

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

UKRAINIAN-AMERICAN CONCORDIA UNIVERSITY

Faculty of Management and Business

Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

_____ **Rethinking IT management for adapting to war realities** _____

(based on Sun Culture Center _____ case)

Bachelor student of the 4th year of study

Field of Study 07 – Management
and Administration

Specialty 073 – Management

Educational program – IT Management

Arisa Tajima

Research supervisor

Ruslana Seleznova

Ph.D. in Economics

Kyiv – 2024

Abstract

The thesis describes what happened in Ukraine due to the war, and also how Ukraine fought for a free life and development during the period of the Covid-19 pandemic and the war. The work also examines changes in IT management during this period.

Also, my work is based on analysis and research based on information from my educational practice. Finally, I also look at leadership, and what kind of leaders are needed in the current war.

We can learn from the example of Ukraine, which is doing business and working hard despite the ongoing war.

Keywords: information technologies, IT company, IT management, leadership

Анотація

Дипломна робота описує те, що сталося в Україні через війну, і також те як Україна боролася за вільне життя та розвиток в період пандемії Ковід-19 та війни. Також і робота розглядає зміни в ІТ менеджменті у цей період.

Також моя робота ґрунтується на аналізі та дослідженнях, що засновані на основі інформації з моєї навчальної практики. Нарешті, також я розглядаю лідерство, і те, які лідери потрібні під час нинішньої війни.

Ми можемо навчитися на прикладі України, яка веде бізнес і наполегливо працює, незважаючи на триваючу війну.

Ключові слова: інформаційні технології, ІТ компанія, ІТ менеджмент, лідерство

PHEE-institute «Ukrainian-American Concordia University»

Faculty of Management and Business

Department of International Economic Relations, Business and Management

Educational level: **Bachelor's degree**

Specialty **073 “Management”**

Educational program **“IT Management”**

APPROVED

Head of Department



Prof. Zharova L.V.

“7” May 2024

TASK

FOR BACHELOR'S QUALIFICATION WORK OF STUDENT

Arisa Tajima

1. Topic of the bachelor's qualification work

Rethinking IT management for adapting to war realities(based on SUN CULTURE CASE case)

Supervisor of the bachelor's qualification work **Ruslana V. Selezniova Ph.D. in Technical Sciences, Associate Professor at the Department of Information Technologies & Innovations.**

Which was approved by Order of University from **“25” September 2023 № 25-09/2023-5к**

2. Deadline for bachelor's qualification work submission **“12” May 2024.** 3. Data-out to the bachelor's qualification work _____

4. Contents of the explanatory note (list of issues to be developed) Achieving this aim is determined by the solving of the following tasks:

1.The Reality of War and the Need for IT

2.The Role of IT in a War Environment

3.Threats and Countermeasures: The Importance of Cybersecurity

4.General information and research of “Sun Culture Center”

5.Internal structure of “Sun Culture Center” and SWOT analysis & matrix







6. IT management and Information technology environment analysis of “Sun Culture Center”

7.Improved leadership and management

8.Role of information technology during wartime

5. List of graphic material (with exact indication of any mandatory drawings)

6. Consultants for parts of the bachelor’s qualification work

Part of the project	Surname, name, position	Signature, date	
		Given	Accepted
1	Seleznova R 		
2	Seleznova R 		
3	Seleznova R 		

7. Date of issue of the assignment

Time Schedule

No	The title of the parts of the qualification paper (work)	Deadlines	Notes
1	I part of master thesis	<i>Prior to 27.02.2024</i>	

2.	<u>II part of master thesis</u>	<i>Prior to 27.02.2024</i>	
3.	<u>III part of master thesis</u>		
4.	Introduction, conclusions, summary		
5.	Pre-defense of the thesis	<i>29.04.2024</i>	

田島 有紗

Student

(signature)

Prof.

Supervisor

(signature)

Conclusions: The student is allowed to defend. The thesis meets the requirements. The student deserves a positive assessment

Prof.

Supervisor

(signature)

CONTENT

INTRODUCTION.....	3
CHAPTER 1. THE RESLITY OF WAR AND THE NEEDS FOR IT.....	5
1.1 The Reality of War and the Need for IT Management	5
1.2 The Role of IT in a War Environment.....	11
1.3 Threats and Countermeasures: The Importance of Cybersecurity.....	15
CHAPTER 2. ANALYSIS OF THE “SUN CULTURE CENTER” AND OPPORTUNITIES AND POTENTIAL THROUGH DEVELOPMENT OF IT MANAGEMENT.....	19
2.1. General information and research of “Sun Culture Center”	19
2.2. Internal structure of “Sun Culture Center” and SWOT analysis & matrix.....	25
2.3. IT management and Information technology environment analysis of “Sun Culture Center”	38
CHAPTER 3 IMPORTANCE OF HUMAN RESOURCES AND EDUCATION.....	49
3.1 Improved leadership and management	49
3.2 Role of information technology during wartime.....	51
CONCLUSION.....	55
LIST OF REFERENCES.....	57

INTRODUCTION

The world is changing day by day. I think we can realize that the environment and system around us are changing very quickly compared to the past. The present in which we live began with creation. Our Creator first created light and shadow, from which he created nature, sea, water, etc. After that, humans worthy of our ancestors were born, and they began to live on Earth. Everything created before the birth of mankind was used to make it easier for our ancestors, humans, to survive or live. In that way, nature and living things have developed, and the situation of the world we live in has gradually been formed and we are still alive.

And times passed and new creations emerged in the present world. We call it "Information Technology." We often use the word "IT" these days. IT is defined by the American Information Engineering Association as research, design, development, implementation, support or management of computer-based information systems, especially application software and computer hardware. IT represents many changes in our living and environment, even though it's only a few decades old. IT has changed everything around us. I think we can understand that we cannot live without IT today. When we study and work, IT has become an integral part of putting together materials, creating materials, and organizing teams and accounting.

In the 21st century, the entry into an advanced information society has become a reality. With the combination of computers and communication technology, the IT (information technology) revolution has progressed, and many people have come to pay attention to the theme of new economic structural changes. Examples include the rapid expansion of Internet shopping, the dualization of e-mail, the rise of e-commerce, and experiments on e-money. It is inevitable that IT will penetrate the economy. The wave of electronic innovation is expected to bring new development possibilities and perhaps problems into the economic field. Meanwhile, the efficient use of energy and resources and reduction of greenhouse gas emissions such as carbon dioxide are becoming important in the 21st century due to global warming. It would be desirable

if jobs could be secured, income distributed, and the economy could flow smoothly without using too much resources, energy, iron or cement.

Since February 2022, the war has begun in Ukraine and the importance of IT has increased. I think many companies have been damaged by the war, and they can no longer work as before. I can say the same thing at the company where I did my internship this time. However, it continued to develop and still continues to operate as a company. Therefore, this time, I would like to write here what role IT played in these wars and how the company has developed by using IT management.

CHAPTER 1. The Reality of War and the Need for IT Management

1.1 The Reality of War and the Need for IT Management

1) The Ukrainian army's reversal offensive has begun

More than a year and a half have passed since the Russia-Ukraine War began, and it is almost the second year. As the war continues for a long time, what are the conditions for a ceasefire between the two countries?

In the early days of the war, there were moves toward peace between Russia and Ukraine. In March last year, Ukraine agreed to neutralize a security framework that replaces NATO, does not allow foreign troops or bases in Ukraine, and does not possess nuclear weapons or other weapons of mass destruction. He also suggested that the issue of attribution of Crimea should be shelved, saying it would take 15 years to discuss. On the other hand, Russia said it would not demand Zelensky's resignation (de-Naziization) in negotiations for a ceasefire. However, the Ukrainian side hardened its stance after Russian troops killed a number of civilians in Bucha near Kyiv, and negotiations on a ceasefire were suspended and face-to-face talks between the parties still remain stalled.

Since then, Ukraine has set its goal of "retaking all territory including Crimea" (restoring territory to the 2014 border) and withdrawing Russian troops completely. President Zelensky announced a 10-point "peace formula" [1] last November, including Ukraine's territorial integrity and the withdrawal of Russian troops while Russia pressed Ukraine to recognize Crimea and four eastern and southern states already belong to do so.

With no signs of peace in sight, the prolonged war has caused more damage to Ukraine, while people are also said to be tired of the war. Furthermore, as will be explained later, fatigue in supporting Ukraine is becoming apparent in the United States and European countries that have supported Ukraine. Concerned about the tapering of aid, including arms supplies, Zelensky began to aim for a "win by the end of this year" to break the deadlock.

After attending the G7 Hiroshima Summit in May [2] and seeking long-term assistance from the leaders of Japan, the United States and Europe, Japan launched a massive reversal offensive to regain its territory in early June. Ukraine's strategy is to break through Russian defensive positions in Zaporizha, Helson and Bakhmut in eastern Donetsk on a long line of more than 1,000 kilometers, recapture southern Crimea within range of shelling and isolate Crimea's troops. The ongoing war in Ukraine has had a devastating impact on the country, its people, and its infrastructure. In the midst of this turmoil, the importance of effective IT management has become increasingly evident.

2) The passion for the recapture of Crimea

President Zelensky is seeking to recapture Russia's four occupied eastern and southern states and the Crimean Peninsula [3], which was stolen in 2014, but he is particularly eager to recapture Crimea, the starting point of Russian aggression. This is illustrated by Umelov's appointment as defense minister.

In September 2011, President Zelensky ousted Defense Minister Reznikov and appointed Rustem Umerov, who was the head of the National Property Fund, to succeed him as responsible for the continuing corruption scandals involving the Ministry of Defence. Umelov's appointment is seen as an anti-corruption measure, but that is not all. The appointment also shows the president's determination to recapture the Crimean Peninsula, which was taken away by Russia. Umelov is a Crimean Tatar Muslim.

Crimean Tatars originated from Turkic Muslims who lived mainly on the Crimean Peninsula before Crimea was annexed by the Russian Empire. In World War II, he was expelled to Central Asia by Stalin for suspected cooperation with Nazi Germany. In May 1944, more than 200,000 Crimean Tatars were suddenly forced to emigrate, forced into trains and transported thousands of kilometers away to Uzbekistan and Kazakhstan. More than tens of thousands of Crimean Tatars died on the way, or shortly after arriving at the destination. Umelov's family was also expelled from Crimea, where he was born in 1982 in the Uzbek Soviet Socialist Republic.

Since then, many Crimean Tatars, including Umelov's family, have been allowed to return to Crimea in the late 1980s. Today, Crimean Tatars make up approximately 12% to 15% of the Crimean Peninsula's population. Russia's 2014 seizure of Crimea marks their second loss of home. Some say the goal of recapturing Crimea is unrealistic, but Zelensky's appointment of Crimean Tatars as the most important post in achieving that goal carries a strong message that he will never give up. Crimean Tatar troops are also participating in the next counterattack.

3. Reversal offensive with a view to peace

In July, President Zelensky reiterated that the goal of the cease-fire is to recapture the entire country, including the Crimean Peninsula and eastern Donbas, when Ukrainian troops reach Russia's border. In a joint press conference with Spanish Prime Minister Jacques Sanchez, he said the border as of February last year when Russia began invading was "not a border." In addition to Crimea, the Russian side has not changed its position that Ukraine's acceptance of the "new territorial reality" in which four eastern and southern states were "merged" by Russia through referendums in October 2022 is a prerequisite for negotiations.

However, some media reported that President Zelensky was secretly considering a peace plan different from this position. They say they plan to start ceasefire talks with Russia by the end of this year on the premise that they will recapture certain territory through counterattack operations. The Washington Post reported on June 30. President Zelensky has emphasized his refusal to negotiate with Putin until he retakes all of his territory, and if the Washington Post article is true, it will be a major change in Ukraine's policy. The newspaper said CIA Director William Burns had been briefed on the plan during a secret visit to Ukraine in June during talks with Zelensky and top intelligence officials. Under the plan, Ukrainian forces will use a reversal offensive to recapture territory that would bring southern Crimea, which Russia unilaterally annexed in 2014, within range of shelling. In addition, ground forces will advance in the direction of Bakhmut, a key point in eastern Donetsk province, and put pressure on Russia to start negotiations on a ceasefire even if they have not yet regained all their

territory. However, Ukraine's plan to recapture its territory within Crimea's range is becoming difficult due to the delay of the reversal offensive.

4) Thick Russian defensive positions

The Ukrainian army, which aims to divide the eastern and southern Russian occupation areas, has launched heavy-armed reverse attacks with Leopard, a German tank provided by the United States and Europe. IT plays a crucial role in enabling communication, coordination, and information sharing, which are essential for both civilian and military operations. In the Ukrainian context, IT has been instrumental in documenting war crimes, coordinating humanitarian aid, and providing essential services to displaced citizens.

However, the war has also exposed the vulnerabilities of Ukraine's IT infrastructure. Cyberattacks have targeted critical systems, disrupting essential services and causing widespread damage. These attacks have highlighted the need for robust cybersecurity measures and a strong focus on IT resilience.

