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1. Foreword

It has been more than four months since Russia invaded Ukraine. Most countries thought it would be a "military operation" that could end in a few days with Ukraine forced to cede territory and seek peace. However, the unexpected happened. The Ukrainian government did not collapse or go into exile but persisted against the invaders with support from the US and Europe to cause considerable damage to the Russian forces. This article examines the Ukrainian government's efforts and adaptations after the Russian invasion from the perspective of

"continuity of government (COG)." It also draws on relevant US policies and practices as a reference for the Taiwanese government to strengthen its ability for possible major incidents.

2. Ukraine's COG in response to the war

COG refers to the preparatory actions taken by a country to ensure that its government departments at all levels can continue essential operations in the event of major catastrophic events, such as significant natural disasters or even nuclear war impacts.¹ From the

^{1.} On July 15, 2016, Presidential Policy Directive 40 (PPD-40) explicitly called for a plan for COG operations. It defined eight national essential functions (NEFs) that the government must maintain: Ensuring the continued functioning of the form of government under the United States Constitution, demonstrating leadership to the Nation and the world and maintain the trust and confidence of the American people, defending the US against all enemies and prevent or interdict attacks against the US or its people, property, or interests, and maintaining and fostering effective relationship with foreign nations, protecting against threats to the homeland and bringing perpetrators or attackers to justice, providing rapid, effective response to and recovery from attacks or incidents, protecting and stabilizing the economy and ensure public confidence in its financial system, and providing public health, safety, and welfare to the nation. See "Continuity Guidance Circular," FEMA National Continuity Programs, February 2018, https://reurl.cc/yr0zE2.





Eisenhower era to the present day, COG programs have been in place for all levels of the US federal and local governments to sustain uninterrupted operations. The more nuanced "Continuity of Operations" (COOP) is a similar concept. COOP refers to the preparations made within all individual organizations, from central to local governments and from the public sectors to non-governmental organizations (NGOs) and the private sectors, to maintain basic operations in the event of disasters.

2-1 Kyiv authorities made its rapid transition to a wartime system

Russian troops invaded Ukraine on February 24, 2022, triggering an imminent threat to the COG for Kyiv. The risks include the arrest or murder of President Volodymyr Zelensky, the continuous functioning of Ukraine's executive (headed by the President), legislature, and judiciary system, and the fall of Kyiv or even the entire country. The Ukrainian authorities must take swift steps to ensure COG and to galvanize people's morale

to resist the invading Russian army with determination.

On February 24, Zelensky announced the severance of diplomatic relations with Russia; on the same day, the Ukrainian parliament passed a state of war throughout the country. The following day, Ukraine set up a Supreme Command in Kyiv, with President Zelensky as the Supreme Commander. Zelensky remained in Kyiv to continue his command and demonstrated his determination to resist. He was assisted by the Minister of Defence, the Chief of General Staff, and some of the Deputy Prime Ministers in making various wartime decisions.² In the face of a common threat of aggression, the Ukrainian Supreme Command is in charge of integrating the leadership of government operations. When cities fight independently, the mayor is responsible for mobilizing the citizens, and the military commanders are in charge of directing urban warfare. Several Ukrainian central ministries have moved westward to continue operations in Lviv and are administered by the Prime Minister.³ The

^{2.} David L. Stern, "Ukraine's Lviv Becomes 'Western Capital' as Some Diplomats Leave Kyiv," *The Washington Post*, February 18, 2022, https://reurl.cc/9GY7rv.

^{3.} Shen, Ming-shih, "Observing Taiwan's War Mechanism from the Ukraine Conflict: Revelation and Exploration," *Tamkang University Strategic Studies Annual Conference*, May 2022.





Ukrainian garrison had already completed their deployment and established fortified positions, which ensured the safety of Kyiv by keeping the Russians out of the defensive front.

2-2. "Infrastructure resilience" is the foundation of COG

Before the war, Russia launched cyberattacks on Ukrainian government agencies and banks. On the day the war broke out, it was also reported that an unidentified hacker attack disrupted Ukraine's broadband satellite Internet connection. On February 26, Ukraine's deputy prime minister openly asked Elon Musk for help with Internet connections. The following day, Musk responded that the Starlink satellite broadband service had been activated. Later, a total of 5,000 Starlink terminals were provided to Ukraine thanks to a partnership between USAID and Musk's SpaceX to save the country from the threat of network disconnection.4

In his speech, Zelensky pointed out that the Russian army cut off water, electricity, and all civilian daily life supplies to Ukraine after the invasion. Between February 24 to 26, Ukraine's power grid was successfully tested for independent operation, and the government then disconnected the grid from that of Russia and Belarus. On March 16, Ukraine's power grid effectively connected with the European grid, which signified the country's successful power source transition from Russia to Europe.⁵ The unprecedented quick transition empowers Ukraine's sustainable capability to resist the invasion. In addition, the Tesla Powerwall intelligent energy storage device also made a big splash in Ukraine. Each Powerwall can store up to 13.5 kWh of electricity, and up to 10 units can be interconnected into a cluster. Each cluster is sufficient to support the daily electricity needs of an average household. It can

