global information as well as data-based predictions of various residual, potential and actual threats.

In this third stage, it is hoped that with the stability that has been built in the second stage accompanied by XYZ's ability to collect data through 1 (one) device, operational activities can be prioritized on international issues. The arrangement of elements and sub-elements in the event of operational activities is always themed*robotics*more TECHINT, CYBINT and SIGINT while HUMINT is more placed in the control and monitoring center. Operational activities have not only expanded in terms of area, number of cases, types of threats and various levels of difficulty but have penetrated operational activities in regulating transportation, climate, culture, setting international market prices, viruses and vaccines, space security, to change the character of a nation. .

4. Conclusion

Based on the results of research and testing in the discussion put forward, several conclusions are stated as follows:

1. The design of the change management model in XYZ government agencies in the Era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) based on the results of this study is to recommend the formulation of the grand design of XYZ towards a World Class Organization.

2. The strategy at XYZ government agencies in the Era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) based on the results of this study is to recommend compiling a long-term strategic road map in the form of:
   a. Design Transformation Change Design Organizational Structure
   b. Plan for Provision of Human Resources through Additional Levels of Higher Education and Development of Study Programs and Departments at Official High Schools (STK)
   c. Design for Provision of Laboratories at Official Colleges (STK)
   d. Health Facilities Provision Plan
   e. Infrastructure and Technology Development Phase Design
   f. Operational Activity Phase Design

Acknowledgments

The authors wish to express their sincere gratitude to the publisher of TIJOSSW, who gave permission and a great chance for the Authors to publish their writings. The next appreciation is given to the reviewers of the TIJOSSW publisher who has spent more time making valuable corrections dealing with technical writing styles or ideas about this writing.

References

Barron, K., & Chou, S.Y. (2017). Towards a spiritual mode of firm sustainability strategic planning processes. Society and Business Review, 12(1), 46–62. https://doi.org/10.1108/sbr-01-2016-0008

Fernandes, A., Spring, M., & Tarafdar, M. (2018). Coordination in temporary organizations: Formal and informal mechanisms at the 2016 Olympics. International Journal of Operations and Production Management, 38(6), 1340–1367. https://doi.org/10.1108/IJOPM-02-2017-0097

Frey, CB, & Osborne, MA (2017). The future of employment: How susceptible are jobs to computerization? Technological Forecasting and Social Change. https://doi.org/10.1016/j.techfore.2016.08.019

Garcia-Lausin, L., Perez-Botella, M., Duran, X., Rodríguez-Pradera, S., Gutierrez-Martí, MJ, & Escuriet, R. (2019). Relation between Epidural Analgesia and severe perineal laceration in childbearing women in Catalonia. Midwifery. https://doi.org/10.1016/j.midw.2018.12.007

John, M., Ii, AP, Robinson, RB, Ii, P., John, A., Ii, AP, Richard, B., Ii, AP, & Richard, B. (2018). Strategic management = strategic management : formulation , Strategic management = strategic management : formulation , Strategic management = strategic management : formulation , implementation and control book 1 / John A . Pearce II, Richard B. (II second). 658.4012 PEA's Pearce II. John A. Jakarta Salemba Empat.

Muthusamy, SK (2019). The power of positive words: communication, cognition, and organizational transformation. Journal of Organizational Change Management, 32(1), 103–122. https://doi.org/10.1108/JOCM-05-2018-0140

Pistoni, A., & Songini, L. (2017). Strategic managerial control for the service strategy. In Studies in strategic managerial control (Vol. 32).

Salmon, P., Stanton, N., Jenkins, D., & Walker, G. (2019). Coordination during multi-agency emergency response: Issues and solutions. Disaster Prevention and Management: An International Journal, 20(2), 140–158. https://doi.org/10.1108/09653561111126085

Walakula, YB (2020). Analysis of the Existence of Indonesian Tourism in the Middle of the Corona Virus Disease (Covid19) Pandemic Situation. NOUMENA: Religious Social Sciences.