However, the timing of the counterattack was later than planned, giving Russia time to build a strong defense network. Russian army established an iron-walled defensive position around the southern state of Savoryja. When tanks fall into trenches (grooves) that block the advance of tanks, tanks from Europe and the U.S. are also stuck. Beyond that lies a minefield with five to six mines per square meter. In addition, obstacles such as anti-tank trenches and concrete blocks about one meter high called "dragon teeth" stand against Ukrainian troops. Even if they break through, Russian soldiers trapped in the trenches will stand by and shoot. Strategies such as mass deployment of attack helicopters and communication interference also prevent Ukrainian troops from advancing. Russian forces have also bombed and destroyed dams at the Kahovka hydroelectric power plant in the southern state of Helson on the Dnieper River to prevent Ukrainian troops from advancing.

It is not easy to break through such a strong defense line of the Russian army, which has been laid out many times, and this is the cause of the struggle. Ukrainian troops reportedly lost 20 percent of their weapons deployed on the battlefield in the first two weeks of the counterattack operation, which began in early June. The

Ukrainian army recaptured 3,000 square kilometers of territory in six days when it launched a counterattack in the northeastern province of Harkiu last September, but only 160 square kilometers of southern territory were recovered from Russia in the first month.

Ukraine, which has been aiming to win by the end of this year, changed its track in an interview with CNN in late July and said it would win over Russia by next summer. Zelensky also admitted that he was "lagging behind hope." [5](Fig.1)

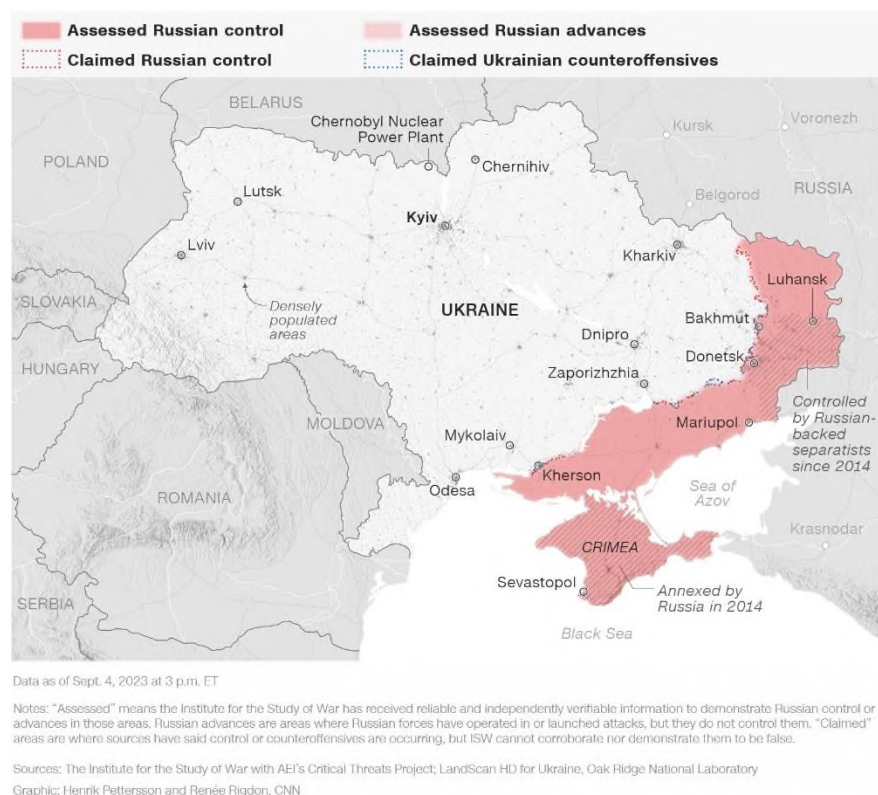


Fig1: Ukraine's September 2023 war situation

5. Further prolongation of war and Ukraine's plight

The war situation is continuing to move back and forth as Ukraine did not achieve as expected despite a large-scale reversal offensive. The prevailing view in Europe and the U.S. is that Ukraine will not be able to recapture the Crimean Peninsula, which it strongly hopes will be. Zelensky said in an interview with CNN in September, "Even if you want to compromise or talk to someone, you can't be a liar," [6] expressing his negative view on negotiating a ceasefire with Putin. Unless significant progress is made in recapturing the territory, negotiations are unlikely to proceed.

On the other hand, there is little possibility that Russia will accept negotiations to return the Crimean Peninsula. The Crimea Peninsula was under Soviet control, but it was controlled by the Ukrainian Republic in 1954 during Khrushchev's administration and became an independent Ukrainian territory after the collapse of the Soviet Union. Because of this historical background, many Russian residents live there. When the pro-Russian Yanukovich government collapsed in 2014 due to Ukraine's political upheaval, Putin sent masked troops to take control of Crimea. It forced a referendum with local pro-Russian forces and annexed it to Russia.

The recovery of the lost territory raised the patriotic mood of the Russian people, which led to a recovery in Putin's approval rating and solidification of the regime's foundation. For Putin, Crimea is both a symbol of his power and a legacy of his administration. If they let go of this easily, they may lose their political authority and control. It is unlikely that Putin will choose such an option ahead of the presidential election in March next year. Unless the war situation changes dramatically, it will not accept negotiations to return the eastern and southern states that have already completed procedures for incorporation into Russian territory.

Moreover, Russia is steadily preparing itself for a long war. Putin announced that he has secured 300,000 new volunteers, raised the recruitment limit from the current 27 to 30 from January next year, and will increase defense spending 1.7 times this year. Only about a quarter of the world's countries actually participate in economic sanctions against Russia, and clever loopholes have been prepared, so the effect of sanctions is limited. In a democratic country, war-weary sentiment prevails and political difficulties follow the long war, but Putin's dictatorship is stable in Russia, which is accustomed to strong rule, and domestic power to prevent the continuation of the war is weak. Speaking at a conference on international affairs in southern Sochi in October, Putin said Ukraine's military activities and economy will collapse in a few days if Western aid is cut off.

On the other hand, Ukraine cannot carry out cross-border attacks on Russia politically and not only can it not hit Russian bases, but the longer the war lasts, the more devastated its territory and victims will increase. Due to the long border,

construction and defense positions are also limited. It is extremely difficult for Ukraine to win militarily. In addition, there are growing calls in the United States and Europe for a review of their assistance. If Trump, who advocates suspension of aid to Ukraine and reconciliation with Russia in next year's U.S. presidential election, is re-elected, the continuation of the war itself will be in jeopardy. Putin, on the other hand, is expected to create an international environment favorable to Russia if he carries it into a long-term war and is unlikely to lower the conditions for negotiating a ceasefire.

Until here, I summarized the situation of the war in Ukraine. So in next paragraph, I would like to mention about how IT helped in Ukraine war.

1.2 The Role of IT in a War Environment

Next, I would like to mention the role of IT in the war. Russia has attacked Ukraine multiple times through cyberattacks even before the invasion of Ukraine, which began in February 2022. Ukraine is known as a country with very high IT technology, and it can be said that it has high combat power not only in ground warfare but also in IT, which is invisible. I have seen a Japanese Internet article saying that Russia was forced to struggle not only in ground warfare but also in cyber warfare over the Internet because it could not see through the high level of IT power of Ukraine. In this way, IT can be said to have played a very important role in the Ukrainian War. Here, I would like to mention the role of IT in the Ukrainian War by giving specific examples.

Initially, it was expected to be settled early, but the future is still uncertain. Since the beginning of the invasion, the Ukrainian government has focused on disseminating information through its official website and SNS. Among them, President Zelensky and Minister Fedorov of the Ministry of Digital Affairs are among those who send messages through SNS. The information sent is directed not only to Ukraine but also to the world, including the situation of Russia's invasion, Ukraine's response to it, calls for military and humanitarian assistance to the world and information to its people.

In addition to battles with tanks and missiles that take place on land, sea and air in real space, cyberattacks in virtual space are also being utilized. It is difficult to confirm the actual situation of Russia's cyber attacks because there has been no official communication. On the other hand, the full picture of cyber attacks by Ukraine is not

clear, but the only cyber attack unit officially sent by the Ukrainian government is IT ARMY of Ukraine. Its existence became widely known when Ukraine's digital minister, Mr. Fedorov, took to Twitter to call for cyber attacks against Russia at home and abroad. "We have an IT force. We're looking for people with digital talent. There are tasks for everyone. We will continue to fight on the front lines of cyber. The first task is a channel for cyber specialists" and we have launched the Ukrainian IT Army on social media.

To save people's life

American IT companies support Ukraine one after another. IT giant Google has started a local service that sends information to Android smartphones when an air raid warning is issued.

Ukraine's deputy prime minister tweeted about citizens using smartphones around satellite antennas. It is an Internet connection service provided by American space development company SpaceX.

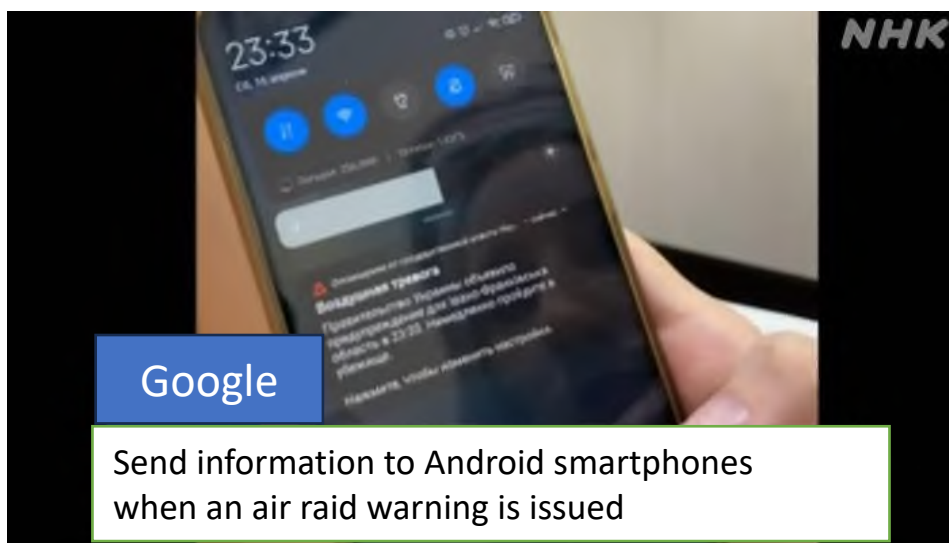


Fig:2 an Internet connection service provided by American space development company SpaceX.

One Ukrainian who uses the service said, "It's very helpful. Sometimes I can't hear sirens."

American IT companies are also contributing to monitoring cyberattacks against Ukraine. About 600 employees of Cisco Systems, a major telecommunications company, monitored cyberattacks remotely from the United States. We check the

system of government and financial institutions in Ukraine 24 hours a day, and when we detect any abnormalities, we immediately notify them.

One of the employees who participated in the support said, "If you have a personal computer at home (you can check it), you don't need large-scale facilities."

In addition to land, sea and air battles, modern wars are also called "hybrid wars" that paralyze important infrastructure such as electricity, telecommunications, and finance through cyberattacks and plunge society into chaos. In this situation, the support of American IT companies is supporting Ukraine.

In this way, Russia is trying to intimidate and control people by blocking the Ukrainian Internet. We feel a sense of fear that we don't understand, and the Ukrainian people probably continue to live. In a different way, I feel that Russia is also trying to confuse people by spreading false information spread by Ukraine by blocking the local Internet in Ukraine and not connecting with the outside world. That's why I think we need to keep fighting without losing.

IT Army

In addition to battles with tanks and missiles that take place on land, sea and air in real space, cyberattacks in virtual space are also being utilized. It is difficult to confirm the actual situation of Russia's cyber attacks because there has been no official communication. On the other hand, the full picture of cyber attacks by Ukraine is not clear, but the only cyber attack unit officially sent by the Ukrainian government is IT ARMY of Ukraine. Its existence became widely known when Ukraine's digital minister, Mr. Fedorov, took to Twitter to call for cyber attacks against Russia at home and abroad." We have an IT force. We're looking for people with digital talent. All tasks are here at "[https://t.me/itarmyofurraine.](https://t.me/itarmyofurraine)" [7] There are tasks for everyone. We will continue to fight on the front lines of cyber. The first task is a channel for cyber specialists"¹and we have launched the Ukrainian IT Army on social media.

In addition, the Ukrainian IT Army is disclosing information on "cyber attack methods" and "cyber attack results" on the homepage addresses of Russian-related businesses that are targeted. First, let's look at the "cyber attack method." There are various methods of cyberattacks, but the Ukrainian IT Army introduces an attack method called DDoS attack (read as DDoS attack). DDoS attacks are short for Distributed Denial of Service attacks and are cyberattacks that send excessive access or data from multiple computers to targeted websites. The DDoS attack method introduced by the Ukrainian IT Army is easy for anyone using a computer for work. As a specific DDoS attack, the Ukrainian IT Army introduced an attack method called "1,000 Needles Death" [8] on Telegram on March 24, 2022, and an attack method called Liberator on March 29, 2022.