^{4.} Wu, Ying Fan, "Ukraine Asked Elon Musk to Relieve Internet Disconnection Concern, Musk Won 500,000 Likes," *China Times*, February 27, 2022, https://reurl.cc/NAmyxm; "Ukraine's Satellite Network Sabotaged during Russian Invasion, West Investigates," *Central News Agency*, March 12, 2022.https://reurl.cc/417Wd2; "USAID Safeguards Internet Access in Ukraine through Public-Private-Partnership with SpaceX," *USAID*, April 5, 2022, https://reurl.cc/ErM1RR.

^{5.} Anna Blaustein, "How Ukraine Unplugged from Russia and Joined Europe's Power Grid with Unprecedented Speed," *Scientific American*, March 23, 2022, https://reurl.cc/55y8a6.





even last for more than three days if used only for Internet communication and the minimum level of hot water and cooking. Undisturbed Internet connectivity and household utilities provide valuable communication means and necessities to war-torn Ukraine and are also the foundation of the Ukrainian government's sustainability.

2-3. Digital warfare: a combination of information, propaganda, and psychological efforts

Defending the homeland, repelling the enemies then bringing them to justice are essential functions that must be performed for maintaining effective COG. In addition to the military and technological innovations, the Russian-Ukrainian conflict is a digital war that combines information, propaganda, and psychological efforts to determine the winner between the two sides. The Ukrainian Minister of Information has performed very well in cyber and information warfare, and Ukraine's four

information and psychological warfare centers are also very powerful. The Kyiv authority has utilized various social media, in combination with official websites and online press conferences, to successfully spread official Ukrainian government information to effectively master the right to speak about related affairs. For example, although the wellknown "The Ghost of Kyiv" and "Snake Island" stories have mixed with some false information, they were very effective in terms of propaganda and boosted the soldiers' morale by depicting the bravery of the Ukrainian fighters. The functioning network also allows the Ukrainian people to reflect the real-time movements of the Russian forces through mobile phones and the Internet, creating an effective universal intelligence network and improving the combat effectiveness of the Ukrainian forces.

3. COG and Taiwan

As the war is still ongoing, many COG actions taken by the Ukrainian

^{6.} Tang, Ming-Hui, "Tesla Power Storage Systems in Russian-Ukraine Conflict Revelated Taiwan," *Up Media*, 13 March 2022, https://reurl.cc/olorgg.

^{7. &}quot;Centers for Information and Psychological Operations of the SSO of Ukraine. Defeat Is Near," *Top War*, March 3, 2022, https://reurl.cc/2Z9KYv.





authorities are not yet revealed due to their sensitive nature. For example, if Zelensky were killed, who would become his successor? What's the order of succession? Although the Ukrainian high command was established in Kyiv and Zelensky claimed he stayed on Bankova Street, Ukraine was supposed to have several underground bunkers serve as combat and preparatory command posts. From the currently publicized information and the US approach, there's much for Taiwan to learn about COG.

3-1. Strengthened leadership resilience is the core of COG

For Taipei, which lacks defensive depth, strengthening the defense of the leadership is an important national security issue. Therefore, the enhancement of leadership resilience through COG will help the government to operate continuously and lead the people to respond in the event of major disasters or shocking incidents. In this regard, there are three major points worth considering: the succession list of leaders, the shadow government, and the emergency command posts that are readily available.

The US always maintains a presidential succession list based on the 1947 Presidential Succession Act, which remains updated as circumstances dictate. In addition to the President and Vice President, there are 17 Congressional leaders and Cabinet heads on the list.8 Similarly, federal ministries also have their own succession lists of leaders. In case of major incidents or emergencies in the country, there would probably be no time for the agencies to discuss the succession list and the order, which may even lead to leadership crises. Therefore, the more mature and complete succession lists and system mean more robust, sustainable government agencies.

A complete "shadow government" is another important mechanism that must be evacuated into a secure command post (underground bunker) in the event of major national disruptions; it will take over the responsibility to keep the government running when necessary. After the 9/11 attacks in 2001, President George W. Bush, Jr. initiated the first "shadow government" operation in the US on that day. "Members of reserve command post" are often allocated

 $^{8. \ \} Order\ of\ Presidential\ Succession,\ US.GOV, \ https://www.usa.gov/presidents.$





in Taiwan's military exercises and simulations. But do they regularly conduct peacetime communications and stationing exercises? In addition, the main command post, reserve posts, and other additional posts for evacuation that accommodate the political and military leaderships and the "shadow government" after major incidents, especially the equipped communication and information infrastructure, must be tested regularly, and drills for stationing and transferring the command post personnel must be conducted to ensure that the facilities can function immediately to support government operations as an essential COG measure. Only continuous testing, exercising, and validating efforts can ensure effective command post operations in wartime.