The Ukrainian IT Army has disclosed the "cyber attack results" obtained through these cyber attacks. The target of the DDoS attack set by the Ukrainian IT Army has reached 64 institutions as of April 23, 2022. To check the results, 21 servers around the world simultaneously check the operation of websites of 64 target organizations every 10 minutes. The status of the target website is determined to be "available", "still working", "little moving", "not working" and "undecided". If Ukraine's DDoS attack is successful, more institutions will be determined to be "little moving" or "not working". On the other hand, if DDoS attacks are not successful, more institutions will be judged to be "available" or "still working." The goal of the Ukrainian IT Army is to make the target of attack "unmoving". According to the "cyber attack result" status as of April 23, 2022, the breakdown of 64 organizations is 12 available, 10 still working, 13 barely moving, and 29 not moving (Figure 3 red frame). You can also check the operation status of individual websites. For example, you can see that the website "tcp://91." is "not working" (Figure 3 yellow box).[9]

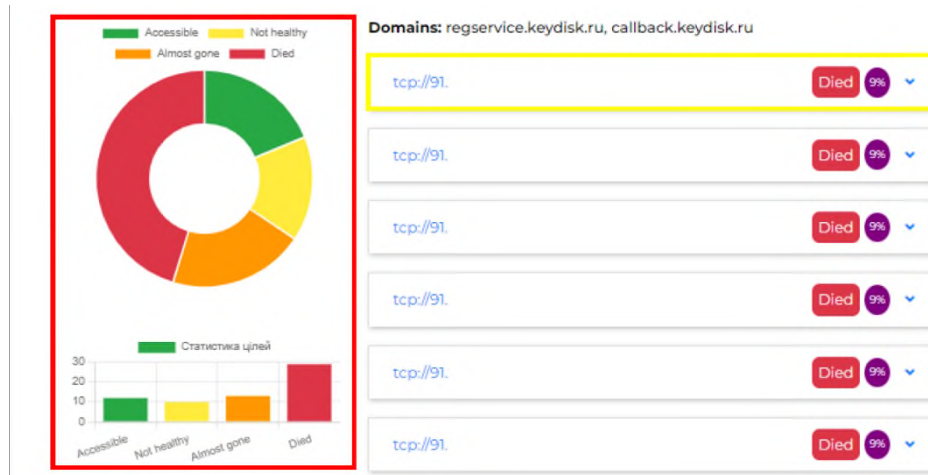


Fig3: Results of visualized cyberattacks(ItArmyofUkraine

「<https://itarmy.com.ua/check/?lang=en>」)

As we have seen above, cyberattacks by the Ukrainian IT forces have become as clear as attacks in real space, and the results of attacks are becoming more visible. The cyber attack was initiated by the Ukrainian government to protect the country from Russian aggression, and I think it is important to recognize that "the expansion of cyber attack techniques has created a battlefield in cyberspace where anyone can easily participate."

Traditionally, cyberattacks have been thought to be state-led or by some hackers. However, the DDoS attack being carried out by the Ukrainian IT Army provides a "place" for Ukrainian civilians and foreigners to carry out cyber attacks on their PCs. Such cyberattacks can be targeted and attacked even if they are physically separated, and anyone can easily participate. Civil and non-Ukrainian cyberattacks on Russian government agencies, private businesses and banks are not only criminal, but they are also an act of participation in the war and should be recognized as a new battlefield in cyberspace involving civilians around the world.

1.3 Threats and Countermeasures: The Importance of Cybersecurity

First of all, I would like to look at the point of how Ukraine is able to continue to withstand current cyber attacks from Russia.

This is because it makes use of bitter lessons from the past. Russia unilaterally annexed the southern Crimean Peninsula in 2014, but at this time, it engaged in a

"hybrid war" that combines military operations with cyberattacks and interrupted Ukraine's communication network. The Ukrainian military's chain of command has been disrupted and the people have lost access to accurate information.

In the midwinter of 2015 and 2016, a massive power outage occurred due to cyber attacks by Russia. The winter in Ukraine was severe and the lives of citizens were greatly disrupted. In 2017, wiper attacks on government agencies, electricity, airports and railways caused serious damage.

In response, Ukraine has come up with measures to prevent communication from being cut off by distributing communication facilities such as networks. Security of key infrastructure such as electricity has also been strengthened. In cyber attacks, private companies are at the forefront of threats in peacetime and emergency. Therefore, the government and private companies worked together to take measures. This is an important point. Since Zelensky's inauguration in 2007, the deputy prime minister has been actively developing relations with large overseas IT companies.

Eight years of measures have paid off, and long-term efforts and flexible responses hold the key to successful cyber defense. Ukraine has previously prohibited the government from storing data in the cloud. However, in anticipation of the importance of data protection in the event of an occupation of Kiev, parliament revised the law a week before the invasion began. And with Amazon's help, it moved critical government data to the cloud.

In fact, facilities that store all government backup data were destroyed by missile attacks immediately after the invasion, making it difficult to continue government functions without cloud migration.

Google and Microsoft also offer free cloud services. Not only IT giants but also governments in the United States, Britain and Estonia are actively supporting cyber attack information and security technology. Whether or not such international support is also a big difference from Russia.

Furthermore to cybersecurity, effective IT management also encompasses a range of other critical tasks, such as:

Maintaining and upgrading IT infrastructure: This includes ensuring that hardware and software are up-to-date and secure, and that systems are able to handle the demands of wartime operations.

Managing data: This includes protecting sensitive data from unauthorized access, ensuring data integrity, and providing access to data when and where it is needed.

Training and support: This includes providing IT training to personnel and providing technical support to address IT issues promptly and effectively.

Effective IT management is not just a matter of technology; it is also a matter of people and processes. It requires a skilled IT workforce, clear and effective communication, and a commitment to continuous improvement.

In the face of the ongoing war, Ukraine's IT sector has shown remarkable resilience and adaptability. IT professionals have continued to work tirelessly to maintain essential services and support the country's war effort.

As Ukraine looks to rebuild and recover from the war, IT will continue to play a vital role. Effective IT management will be essential for ensuring that Ukraine's IT infrastructure is secure, reliable, and capable of supporting the country's future needs. A wide range of risks are trickling down from Russia's assault on Ukraine, from sanctions compliance to supply chain disruption to business interruption. Cyberrisk has also drawn considerable concern and the threat landscape continues to evolve rapidly, though the details of increased cyberattack activity are not yet fully known and may be largely unfolding below the surface right now.

Attacks attributed to Russia have been launched against a range of targets in Ukraine, including new destructive malware campaigns, targeted information-gathering against a range of civilian and government targets, and attacks on critical infrastructure. Concerns about escalating cyber activity around the crisis are a vivid reminder of the importance of knowing your threat model and adjusting your risk management priorities accordingly. According to experts ranging from independent cybersecurity professionals to officials at the Cybersecurity and Infrastructure Security Agency (CISA), organizations at greatest risk right now include critical infrastructure, banks and other financial services firms, and of course key service providers in Ukraine

or Russia. Spill-over to other businesses is more likely with cyber conflict, however, particularly given Russia is one of the most advanced and aggressive nation-state cyber threat actors—remember the crippling global attack known as NotPetya that upended supply chains in 2017 resulted from a Russian cyberattack on Ukraine.

That is not to say that there is necessarily cause for panic, simply that the effects of cyber conflict can be unexpected, widespread and potentially severe. At this point, for most companies that are not in a high-risk position as a direct result of the war, the best course of action for risk professionals is to focus on ensuring your company has an updated and detailed incident response plan on hand and distributing it to relevant members of the organization, reviewing and potentially strengthening your general cybersecurity posture, and reminding employees about cyber hygiene.

For example, given the tragic events and breaking developments around the conflict, many may be glued to news or social media. Unfortunately malicious actors are known to take advantage of such situations by posting phishing links on social media with alleged news updates or email scams that purport to collect charity donations. Remind employees about these perils and offer refreshers on how to spot phishing scams and the need to exercise caution with links in emails or on social media.

CHAPTER 2. ANALYSIS OF THE “SUN CULTURE CENTER” AND OPPORTUNITIES AND POTENTIAL THROUGH DEVELOPMENT OF IT MANAGEMENT

2.1. General information and research of “Sun Culture Center”

1.1 Characteristic of the status

1) Company establishment background

Sun Culture Center was established in 2006. The Sun Culture Center has been working with the goal of spreading Japanese culture to Ukraine. By communicating Japanese culture, We have contributed to a more developed country by combining the original culture of Ukraine with the new culture of Japan. I have been trying to establish exchanges between Japan and Ukraine by showing origami and transcription at Japanese language schools and restaurants in Ukraine. Also, our Sun Culture Center has been supporting Chernobyl in Ukraine for a long time. We have established strong ties by holding events for those affected by the Chernobyl accident. Therefore, after the Great East Japan Earthquake in 2011, we received a lot of support from Ukraine, and since then we have supported each other with strong cooperation.

Centralized structure with hierarchy

There is a hierarchy consists of positions differentiate with responsibility and in Sun Culture Center. But the power of authority is not so strong and strict compared with other centralized business entities. And communication between top manager and general employee is accessible. So, we have meeting once a week and discuss the situation of company.

Geographical structure

The original location was in Ukraine. But because the situation of invasion from Russia, most of teacher cannot stay in Ukraine. The top manager is in Ukraine, but most of members are Japanese. So they had to go back to Japan. So we recently collaborated in Ukraine, Japan and Poland. By collaboration in different location, we tried to keep and spread our activities.

Business structure

Sun Culture Center is not an enterprise but an NGO, so it cannot be defined clearly in what way. However, basically, the head of Ukraine is responsible for the whole thing and cooperates with the Japanese and Polish branches. Since it is not a company, we do not put profits first, but focus on how we can communicate Japanese and Korean culture through our activities and have a positive impact on people.

2) Mission and Vision

Mission

“Inherit the best cultural values and traditions represented by different nations, uniting them within the one world culture.”

First, Sun culture center strive to represent the values of Japan and Korea, since these countries have become a center in the world's cultural heritage. Through our activities and cooperation, we sincerely want to express the best aspects of these beautiful countries and help you to plunge into the mysterious atmosphere of the East.

We strive to develop cultural exchange between countries. We are working both in Ukraine and Japan. you can also find out about the events that we held in Japan.

3) Characteristic of economic activities Our features

The Sun Culture Center targets people who are interested in Japanese, or Japanese culture. Those who are interested in Japanese culture teach origami and calligraphy. Also, most of the staff are Japanese, and I think it's an advantage that you can learn directly from them.

For Ukrainian students, the opportunity to engage with native Japanese teachers is very valuable.

To be able to learn something directly from a real Japanese people.

Most of our employees are Japanese, so I think this is an advantage compared to other businesses. We teach Japanese more by textbook, but at the same time, we think it is easier to imagine how to use the contents of textbooks more practically as a Japanese person than to learn from non-Japanese who can speak Japanese at other schools and educational institutions.

Support who wants to study Japanese.

The number of Japanese living in Ukraine is very rare, with one survey showing 105 working as a language teacher in Ukraine as of 2021, and about 2,050 Ukrainian Japanese learners as of 2021. If you compare the number of learners with the number of teachers in Japan, you can say that there is a shortage of teachers. Therefore, we would like to help those Ukrainians who want to learn more Japanese. Looking at the table below, compared to 2018, Japanese learners are on a downward trend. In any case, however, we can clearly see that the number of Japanese language teachers is not enough for the number of students.

Country	2021				2018		
	Agency	Teachers	Learner	Learners per 100,000	Agency	Teachers	Learner
Ukraine	17	105	2,052	4.3	15	97	2,174

Fig.4: Table of changing the numbers of students, teachers, institutions of Japanese teaching(2021)

Care of Japanese people who come to study in Ukraine

Our NGO not only teaches Japanese, but also supports Japanese students who come to Ukraine to study. There are only a few Japanese people in Ukraine, so I first came here to help them with various things such as how to get on the metro, university procedures and visa applications.

1.3 Nature of owners' management of the enterprise

As mentioned earlier, Sun Culture Center is not a company, so it does not have a clear structure like ordinary companies. Most members have no business knowledge or experience. However, the person who established the NGO acts like a manager, summarizes the organization as a whole, and manages the organization in cooperation with other people who have knowledge of finance.

1) Organizational structure

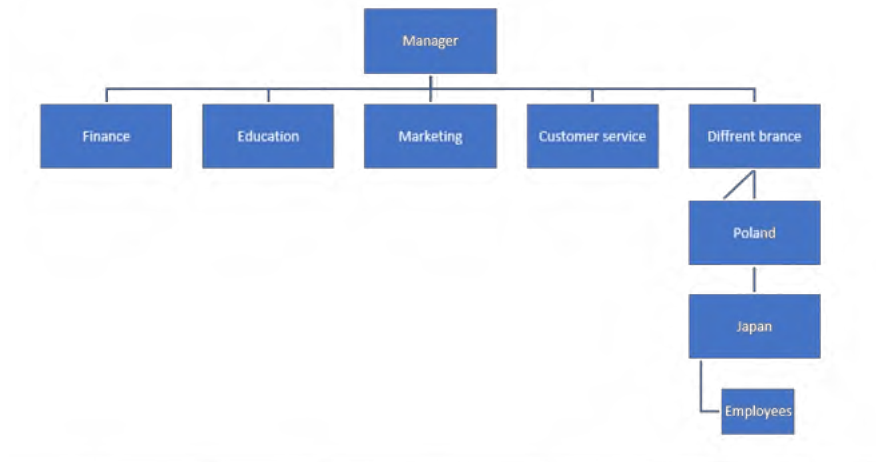


Fig5: Sun Culture center Organizational structure

2) Characters of departments

Management - The management department monitors and manages the overall process and results of the company. Based on reports from each department, it makes appropriate judgments and functions as the head of the company. It should understand the overall situation of the company and support the department or employees as necessary with the most powerful authority.

1) **Finance** - Finance effectively manages the company's assets and manages revenues and expenditures, large and small. Companies have the right to participate in spending for maximum profit, and analysis and measures should be presented to effectively utilize the funds. Also, by knowing finance, you can understand the situation of the company and what parts should be solved, which is a very important part of the company's management part.

2) **Marketing** – We haven't thought of anyone who knows much about marketing or a clear structure yet. Therefore, I can't say clearly about this part, but Sun Culture center entrust it to another marketing company so that if you type Sun Culture Center in the search engine, it will be displayed at the top, or by sending information about Japanese culture and language on YouTube.

3) **Education(Tutors)** - We welcome Japanese people living in Ukraine as teachers and are engaged in activities to teach Japanese language and

culture. We are making efforts to create a curriculum based on Japanese textbooks sold to the general public and to change the way we teach students accordingly. As far as Japanese culture is concerned, members with qualifications for calligraphy and experience in the tea ceremony will become masters and strive to provide Ukrainian people with higher quality service and education.

4) Customer Service - The customer service department is one of the affiliated organizations of the management department and identifies customer needs through direct contact with customers (students or parents) and solves problems. If customer service team is contacted by a customer or tutor (staff of Education department), they should identify the problem as soon as possible and provide appropriate solutions. Customer service members can suggest changing the tutor according to the contents of the consultation.

5) Different branches- Since the invasion of Ukraine by Russia in 2022, we have expanded our scope of activities not only to Ukraine, but also to Poland and Japan. In Poland, we support Ukraine in cooperation with Ukrainian aid organizations, and by conveying Japanese culture to those who have fled the country, we are freeing them from their usual fears and fatigue. Each department aims to cooperate with each other and have a meeting once a week to cooperate and develop.

2.1 Commercial activity of the company

1) Categories of commercial activity

Convey Japanese culture to Ukrainian people.

Through our online platform, we have a platform where you can always apply for Ukrainian people to experience Japanese language and culture. Japanese lessons are basically offered at 560 Gribunya per hour per person. Also, in Japanese culture, it was difficult to hold Japanese events after Corona, so I switched all my activities online and

overcame the difficult situation by starting calligraphy master classes and kimono rentals.

Bridge between Japan and Ukraine

The Sun Culture Center also supports Japanese students who come to Ukraine to study. This organization is the only place where you can get this kind of support just after coming to Ukraine, as you are looking for university procedures and hospital attendance.

2) Results

Change in the number of students and customers distribution by age

	2018		2019		2020		2021		2022		2023	
	number	rate	number	rate	number	rate	number	rate	number	rate	number	rate
Total	21		18		24		40		39		10	
Elementary	3	14.286	2	11.1	1	4.166	/	/	/	/	/	/
High	9	42.857	11	61.11	16	66.66	22	55	19	48.71	8	80
Adult	9	42.857	5	27.77	7	29.16	18	45	20	51.28	2	20

Fig 6: Number of students in Sun Culture Center (from 2020 to 2022) Table

The Sun Culture Center has been teaching Japanese to Ukrainian students for a long time. Among them, this time I would like to analyze the results of the Sun Culture Center based on records from the last five years and six months. Before COVID-19, the number of students was close to 20. There was also time when we taught elementary school children. Before Corona, we used to teach Japanese to Japanese wives and family children living in Ukraine. However, it became difficult after the corona. The reason is that it was difficult for small children to concentrate or listen for long time in one place. So, Our Japanese teacher visited students' homes offline and taught Japanese. But after COVID-19, it became difficult to teach Japanese directly. So, we tried to teach online using Skype. It was difficult to continue after COVID-19 because there was a lack of concentration or sitting in front of the screen. Therefore, we stopped to teach Japanese for children like elementary school or kindergarten.

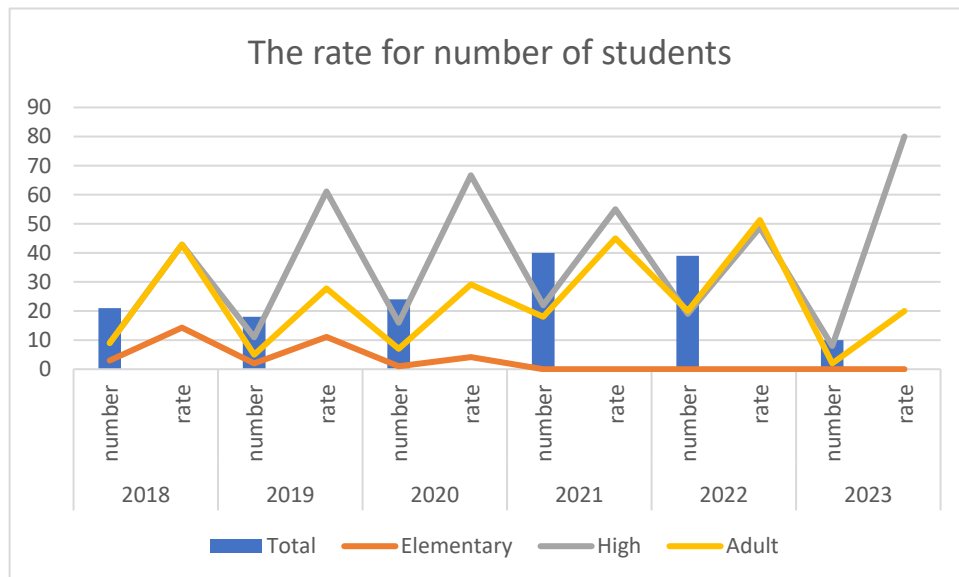


Fig7: The rate of number of students Table

The table above shows the ages of students studying Japanese at Sun Culture Center.

The list starts in 2018, but you can see that the student enrolment rate is high for any number of years. In particular, since COVID-19, many students need to spend time at home. And They started thinking that studying Japanese is very good way to spend time effectively. Because of that, they applied to our program.

Many of the adult students want to develop their businesses using Japanese. For example, one of students are studying agriculture. So, he wants to learn Japanese and conveys his skills to Japan. Also, another student can make music. Therefore, through learn Japanese, he wants to write and compose Japanese songs. There are various goals, but many people are studying Japanese in order to further develop their profession.

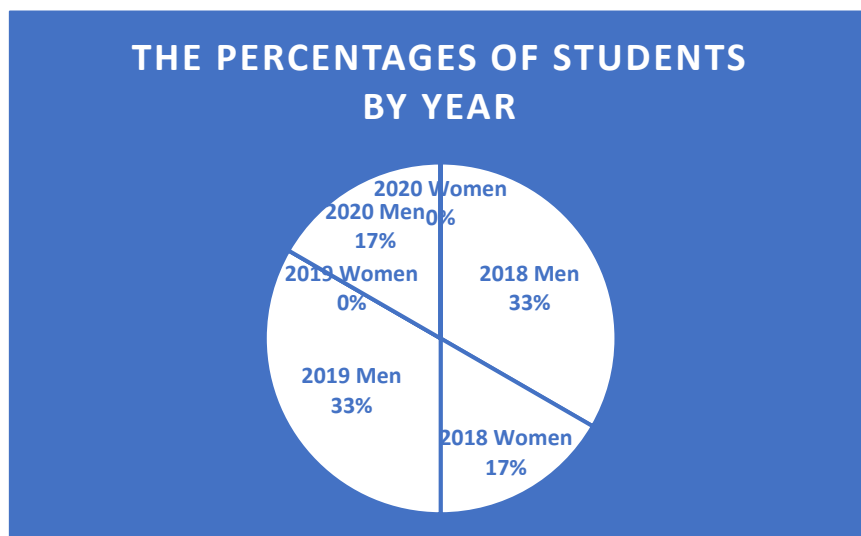


Fig 8: The percentage of number of students by gender Table

The table above shows the ratio of men to women from 2018 to August 2023 in a pie chart. As you can see, the ratio of men is overwhelmingly large. I think the reason for this result is that, as mentioned above, men are walking with a vision to convey their work and skills to Japan by studying Japanese basic.

2.2 Internal structure of “SUN CUNTURE CENTER” and SWOT analysis and matrix

1) Operational structure

Operations in corporate activities refer to the "business chain." Corporate activities have a variety of functions, including procurement, production, and sales, but most operations cannot be completed in one function. For example, a single customer requires the involvement of the sales and after-sales departments as well as the call center. Operations refer to the connection and coordination of these functions and operations across departments. In general, management consists of three elements: (1) vision, (2) competition strategy, and (3) operation. Of these, operations are the foundation for implementing competitive strategies and building superiority. If you compare this to the human body, it will be ① Vision = Mind, ② Competition Strategy = Head, ③ Operation = Body. Each of these three influences each other, making it difficult to establish a competitive advantage if even one of them is insufficient. In a business environment in which changes become normal and customer needs become diversified, the entire company will read the changes in the market, A mechanism for developing, producing, and supplying what customers want at a lower price, faster than other companies, and at the right time = Organizational ability to create and evolve a "business chain" is needed. The pursuit of optimal operational efficiency by function and department alone has resulted in some kind of deficiency between the operations, resulting in in inefficiency and degradation of operational quality. It is necessary to pay the utmost attention to whether the operation is a one-shot, steady operation, and to re-establish Operations Management, which will refine organizational management.

2) Our company's analysis based on VUCA

In recent years, there have been unpredictable situations such as COVID-19, the invasion of Ukraine, and the rapid evolution of AI technology.

We sometimes use four initials to express the fact that we cannot predict what will happen in the future, using the term "VUCA."

First, let me explain the meaning of VUCA.

1. Volatility
2. Uncertainty
3. Complexity
4. Ambiguity

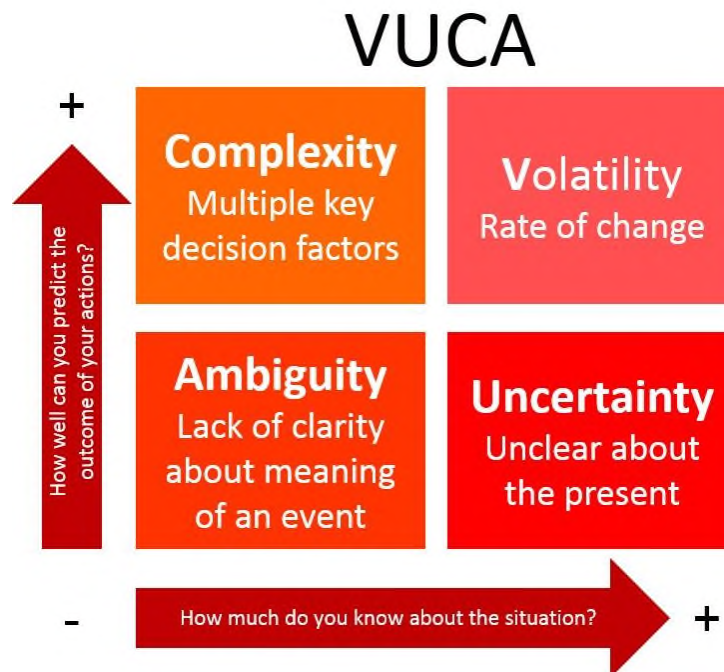


Fig9: Structure of VUCA

As mentioned above, VUCA is a coined word that connects four initials. The term was used in military terms when there was an unpredictable situation when the United States and Russia fought a war. In recent years, the term VUCA has become popular in the business community. To put it simply, VUCA represents an unpredictable and difficult situation because of its rapid change.

Volatility

Variability refers to a large change in people's needs due to sudden changes in information.

The easiest thing to understand is the change in the work system due to the rapid spread of COVID-19.

Until now, it was normal to go to work according to working hours, and then go home after work. This made it impossible to go to the office, and the meeting changed to a new work system where meetings were held remotely. As a result, the market situation changed in a short period of time due to the acceleration of IT technology and the spread of SNS and the development of AI. The more difficult it is to predict the future, the more accurate information needs to be determined.

When we applied this to our situation, we suddenly faced a situation called war. At that time, I think it was helpful to work online in Corona because even if each of them is in a rose situation in Japan or Ukraine, they can adapt to it by remotely connecting them.