3-2. COG must be internalized into the daily routines of government agencies

There is still room for improvement in the understanding and practice of COG by Taiwan's government agencies. COG is not just about crisis management, nor about having a preparedness or contingency plan in place and then passively waiting for inspection or rehearsal. In December 2020, US President Trump signed Executive Order 13961, "Governance and Integration of Federal Mission Resilience," which explicitly requires that all federal government departments must integrate all readiness programs into their daily operations to ensure that the US government retains essential functions under all circumstances.

The Executive Order underlines the importance of the following objectives to be pursued: governments from the central to local levels must truly understand and appreciate the importance of COG, the central government must establish a COG mechanism through policy declarations and necessary legislative amendments, government ministries and agencies must complete pragmatic preparedness plans covering protection, response, adaptation, and recovery, and establishment of an agency similar to the US Federal Emergency Management Agency (FEMA) to continuously rehearse and evaluate

^{9. &}quot;Governance and Integration of Federal Mission Resilience," *Presidential Documents*, Executive Order 13961, December 7, 2020, https://reurl.cc/A7WloQ.





government departments.

Through such continuous rehearsal and validation, the US has found that if COG is internalized in all ministries, the transition from a peacetime system to a wartime one should not be a decision to be made only after the top leaders convene the heads of ministries, but must be evolved into a mechanism that works on a daily basis. As a result, a Continuity of Government Readiness Conditions (COGCON) system has been established in the US in recent years. From COGCON 4, the lowest alert level, to the first alert level in which the leadership team is fully stationed at the command post, decisions are made by the President, with the assistance of the National Continuity Coordinator (the President's Homeland Security and Counterterrorism Advisor), and FEMA and COG units are notified thereafter. 10 The experience accumulated from day-to-day COG operations and the flexible peacetime/wartime system transition mechanism will help strengthen the government's COG capability under major incidents.

3. The government's basic operational capability must be developed through continuous validations

As a lone-standing island, Taiwan might have difficulties obtaining foreign aid in the short term if blockaded. In the event of war, power plants, natural gas import facilities, and oil depots could be the targets of the first-wave attacks. Ensuring the basic supply of oil, gas, electricity, water, and food, as well as the operation of economic, financial, and public healthcare systems, is fundamental to the COG and the maintenance of citizen morale. Taiwan's "National Defense Mobilization and Preparation Act" includes eight mobilization and preparation plans for the central government agencies, while the

^{10.}At the lowest alert level, Level 4, maintaining the backup facilities and conducting regular drills are sufficient. At Level 3 alert, government personnel must enter the reserve command post and test information and communication systems to ensure their readiness and track ministry leaders and their designated successors on a daily basis. If the alert escalates to Level 2, 50-75% of the operational staff must enter the reserve post, establish operating capabilities, and be prepared to perform the organization's essential functions following an emergency or disaster situation. Under Level 1 alert, the designated leadership team and COG Staff shall be fully stationed at the reserve post and ready to perform the organization's essential functions. See "Continuity of Government," *The White House Info*, https://whitehouse.gov1.info/continuity-plan/.





authorities and operating departments of eight key types of infrastructure facilities also have protection plans in place. However, whether it's a mobilization plan or a protection plan, it must be repeatedly validated through practical exercises and evaluations to identify insufficiencies and then continue to have it refined.

In the COG mechanism of the US, the National Exercise Program (NEP) is directly under the control of the White House to implement eight different exercise programs on a twoyear cycle. The NEP includes activities ranging from the Eagle Horizon exercise participated by all federal departments to exercises on how the Department of Defense supports civilian departments, in addition to operations on disaster relief, coastal logistics, cybersecurity, nuclear weapon incidents, urban nuclear facility accidents, and nuclear, biological, and chemical accidents that are repeatedly conducted and validated. 11 Without regular, practical peacetime rehearsal and validation, unrealistic or ignored elements of mobilization or defense

plans may continue to exist and cause significant damage to COG in case of major incidents. Continuous identification of problems and improvement of the government's basic operational capacity through implementing exercises and assessments by the related departments will be an important issue for Taiwan's COG efforts.

4. Conclusion

No one knows when a major disaster or war will hit. Still, through daily COG preparation and improvement, the government and chain of command can become more responsive and resilient to act against disasters and even enemies. At a time of climate extremes and rising military threats from China, Taiwan's government now has a relatively high probability of facing sudden, major incidents. Observing the actual situation of the war in Ukraine and the mechanism and practice of COG in the US, there is much that Taiwan should consider and put into practice.

^{11. &}quot;Continuity of Government," The White House Info, https://whitehouse.gov1.info/continuity-plan/.





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