Uncertainty

Uncertainty is a situation in which it is difficult to predict what will happen in the future. It is mainly used when it is difficult to predict political, national, natural environment, and global climate change.

In addition, unknown diseases such as COVID-19 can be said to be uncertain. In this age of VUCA, where these sudden difficult situations occur, it is difficult to judge things. Furthermore, due to the collapse of the seniority system and the lifetime employment system, the employment patterns of companies will change, and the judgment and conjecture of individuals and managers will be tested. If you don't know how the environment around us will change, how companies can flexibly respond to uncertainty becomes a challenge.

When this part was adapted, I think it can be said that despite the fact that war broke out, we developed our bases not only in Ukraine, but also in Japan and Poland regardless of location. Even if the uncertainty of war makes it impossible to see the future, on the contrary, we have used it as an opportunity to overcome it.

Complexity

Complexity refers to the fact that globalization has complicated the business environment by intertwining common sense in a country. There are many companies

operating overseas in Japan as well, but business becomes complicated due to differences in laws and customs, and accurate judgment is needed.

There are many cases where successful cases abroad do not work in Japan. Cashless payments are an example of this, and it takes a long time to penetrate in Japan.

As such, complexity is one of the most challenging business and marketing challenges in the future for VUCA.

I think this part is the time difference in our company. Unlike when I was in Ukraine, there is a time difference between Japan and Ukraine for 6 hours in winter and 7 hours in summer, so it is certainly harder to get customers than before. I think we need to deal with this kind of thing.

Ambiguity

Ambiguity refers to the complexity of conventional variability, uncertainty, and complexity.

It means that the causal relationship of a sudden event cannot be understood and cannot be explained. This makes it difficult to find the cause and solution of a problem because past achievements and examples of success do not work.

Recently, with the spread of the Internet and SNS, interpretations of one thing have become more diverse, and strategies for customers have become difficult to narrow down.

We have now managed our business with a situation that we never expected to see a war. I don't know what the situation in Ukraine will be like in the future, but I think that we always need to respond according to the situation and work out the outline and countermeasures. I think war gave us a lot of trials, but at the same time it gave us a chance. I hope that we can continue to grow up facing the situation of war, which is next to us.

3) SWOT ANALYSIS AND TOWS MATRIX

Next, we would like to analyze the company's situation using SWOT Analysis and TOWS Matrix.

SWOT (Swot) analysis is a current analysis method that identifies the positive and negative aspects of the internal and external environments in order to plan management strategies.

"SWOT" refers to the elements in the internal and external environments. The internal environment here refers to your own internal environment, and the external environment refers to external factors that affect your company, such as markets and competitors.

[Internal environment]

S: Strength/Internal environmental factors that positively affect your company and your products and services

W: Weakness/Internal environmental factors that adversely affect our company and our products and services

[External environment]

O: Opportunity/External environmental factors that positively affect your company and your products and services

T: Threat/External environmental factors that adversely affect your company and your products and services

Incidentally, SWOT analysis has been used for a long time, so it is sometimes called "outdated," but it is a basic method that can objectively grasp the current situation without bias and is still being used today. So I would like to analyze "SUN CUNTURE CENTER" with this method.

SWOT matrix

STRENGTHS	WEAKNESSES
<ol style="list-style-type: none"> 1. Our main target is various people from all over the world with any environment 2. Prepare the courses from early age (Like 3 years old) till adult 3. Expand the foundation for international 4. Native Japanese teacher 	<ol style="list-style-type: none"> 1. Lack of teacher's experience 2. Lack of material for learner 4. Weak of IT sphere 5. Unprofessional Management
OPPORTUNITY	THREATS
<ol style="list-style-type: none"> 1. In Ukraine, Japanese culture became famous 2. Because of the war, some of Ukrainian came to Japan and start their new life in Japan 3. Rebuild our Web site 	<ol style="list-style-type: none"> 1. There are so many professional Japanese teachers 2. Because of the war, Many students quite our services 3. People expect from us high quality lessons. Because we are native Japanese speaker

Fig 10: SWOT analysis table

1) Analyze

SWOT analysis

One of our strengths is that Japanese speakers teach Japanese as instructors. Also, we don't usually set the age settings set in many places, and we try to teach any age or person. Up until now, among small children, there have been so many participants from the age group ranging from three to 45 years old. Also, we are flexible so that students can pay in a more affordable way, rather than setting their own payment

methods.

In addition, with the start of the Ukrainian invasion, Ukrainians have been targeted until now, but they are operating in various countries beyond that limit. Also, the weakness is that we use popular teaching materials to teach Japanese and what kind of textbooks and reference books foreigners are studying based on, but because we still have overwhelming knowledge of Japanese and skills, sometimes the teacher's skills do not match. Also, we can say that we are weak because people who have a strong knowledge of management and accounting are not doing it yet. In opportunities, since we are native Japanese teachers, many of our students want to be able to speak Japanese, so I think the demand for such parts will increase.

The threat is that many students may not be satisfied with the quality of our classes by studying elsewhere and comparing them with other companies, which may also give a bad impression to our NGOs and lead to a decline in our customers if such rumors and stories are spread elsewhere.

2) TOWS MATRIX

TOWS analysis, also known as cross-SWOT analysis, is an evolutionary form of SWOT analysis. It is a framework for developing more specific management and marketing strategies by multiplying the elements visualized in SWOT analysis. By extracting and analyzing the following four elements, SWOT analysis has become a more developed framework.

1. Opportunity x Strength
2. Opportunity x Weakness
3. Threat x Strength
4. Threat x Weakness

Let's look at each of them in detail.

TOWS Analysis Elements 1. Opportunity x Strength

In terms of opportunity x strength factors, we will consider strategies to expand and maximize opportunities by utilizing our strengths. Opportunities and strengths are directly related to the company's interests. Consider the strengths of your company's

products and services, and consider how you can multiply them with opportunities. The key is how to save waste and build the best strategy.

TOWS Analysis Elements 2. Opportunity x Weakness

For opportunity x weakness factors, consider strategies to use opportunities to complement your company's weaknesses. Contrary to opportunities and strengths, we will consider and implement improvement measures by extracting the weak points of our company. In addition, if you can do it well, you can turn your weakness into a strength, so don't look away and focus on it.

TOWS Analysis Elements 3. Threat x Strength

For Threat x Strength factors, consider strategies to address threats by leveraging your strengths. By extracting and analyzing both threat and strength factors, you can not only recognize your strengths, but also understand the realities and characteristics of your competitors. Let's also consider whether threats can be transformed into opportunities.

TOWS Analysis Elements 4. Threat x Weakness

In terms of threats and weaknesses, consider strategies to complement your weaknesses and minimize threats. Companies must recognize the profitable and unprofitable sectors and sometimes take steps such as withdrawal. If you're in debt, check your profitability in the future through this analysis. If you decide that you cannot minimize the threat, you must choose to withdraw.

TOWS MATRIX

SO	ST
<ol style="list-style-type: none"> 1. Organize some Japanese event in Japan 2. Make some class for practicing Japanese 3. Rebuild our advertising systems and work for increasing our customers 	<ol style="list-style-type: none"> 1. Our class style change to focus on speaking 2. Train and learn how to be professional Japanese teachers 3. Find some new advertising way to know our NGO activities more to people
WO	WT
<ol style="list-style-type: none"> 1. Find some good and quality material in Japan 2. Search some new people to cooperate with us to improve our services 	<ol style="list-style-type: none"> 1. Keep our activities. 2. Find and cooperate with some professional people who know and experience to run the company 3. Discuss and develop our service step by step

Fig 11: TOWS analysis table

3) Analysis

TOWS Matrix

In opportunities x strengths, we considered strategies to expand and maximize opportunities by utilizing our strengths. Opportunities and strengths are directly related to the company's interests. The key is how to reduce waste and build the best strategy. For our case, we can say that we can emphasize more that “we are Japanese.” It also can be one of our strong brandings and develop our activities.

In terms of opportunity x weakness, we considered strategies to use opportunity to complement our weaknesses. Contrary to opportunities and strengths, we will consider and implement improvement measures by extracting weak parts of our company. In

addition, if implemented successfully, weaknesses can be converted into strengths, so we need to focus on them without turning a blind eye. Strength elements consider strategies that leverage your strengths to address threats. By extracting and analyzing both threat and strength factors, we can not only recognize your strengths, but also understand the reality and characteristics of your competitors. Let's also consider whether threats can be transformed into opportunities. Weakness elements consider strategies to complement our weaknesses and minimize threats. Companies need to recognize profitable and unprofitable sectors and sometimes take steps such as withdrawal. If we have a department that is in debt, use this analysis to determine future profitability. If you decide that the threat cannot be minimized, we must choose to withdraw.

4) Competitive Matrix



Fig12: Competitive matrix analysis

Competitive matrix using data of competitive advantage analysis of enterprise and service shows the place of Sun Culture Center in industry market. In this table, we analysed the quality and price of business and services that teach Japanese to foreigners in Japan with our NGOs.

You can understand by looking at this table that prices are usually set high in Japanese education. However, while the other two companies are expensive, the quality

of their service is also very high. For example, the company IJEC focuses not only on Japanese language education but also on employment support with the aim of helping foreigners who want to work in Japan and teaching Japanese. Another company called ISI provides education with the goal of providing quality education like being in Japan online. We employ high-level Japanese language teachers, and we are committed to providing the best Japanese language education for our students. On the other hand, although our NGOs set high rates, the quality of teachers is not very high and I think that improvement is needed from now on.

2.2 Competitive advantages of the enterprise and product

1) Competitive advantage analysis of Sun Culture Center

Company Factors	Sun Culture Center	A company	B company	C company
Product/ Service	Class with video calling	Class with calling / video calling	Class with video calling	Class with calling / video calling
Time on Market	2 years	More than 10 years	7years	12 years
Target Audience	Middle and low-income family / Beginner to middle level of student	Individuals and groups / Wide range of target audience / who prefers Calling class	Individuals and groups / Wide range of target audience / Business Japanese learner	Wide range of target audience / Who prefers Japanese debate
Product Competitive ness (Rank 1-4)	4 Lacked of tutors and variety	3 Classic and stable system and tutors	1 a wide selection of tutors and programs	2 Some of specialized class
Price Competitive ness (Rank 1-4)	2	3	1 Because of discount event	4
Brand power (Rank 1-4)	4 Now well Known start up	2 Having an influential blog of its own	1 Worldwide international company	3

Marketing Strategy	Website You tube Messenger community	Website Blog SNS (Facebook & Instagram) Website Offline activity	Website All types of marketing channels	Website Advertising through reviewers Offline activity
Main features	Reasonable priced class with Japanese teachers/ Customer service to keep the close relationship with students and parents ²	Provided educational materials/ Specialized calling class/ Strong in blog marketing	self-developed textbooks and interfaces/ Choice for number or duration of classes, not time (Fixed 25 minutes)/ Book a teacher in person	Specialized debate and Japanese speaking competition class/ It is renewed

2) Competitive advantage analysis of Sun Culture Center service

Company Factors	Sun Culture Center	A company	B company	C company
Tutor's Nationality	Japanese	Japanese, Chinese, French, Italian	Japanese, Chinese, Korean, Some other nations who can speak Japanese	Japanese, Chinese, Korean
Tutor selection	O	X	O	X
Content for education	Basic Japanese(Start from Hiragana, Katakana. Conversation mainly)	Basic Japanese Japanese Culture Business Japanese	Basic Japanese(Especially the people who move from Ukraine to Japan) Taach some basically easy Japanese	

Providing Textbook	X	O	O	O But not all textbooks
Self-interface	X	X	O	X
Available platform	Zoom Computer and application	Skype Computer and application	Website (Computer and mobile)	Skype Computer and application
Strength	Various payment options/ Caring for a small number of students creates a deep bond /	a rich source of Japanese education / Direct teacher management is possible because it is headquartered overseas	a rich source of Japanese education / big discounted price / Self-developed interface and materials	Special event in such as Japanese camp or specialized class/ Recently renewed system
Weakness	Additional education material fee / Professional level is lower than others / Direct management of tutors is difficult	Unable to choose the instructor for the first class / Lacked program for young students / Fixed class time for 20 minutes	Too huge range of tutor selection / Fixed class time for 25 minutes / Difficulty in continuous class with one teacher	Unable to choose the instructor for the first class / Lacked program for young students / Direct management of tutors is difficult

3) Conclusion

Based on Competitive advantages of the enterprise and product analysis, Sun Culture center is still weak company which has weak foundation and infrastructure but there are definitely its own advantages of Sun Culture Center.

Sun Culture Center is targeting for Middle and low-income family / Beginner to middle level. So, the brand image is more customer friendly and high approachable. While other companies focus on professionalism, Sun Culture center has the distinction of trying to build an image of Japanese education that is easy for anyone to have online Japanese class.

However, it is also clear that improvements need to be made for this. As the brand image has not yet been properly established, active marketing activities are not

being carried out, so it is difficult to attract customers on its own, and it seems that the minimum expertise required by online Japanese education services is not yet available.

2.3 IT management and information technology environment analysis of “SUN CULTURE CENTER”

1) IT management in SUN CULTUER CENTER

1. Information technology and structures in our company

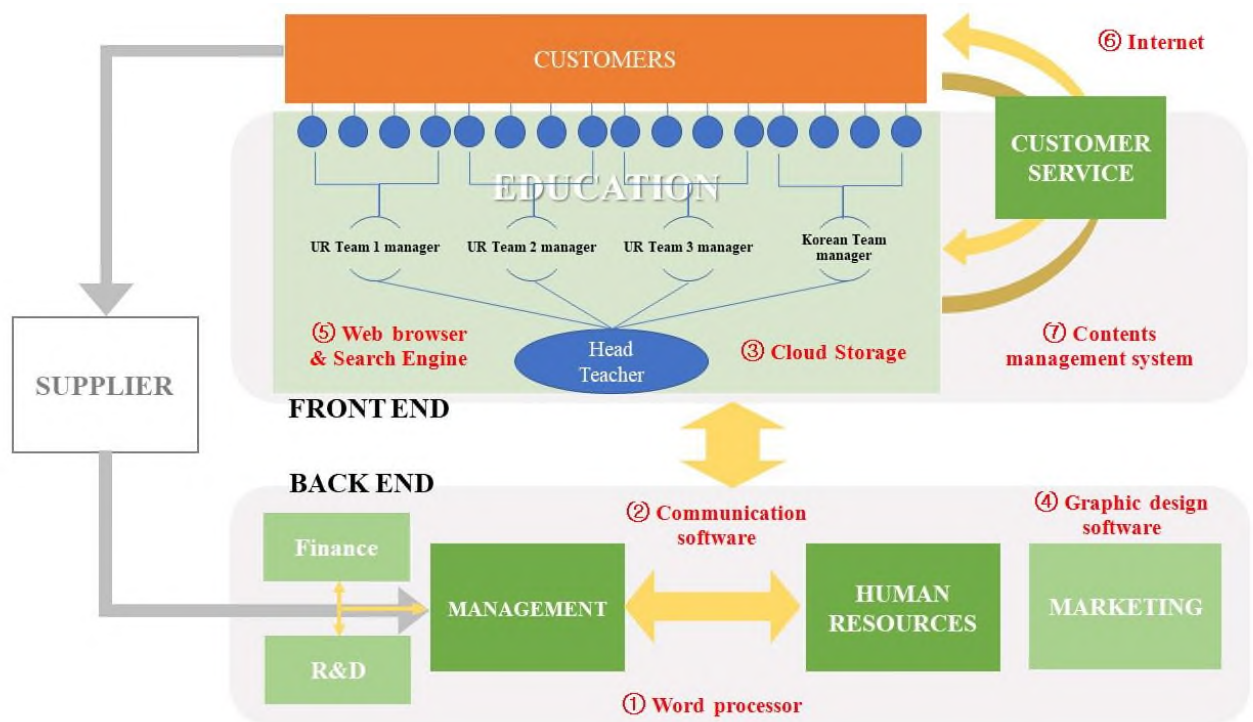


Fig13: The IT systems of “SUN CULTURE CENTER”

We have 7 points to search our IT systems

① Documentation tool (Software) – We usually use “WORD” to do some documentary work. The contents of the class and contracts for students are all written through “WORD.”

② Information and Communication Technology – It is a general term for information and communication technology that utilizes computers of various shapes such as personal computers, smartphones, and tablets. To put it simply, it is a communication tool that connects people to people, things, and things using computers, smartphones, tablets, etc. To give you a detailed example, we communicate through LINE, Telegram, WhatsApp, and so on, while

lessons and meetings are via Zoom, Google meet, and Skype. By using these tools, it is now possible to teach classes and hold meetings remotely even if they are far away from Japan, Poland, or Ukraine.

③ Online storage – This service shares the file on the Internet by uploading the file to the disk space of the server machine lent to the user. Around the same time that the word cloud computing became common, it was also called cloud storage. In general, each user is given a password individually, and although files from different users are not accessible in principle, some have the ability to disclose them to others as needed.

④ Computer assisted –The design is performed by using a computer, or the design-assisted tool by a computer. The word comes from the purpose of increasing efficiency by supporting design work done by human hands by computers.

⑤ Web browser & Search Engine - A browser is software that allows you to browse a home page (website) on a personal computer or smartphone over the Internet. Also known as a web browser, Chrome, safari, Internet Explorer, etc. are famous. We use Yahoo as well.

⑥ Internet – Internet allows users to access and share information and resources from anywhere in the world, and it connects a vast number of networks together. Since most of the IT service or application, most basic conditions are IT technology that is the most basic conditions.

⑦ CMS(Content management system) – Content management systems are an essential tool for brands that create, manage, and optimize their customers' digital experiences . Whether it's a cloud-based solution or an on-premises system, the basic solution for web content management allows you to do a variety of behind-the-scenes tasks, including uploading and writing content, formatting, adding headings and images, and managing SEO.

In next section, I would like to explain in detail which kinds of Apps our companies use for our business.

① Messenger software –Telegram & LINE

Our main target is Ukrainian. So Many of our main customers of Ukrainian use Telegram as a our communication tool.

Telegram (Telegram) is an instant messaging application that enables text chat and video chat, which are used around the world due to its high security. It was developed in 2013 by the brothers Nikolai Durov and Pavel Durov, a Russian programmer and businessman based in Dubai, United Arab Emirates. It is now operated by Telegram Messenger LLP.

It has a registered registered domicile in the British Virgin Islands and the island of Tortra for tax avoidance (tax haven). It can be used as a mobile application for smartphones for free. The message is highly secretive because it guarantees privacy by being encrypted and also has a function that disappears after a certain period of time.

All file formats can be sent and received. Also, since the API is published, the user can create an informal client. A client side is open source, and a server side is proprietary software. Also, our teachers are Japanese.

Among Japanese, LINE is the most popular and common communication tool. So, we use LINE actively for good and speedy communication.

LINE is an application that can be used on smartphones, personal computers, tablets, etc. Users of the LINE app can exchange messages, make voice calls, and make video calls for free. This is because it can be done domestically, internationally, or by telecommunications carriers, so it is spreading in more than 230 countries and regions around the world. In Japan, about 70% of the population uses LINE (as of the end of March 2021), and it is widely used by many users regardless of gender or age. LINE is one of the most convenient communication tools currently.

② Video communication software – Zoom, Google meet, and Skype

We use video communication tools during classes and meetings between teachers. We mainly use Google meet and Skype for classes, and when we have meetings with warriors, we use Zoom or LINE phones to communicate.

Zoom is a cloud service that enables web conferencing anytime, anywhere, from any device, and simply a "video web conferencing application" that allows multiple people to participate simultaneously. It is often used in the business scene because meetings that usually need to be held in one place can be held online. You can install Zoom on a typical device, such as a PC, smartphone, or tablet.

Conference calls and video conferencing are possible even on devices that do not have a microphone or camera installed by connecting a generic external device.

It also features support for all operating systems, including Windows, MacOS, Android and iOS, making Zoom more convenient. There are other applications similar to Zoom, but they are especially business-optimized and are highly regarded as a useful tool in conference-intensive businesses.

Google Meet is available to anyone with a Google account through a web browser and does not have to worry about installing a dedicated application. With Chrome, Firefox, Microsoft Edge and Apple Safari support, these web plows are always easy to do web conferencing.

Another high point is that there are many ways to hold meetings. It can also be held from Google Calendar and Gmail, making it easier for users of these apps to hold meetings.

For example, if you specify a group in the Google Calendar and write down a meeting schedule, all members will receive an invitation. You can also start a meeting by clicking the Start Meeting button on the Gmail screen. Another advantage of Google Meet is that it has a complete security system.

Google Meet's services are built on Google's powerful infrastructure and are fully secure. Meetings with confidence where confidential communication takes place.

Skype is a service that allows you to chat, voice, and video calls in text. Skype features a variety of features for free. There are also paid services, but you can use all the basic functions for free.

Therefore, anyone can use it easily. Skype was originally created by Skype Technologies but has been repeatedly acquired and sold. It was acquired and operated by Microsoft in 2011. Skype is also available on smartphones and tablets as well as computers. Not only that, but it also supports a variety of machines such as game consoles and wearable devices, so it is used by many people not only in business but also in private.

③ Cloud – Google drive

Google Drive is a cloud storage service provided by Google. It is a service that allows you to save data on the Internet by uploading data from a smartphone or a personal computer.

By synchronizing your data with the Google Drive app, you can view your computer's data from your smartphone or tablet, and you can use the data stored on Google Drive from a variety of devices.

We can upload photos taken with our smartphone and download them to your computer, view data created with your computer on your smartphone or tablet and use them for various purposes.

Also, if you upload data to Google Drive, you can use it without worry because it is stored in Google Drive even if the data on your smartphone disappears. It's a very convenient feature to store your valuable data. In addition to the ability to store data, features similar to Word and Excel, such as Google documents and Google spreadsheets, are available.

Create data online, co-edit with others, and use it conveniently at work. With all these features, Google Drive has 15GB of free capacity when you create a Google account. There is also a fee-based plan, and Google One for personal accounts can increase storage capacity from 100GB to up to 30TB. Business-oriented Google Workspace also includes plans to increase storage capacity as needed, video conferencing for up to 500 people, and secure business mail. Our SUN CULTURE CENTER scans textbooks used in classes and stores them on Google drives so that teachers can read them at

any time, and stores students' lesson records on Google drives. It's easy to share with others, so I think it's a very easy-to-use tool.

④ Customer information's Managing software. Excel is the name of spreadsheet software provided by Microsoft. It was developed by Charles Simony, who worked for the company. Excel is one of Microsoft's office suite "Microsoft Office" applications, primarily for spreadsheets and data graphing. It is excellent in function input, macro function, GUI operation, etc., and is used not only for numerical calculation and graph creation but also for various purposes. It also works closely with other application software in Microsoft Office, making it easier to paste graphs created by Excel into Microsoft Word as objects. In addition, the file created in Excel has ".xls" and ".xlsx" as extensions. SUN CULTURE CENTER uses Excel to manage students every year. I also manage financials through Excel.

2)What were difficulties in the war, and how IT management helped to solve

So far, we've seen what kind of IT software we use to run our company. Business and IT are now inseparable as we run our company. And I think the war has made that remarkable. I think we were able to overcome various difficulties because of the development of online networks.

We are doing business across three countries: Japan, Ukraine, and Poland. I think the only good thing about working like that is that working an average of 8-9 hours in one country is usually the limit. However, we work in each country even though there is a time difference, so we can work and work more hours than people who work only in one country. In other words, you can work 24 hours a day. In order for the work to be carried out 24 hours a day without sleep and to accomplish what we have to do, it is important to smoothly transfer the work to the next activity site in addition to the smooth work at each activity site. "If information sharing is insufficient or problems under development remain unresolved, ""24-hour development" may fail. As we work in Ukraine, Japan, and Poland, we often suffer from language barriers and time

differences, but establishing a fast and reliable means of communication is essential for "24-hour development."

From now on, I would like to briefly summarize how we usually work and how IT Management works there.

	JAPAN	UKRAINE	POLAND
Our main Tasks	<ul style="list-style-type: none"> • Teach Japanese • Manage our company • Create some contents etc 		
Time gaps	6hours (Our main working time suit with Ukraine)	0	1 hour
Working places	Tokyo, Saitama mainly	Kiev, Lviv	Warsaw
Working hours	6hours	10 hours	10 hours
Employee	5	2	1
How to relpace or change the work	Chat by LINE, Telegram, Google tools	Direct communiation	Chat by LINE, Telegram, Google tools
Document	English	English, Ukrainian	English
Communication	Japanese, English, Ukrainian	Ukrainian	English, Ukrainian

Fig14. Table of our working systems

The diagram above briefly summarizes how we work across the three countries' borders. We were still based only in Ukraine before the war started, but as I have said many times, it has become impossible to operate in Ukraine based on drinking since the war started.

We are also working by reflecting our bases in Japan and Poland. In Japan, they participated in antiwar demonstrations with Ukrainians from Ukraine, and in Poland, they introduced Japanese culture to Ukrainian refugees who had fled Ukraine, where they held sushi classes as well as copying and origami. We have summarized the obstacles we have experienced in our activities into four points.

1. Times Gaps

Google Calendar- Google Calendar (Google Calendar) is a free scheduling tool that lets you manage your schedules in the cloud. It can be accessed not only through a browser but also through a smartphone app. Google Calendar has the following characteristics.

1. Manage and share schedules on your browser
2. Available on smartphones and tablets
3. Works smoothly with Gmail and other Google services
4. Google Workspace dramatically streamlines scheduling among members

2. Communication

Application Software – LINE, Word, Excel etc

Application software (application) is one of the most commonly used software, also known as "application software". Application software is intended to perform specific tasks. Examples of familiar apps include Word for documentation and Excel for spreadsheets.

In addition, there are applications for SNS such as LINE and Twitter, and applications for watching videos such as YouTube.

3. Meet each other directly

Video communication software – Zoom, Google meet, and Skype

We use video communication tools during classes and meetings between teachers. We mainly use Google meet and Skype for classes, and when we have meetings with warriors, we use Zoom or LINE phones to communicate.

Zoom is a cloud service that enables web conferencing anytime, anywhere, from any device, and simply a "video web conferencing application" that allows multiple people to participate simultaneously. It is often used in the business scene because meetings that usually need to be held in one place can be held online.

You can install Zoom on a typical device, such as a PC, smartphone, or tablet. Conference calls and video conferencing are possible even on devices that do not have a microphone or camera installed by connecting a generic external device. It also features support for all operating systems, including Windows, MacOS, Android and iOS, making Zoom more convenient. There are other applications similar to Zoom, but they are especially business-optimized and are highly regarded as a useful tool in conference-intensive businesses.

Google Meet is available to anyone with a Google account through a web browser and does not have to worry about installing a dedicated application. With Chrome, Firefox, Microsoft Edge and Apple Safari support, these web plows are always easy to do web conferencing.

Another high point is that there are many ways to hold meetings. It can also be held from Google Calendar and Gmail, making it easier for users of these apps to hold meetings. For example, if you specify a group in the Google Calendar and write down a meeting schedule, all members will receive an invitation.

You can also start a meeting by clicking the Start Meeting button on the Gmail screen. Another advantage of Google Meet is that it has a complete security system. Google Meet's services are built on Google's powerful infrastructure and are fully secure. Meetings with confidence where confidential communication takes place.

Skype is a service that allows you to chat, voice, and video calls in text. Skype features a variety of features for free. There are also paid services, but you can use all the basic functions for free. Therefore, anyone can use it easily. Skype was originally created by Skype Technologies but has been repeatedly acquired and sold. It was acquired and operated by Microsoft in 2011. Skype is also available on smartphones and tablets as well as computers. Not only that, but it also supports a variety of machines such as game consoles and wearable devices, so it is used by many people not only in business but also in private.

4. Attracting customers

The video distribution platform

It means a place where video content can be easily distributed and managed on the web. There are two types of products: free and paid.

Depending on the type of pricing, the features available, security and support enhancements vary greatly.

Key features of the video distribution platform include.

1. Video distribution function
2. Live distribution function
3. Tools for increased interaction (e.g., chat with viewers)
4. Advanced analysis capabilities
5. Security measures
6. Collaboration with other systems
7. Load distribution

For example, YouTube, a free video distribution platform, has various functions such as video distribution and management screen, real-time live distribution, evaluation and comment posting.

However, advanced analysis functions, security measures, and cooperation with other systems are not supported, and the paid video distribution platform is more versatile in this respect.

YouTube is an online video sharing platform based in San Bruno, California, United States. As of January 2022, the number of active users was 2.562 billion (of which more than 80 million subscribers were contracted for flat-rate services), ranking second in the world for social media. It was founded in February 2005 by three former PayPal employees, Chad Hurley, Steve Chen and Jord Karim. It was subsequently acquired by Google in November 2006 for US\$1.65 billion and is now operating as one of its subsidiaries. According to Alexa Internet Ranking, it is the second most visited website after Google Search

Cloud Computing Big Data Software

Platform

It refers to the environment on which software, hardware, and services are based.

OS, database engine, configuration, environment, etc. are sometimes collectively referred to. Windows, Mac OS, Linux, etc. cannot run the same program if the platforms are different. Recently, however, there is a method called cross-platform or multi-platform designed to operate on multiple platforms by absorbing differences between platforms in middleware. The Java application is a case in point. The platform is also offered as a cloud service and is called Platform as a Service (PaaS).

PaaS eliminates the need for middleware procurement, maintenance and disaster response, and provides access from anywhere with an Internet connection.

CHAPTER 3 IMPORTANCE OF HUMAN RESOURCES AND EDUCATION

3.1 Improved leadership and management

On Feb. 24, 2022, Russian troops began invading Ukraine. The conflict between the two countries, which began in 2014, has intensified with the invasion, creating tens of thousands of deaths and the worst European refugee crisis since World War II. There are 141 countries in the world that have condemned Russia's actions as an illegal invasion.

Here, I would like to analyze some examples of the challenges and lessons they have faced.

1. Resilience

In early 2022, when the threat of Russia's invasion began to materialize, Ukrainian software developer Larabs began preparations. First of all, a new personnel policy was established in preparation for the recruitment of employees. He then developed a detailed relocation plan for employees across eight countries, providing training on overseas work, emergency treatment and emergency packing. And as employees became more stressed (especially when global media began predicting that "when war begins, Keew will fall in a few days," Roman Rodmanski, co-founder and COO, said he worked to supplement tactical resources with mental health support.

Of course, the outbreak of the war was a shock to the organization, which had made such careful preparations. Nevertheless, the managers I interviewed told me that after the Russian troops withdrew from the Kiu, they were largely able to adapt to the new reality.

When Ukraine's electricity infrastructure was targeted by Russian forces, it immediately launched a new workspace with generators and satellite Internet. In situations where employees were forced to move, they provided assistance, training and resources. With customers disappearing and incomes falling, leaders have come up with creative ways to reduce operating costs without laying off employees. In particular, many people said that the adaptability and resistance developed during the COVID-19 pandemic helped in distributed work.

Let's analyze what we can say by comparing this to our situation. On February 24, 2024, Russia suddenly came to Ukraine and a war that no one expected began. About a month after the war began, it took time to adapt to the situation of the war. Students who had been taking lessons until the previous day suddenly lost contact, and I think that evacuating to a safe place was our first priority. However, about two months after the war, students contacted us, and even started YouTube thinking about how we could continue our activities while adapting to the war, and expanded our base from Ukraine to Poland and Japan. I think we were able to do that because of our resilience and adaptability. Thanks to that, we are still able to continue doing our business without interruption.

2. Purpose

The leaders I listened to found common purpose for the continuation of the business. It is a purpose that supports war activities by hiring people to pay taxes, by volunteering and donating to medical relief and refugee resettlement programs, contributing to military support funds, and by developing products that support the daily lives of Ukrainians.

For example, Natalia Limonova, CEO of Geos, an Edtech platform operator, began calling on investors to donate to the Ukraine Support Fund when proposing a business plan. It is said that the company has been able to raise funds while gaining international support for Ukraine. Looking back at the donations she received from her fellow business leaders, I could feel her thoughts.

Geos, like several other Ukrainian companies, is also a company that provided its products and services to the public free of charge. These leaders told us that despite the difficult situation, a strong sense of purpose helped motivate and unite people in difficult times.

I think it was great that we didn't lose our purpose even in our situation. We have worked hard to convey Japanese culture to the world (Ukraine) and to create good energy for each other. I think it was very big that we were able to do our best without forgetting the first synchronization while the number of students was decreasing due to the war situation and the number of students was decreasing.

3. Empathy

What the leaders interviewed consistently emphasized is that empathy is at the center of their approach. They provide financial support to struggling employees, persuade burned-out employees to take time off, and just listen to them. One manager said he regularly gets time to listen to his son from a driver on the front lines of East Ukraine, jokingly saying, "It's a priestly role."

On the other hand, they also talked about the limitations of empathy. Unless you have had a similar experience yourself, it is difficult to fully understand the feelings of people who have lost their homes or loved ones.

To apply this to our situation, it's true that we also had employees who were separated from their families and employees who were unable to leave Ukraine due to the war, but I think it's not that we cut them off or don't understand their feelings, but that we understand the situation and try to move forward together.

3.2 Role of information technology during wartime

Ukraine is an IT country with many excellent IT personnel. Even after the Russian invasion, many IT startups continue to compete and grow. JICA has been providing business support for Ukrainian startups since 2022, but has been suspended due to the start of Russian aggression. The event resumed in April after more than a year, and the event was held in May, which was the final stage. There were Ukrainian entrepreneurs who were looking ahead to the country's future and maintaining their business vigorously even in difficult situation.

Ukraine, Europe's leading IT powerhouse

Ukraine's IT sector has attracted attention in recent years. It is selected as the top 30 in the "Startup Ecosystem" world ranking that creates and develops startups through networks of investors, universities, public institutions, and large corporations surrounding startups. The reason for this growth is that the government has been actively promoting the IT industry for a long time and has enhanced higher education in science and mathematics, which has led to the creation of many IT-skilled personnel.

Currently, 2.4 million IT personnel are estimated to increase further to 4.5 million by 2024.

There are already four unicorn companies (unlisted companies with a corporate value of \$1 billion) created in Ukraine, including Grammarly, which uses AI to correct English sentences. Ukraine's National Bank and the Ministry of Digital Transformation say exports of IT software services in the first half of 2022 were \$3.74 billion, up 23 percent from the same period last year, amid a about 30 percent decline in GDP due to the war.

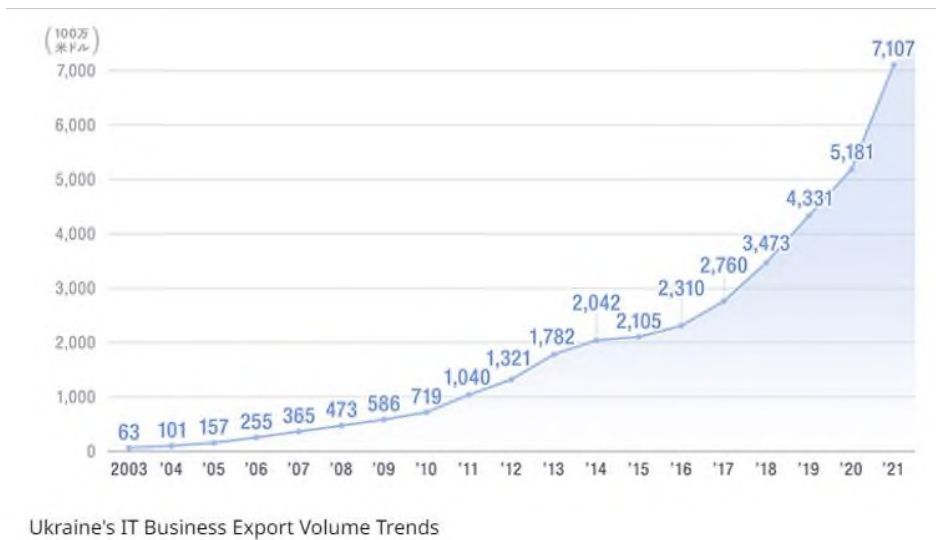


Fig 15: Ukraine's IT Business Export Volume Trends

NINJAProgram Reopens After Interruption Due to Invasion

In January 2022, JICA launched Project NINJA (Next Innovation with Japan) in Ukraine with the aim of further developing such a fast-growing Ukrainian IT startup and revitalizing employment. It is a program that accelerates the growth of startups in developing countries through support activities such as interviews and workshops." We implemented an ""acceleration program"" to brush up our business in an accompanying manner for about 12 weeks to 6 IT startups selected through rigorous selection from 54 applications." Each company has an exclusive mentor (adviser) who has been supporting companies to strengthen their management capabilities and brush up their business plans, as well as matching companies and promoting investment.

Russia's invasion of Ukraine broke out while preparing for a "pitch event" aimed at raising funds and raising awareness by presenting its business to investors and others under the guidance of a mentor. The NINJA program was also forced to suspend. A

little over a year later, the pitch event was finally held in May 2023. At the event, we saw the heated presentations of entrepreneurs who had been working positively despite difficult situations.

Also, as I mentioned at the beginning, Ukrainian war is not the war on the ground, but there is Cyber war. So Many Ukrainian people use some SNS or online platform as their front line. Therefore, I would like to point out some points how they still fight online field.

1. SNS

Zelensky has 16 million followers on Instagram, 5.5 million on Twitter and 2.6 million on Facebook. Ukraine, which is overwhelmingly inferior in military power, is fighting a hybrid war using SNS.

Fedorov, another key figure in the SNS strategy, is calling on multinationals to boycott Russia. If a company continues to operate in Russia is questioned about ethics and rejected, "This company deals in Russia and kills Ukrainian children with the money. It is shameful," he criticized. Most companies have stopped doing business, Fedorov said, because they can ignore e-mails as "not seeing them." Oil giants Shell, Total Energy and Uniqlo of Japan announced their continued operations in Russia, but withdrew after receiving strong criticism.

In addition, influencer and the general public reported the tragic war in real time on SNS, and a video of a girl singing "Anna and the Snow Queen" in an air defense shelter was also posted. Thanks to the power of these citizens, it is said that they are taking advantage of international public opinion.

2. Application

IT military orders are issued via Telegram, a highly secretive chat app. The team led by Aushev is working away from Kiev and is also working on a long-term plan to destroy Russia's infrastructure by communicating through more anonymous means such as the cryptographic messaging app "Signal."

3. Cryptocurrency and NFS

They have also started raising funds for the military and are accepting donations in cryptocurrency. As of March 20, 60 million dollars (approximately 7.2 billion yen) was received.

It is planning to conduct an NFC, which chronologically collects records of the war named "Never Forget This" .Other private organizations and individuals are also making efforts using the NFC. Prior to the war, it was supposed to fall in a few days due to overwhelming military power differences, but Fedorov says IT forces and cryptographic asset financing play a very important role in the war.

CONCLUSION

In this paper, I have written about how the Ukrainian War has adapted IT Management.

The path that led to this paper was that war, which no one had ever expected before, actually started in February 2024 in Ukraine. Nevertheless, Ukraine has not given up and is still fighting desperately to build a country today. I think it's the same in the business field. There are people in Ukraine who are still running business and supporting the country in a desperate situation because they are still alive. From now on, I believe that it will be a role model for the world to communicate how the business that was operating in Ukraine has developed without stopping and adapted to the situation during the war. That's why I decided to write this paper on the subject of reconsidering the adaptation of IT management to the war situation.

In the first chapter, I first wrote about how Ukraine's war has been believed, and unlike World War I and World War II, it is now a world where the online world has developed, so not only ground warfare but also cyber warfare is a new aspect. We then launched what we called the IT army from various countries around the world, mainly the United States, and talked about what role it played and how IT played an important role in the invasion of Ukraine. In such an information society, I think Ukraine has been able to understand what IT needs to do in order to maintain information security in order to continue its business.

In Second Chapter, I summarized basic information about the company I did internship with and analyzed the company using SWOT Analysis and TOWS Matrix. By doing these things, we understood the current situation of the company and covered the part of how we need to do from now on. Next, we described the IT tool we use in detail. The war has made it impossible to do business offline, and many IT software companies are now working to maintain their companies. By using them firmly, I think we will be able to seize the opportunity to develop and expand our business even during the war.

In the third chapter, we described what kind of leadership became important because of the war. What leadership was needed to protect the country and continue to develop

in the context of a war that no one expected, and here, by referring to the 10 leadership and challenges faced by 10 managers, we summarized how it was in our company. Ukraine still has many difficulties and barriers due to the war, but they worked tirelessly to overcome it, and I felt that they were still fighting, and I could understand it through analysis.

This is my conclusion based on my BQW analysis. For not just putting as a knowledge, I will make some suggestion to make our business grow and increase our profits in the future.

Be strong with IT more

Our company has all been replaced by online sales since the war started. This is largely due to the fact that the war has begun and everyone has become unable to be in Ukraine. Therefore, all the tasks that we used to meet face-to-face before the war are online. However, there are still not enough IT savvy people in our company, so it is not perfect yet. That's why I think we need to study IT more, talk about how to develop it, and improve it. 2. Increase the customers

The number of students has decreased since the war started. So I think we need to think about how to increase the number of students. 3. Make a chance to expand our business

I think the war has increased the range of business in a way. Instead of focusing solely on Ukraine as before, we want to look at the displaced Ukrainians and other nationalities so that we can think about how we can develop our business.

LIST OF REFERENCE

1. UKRINFORM[29.03.2024]10 items of "peace formula"
<https://www.ukrinform.jp/rubric-ato/3665790-zerenshiki-yu-da-tong-lingxiang-muno-ping-heno-gong-shiwo-shuo-mingsuru-dong-huawo-gong-kai.html>
2. CNN[20.05.2023] Zelensky makes dramatic Japan appearance as G7 leaders take aim at Russia and China
<https://edition.cnn.com/2023/05/19/politics/biden-japan-visit-china-reaction/index.html>
3. WikipediaCrimean[02.05.2023]Conflict 2014
<https://ja.wikipedia.org/wiki/2014%E5%B9%B4%E3%82%AF%E3%83%A%E3%83%9F%E3%82%A2%E5%8D%B1%E6%A9%9F>
4. CNN [24.07.2023]Ukraine's Defense Minister Seeks to Join NATO Next Year
<https://www.cnn.co.jp/world/35206923.html>
5. CNN[05.09.2023] US notifies Russia of upcoming unarmed ballistic missile test, Pentagon says
<https://edition.cnn.com/europe/live-news/russia-ukraine-war-news-09-05-23/index.html>
6. JIJI.COM[09.09.2023]Zelensky Negative on Ceasefire Talks 'Can't Be a Liar' - Ukraine
<https://www.jiji.com/jc/article?k=2023090900395&g=int>
7. Yoshihide Nishikawa[23.10.2023]Current state of the Ukraine war: increasing confusion and prolonged conditions,1-10
https://ippjapan.org/pdf/IPP*MReport_008.pdf
8. <https://crri.jp/newsletter0331-01/>
9. CROWNEWRECORDSMANAGEMENT[Jun.2022] 10 Trends in Information Management by Global and Region in FY2023
<https://www.crownrms.com/jp/insights/ten-global-and-regional-trends-in-information-management/>
10. Twitter 「<https://twitter.com/fedorovmykhailo/status/1497642156076511233>」
11. Telegram <https://telegra.ph/Death-by-1000-needles-03-17>
12. Telegram 「<https://t.me/itarmyofukraine2022/245>」
13. IT army of Ukraine website <https://itarmy.com.ua/>
14. Hashimura Yu[11.05.2022]Shock of Ukrainian IT "cyber attack",1-4
<https://www.dlri.co.jp/files/ld/186918.pdf>
15. Research Institute for Systems Technology [2013] Economic and social impact of the IT revolution
<https://www.systemken.com/computer4.html#:~:text=%E3%82%B3%E3%83%B3%E3%83%94%E3%83%A5%E3%83%BC%E3%82%BF%E3%81%A8%E9%80%9A%E4%BF%A1%E6%8A%80%E8%A1%93%E3%81%8C,%E3%81%AB%E8%A6%8B%E3%82%8B%E3%81%93%E3%81%A8%E3%81%8C%E3%81%A7%E3%81%8D%E3%82%8B%E3%80%82>

16. NHK[2023] "Cyber Attack = Crime..." The Japanese in Ukraine's reason for participating in the war
<https://www.nhk.jp/p/gendai/ts/R7Y6NGLJ6G/blog/bl/pkEldmVQ6R/bp/pM2ajWz5zZ/>
17. NHK[19.05.2023] Support Ukraine with IT technology
https://www3.nhk.or.jp/news/contents/ohabiz/articles/2022_0519.html
18. ZDNet Japan[04.04.2023]Ukraine invasion pulls IT companies out of Russia; relationship between war and IT
<https://japan.zdnet.com/storage/2022/03/30/a69f31e567b25520fc0a307db0bb7b19/war-it.pdf>
19. Institute for Peace Policies[01.11.2023] The current state of the Ukrainian War: intensifying confusion and prolonged conditions — Is "endless war" acceptable
<https://ippjapan.org/archives/8060>
20. Reuters Staff[02.04.2022] ANGLE: Prolonged war, technicians in Ukraine's IT powerhouse in trouble
<https://jp.reuters.com/article/ukraine-crisis-tech-workers-idJPKCN2LT3BX>
21. Everyday news[24.02.2023] One year of invasion of Ukraine, the danger of breaking the boundaries of IT soldiers and civilians spreading "the battlefield"
<https://mainichi.jp/articles/20230224/ddm/005/070/032000c>
22. Yu Kashiwamura [05.2022] Shock of Ukraine's IT Army Cyber Attack
 A world in which DDoS attacks that anyone can easily participate are expanding
<https://www.dlri.co.jp/report/ld/186918.html>
23. Issei Suzuki [24.8.2023] Russia's Cyberwarfare Reasons for Ukraine's Successful Defense
<https://mainichi.jp/articles/20230824/k00/00m/030/001000c>
24. Hilary Tuttle[04.03.2022]
<https://www.riskmanagementmonitor.com/cyber-risk-management-tips-for-businesses-amid-the-russia-ukraine-war/>

3%83%9F%E3%83%A5%E3%83%8B%E3%82%B1%E3%83%BC%E3%82%B7%E3%83%A7%E3%83%B3%E3%82%A2%E3%83%97%E3%83%AA%E3%81%A7%E3%81%99%E3%80%82

36. IDC Frontier [03.05.2023] Platform <https://www.idcf.jp/words/platform.html>
37. Tsuyoshi Kitani[29.06.2010]Shortening construction period by utilizing time differences from overseas "24-hour development"
<https://www.nttdata.com/jp/ja/trends/data-insight/2010/062901/>
38. DSMagazine [05.05.2023] What is YouTube? Explain the meaning, free or charged, advantages and disadvantages for beginners
<https://ds-b.jp/dsmagazine/what-is-youtube/>
39. Maxim Sich[21.04.2023]Ukrainian companies how to overcome crises, Challenges and lessons faced by 10 managers <https://dhbr.diamond.jp/articles/-/9440?page=4>.
40. JICA[07.07.2023]"The IT sector is responsible for the reconstruction of Ukraine." Empower growing startups with a strong sense of mission
https://www.jica.go.jp/information/topics/2023/1514852_36683.html
41. Zelensky's facebook
https://www.facebook.com/watch/zelenskyy.official/?ref=embed_video
42. Kaja Kallas[-1.05.2023] Prime Minister of Estonia, a developed IT country, stresses, "Democrats should learn about cyber defence from Ukraine."
https://courrier.jp/news/archives/324397/#paywall_anchor_324397
43. Acronis[16.09.2022]behind-the-scenes cyberwar
<https://www.acronis.com/ja-jp/blog/posts/is-there-a-cyberconflict-happening-behind-the-scenes/>
44. Makiko Nakagawa[28.02.2023]Why Ukrainian IT company ELEKS didn't lose customers a year after Russian invasionhttps://xtech.nikkei.com/atcl/nxt/column/18/00001/07752/?i_cid=nbpnxt_sied_blogcard
45. Ko Horikoshi[24.02.2023]Mobile industry attention MWC to open, prospects for Rakuten's future Open RAN market

https://xtech.nikkei.com/atcl/nxt/column/18/02372/022400002/?i_cid=nbpnxt_sied_blogcard

46. Sho Shimazu[13.02.2023]GAFAM's layoff storm, 'win-win' even if 50,000 people are fired
https://xtech.nikkei.com/atcl/nxt/column/18/02357/020900003/?i_cid=nbpnxt_sied_blogcard
47. Yuito Kizima[03.02.2023]Deepfake threatens to increase BEC's viciousness, in an era when the caller can't believe it
48. Yu Horikoshi[07.11.2022]U.S., Europe, China and Russia Conflict over Net Management, Why China Approaches ITU
https://xtech.nikkei.com/atcl/nxt/column/18/02225/110200002/?i_cid=nbpnxt_sied_blogcard
49. Miyaneya[25.04.2022]Ukraine's IT strategy is led by the youngest minister!Gather Russian military information with Dia, an app that allows administrative procedures even during wartime Explanation of the surprising "electronic warfare"
https://www.ytv.co.jp/miyaneya/article/page_ygn3tjbdvkxmfgwu.html
50. Yomiuri News paper[06.03.2022]Open Ukraine vs closed Russia giant IT company key SNS era war
<https://mainichi.jp/articles/20220306/k00/00m/030/192000c>
51. Data Science UA[13.05.2023]How Ukrainian Women Overcome War Challenges as IT Leaders
<https://hackernoon.com/ja/%E3%82%A6%E3%82%AF%E3%83%A9%E3%82%A4%E3%83%8A%E3%81%AE%E5%A5%B3%E6%80%A7%E3%83%AA%E3%83%BC%E3%83%80%E3%83%BC%E3%82%B7%E3%83%83%E3%83%97%E3%81%8C%E6%88%A6%E4%BA%89%E3%81%AE%E8%AA%B2%E9%A1%8C%E3%82%92%E3%81%A9%E3%81%86%E4%B9%97%E3%82%8A%E5%88%87%E3%82%8B%E3%81%8B>
52. NHK[27.02.2022] Why do you participate in the war? Citizens Reaching Cyber Attacks in Ukraine

Invasionhttps://www3.nhk.or.jp/news/special/sci_cul/2022/07/special/cyber-hacker-ukraine-0728/

53. Steven Kettman[08.04.2022] Advances in technology change the war<https://wired.jp/2002/04/08/%E3%83%86%E3%82%AF%E3%83%8E%E3%83%AD%E3%82%B8%E3%83%BC%E3%81%AE%E9%80%B2%E6%AD%A9%E3%81%8C%E6%88%A6%E4%BA%89%E3%82%92%E5%A4%89%E3%81%88%E3%82%8B%E4%B8%8B/>
54. Steven Kettman[06.07.2001] What is the real threat of cyber warfare?<https://wired.jp/2001/07/06/%E3%82%B5%E3%82%A4%E3%83%90%E3%83%BC%E6%88%A6%E4%BA%89%E3%81%AE%E6%9C%AC%E5%BD%93%E3%81%AE%E8%84%85%E5%A8%81%E3%81%A8%E3%81%AF%EF%BC%9F%E4%B8%8B/>
55. Wikipedia[22.03.2024] Ukraine IT Army army<https://ja.wikipedia.org/wiki/%E3%82%A6%E3%82%AF%E3%83%A9%E3%82%A4%E3%83%8AIT%E8%BB%8D>