

DIGITAL TRANSFORMATION AND WORKING CONDITIONS: A CASE STUDY OF RIDE-HAILING DRIVERS IN THE GIG ECONOMY

Shalsabilla Shafira^{1*}, Ritha F. Dalimunthe², R. Hamdani Harahap³

^{1,2} Faculty of Economics and Business, University of North Sumatra, Medan, Indonesia

³ Faculty of Social and Political Sciences, University of North Sumatra, Medan, Indonesia

*Corresponding Author: shalsabilashafira7@gmail.com

Abstract: Companies are facing new challenges due to digital developments. Digital transformation is changing the way companies operate and creating a new economic model, namely the gig economy. Ride-hailing platforms like Go-jek and Grab offer work flexibility for drivers, but often accompanied by uncertainty and vulnerability. This research uses qualitative methods with in-depth interviews with online motorcycle taxi drivers to understand how the platform controls their work. The findings show that despite the freedom to choose working hours, drivers are often forced to work longer to meet income and bonus targets. The platform uses customer rating systems and GPS technology to monitor drivers, adding pressure on them. In addition, the "partner" status given to drivers results in a lack of labor protection, such as insurance and social security. The control imposed by this platform negatively impacts the well-being of drivers. This research emphasizes the need for policies that protect the rights of gig workers, including better social protection and fairer working conditions. This finding is expected to serve as a consideration for policymakers in drafting fairer regulations.

Keywords: Digital transformation, work condition, gig economy

1. Introduction

Today, all companies face new challenges due to rapid digital development. Digital adaptability is a weapon for companies to survive. Because digital-based technology is used to improve and maintain their competitiveness in the market. The change from traditional to digital is called digital transformation. Digital transformation is generally understood as the extensive use of digital technology to improve organizational performance and operational efficiency (Abdullah et al., 2024). Successful digital transformation, which results in improved operational performance, requires organizations to innovate with digital technologies by implementing essential changes in their business processes and models, and adopting strategies and policies that facilitate this transformation (Maroufkhani et al., 2022).

Digital transformation is not only changing the way companies operate, but also facilitating the birth of new economic models such as the gig economy. With the advancement of digital technology, the gig economy allows workers to take temporary jobs through platforms, without the need to have a conventional employment relationship. As such, digitally-driven jobs are becoming more common, where workers and employers are connected by technology through platforms, leading to an increasing number of individuals working in the informal sector. This is because digital platforms offer access to employment for many people who may not be able to participate in traditional labor markets (Mäntymäki et al., 2019).

In Indonesia, in the last three years the number of informal workers has been consistently higher than the number of workers in the informal sector. As of February 2024, data from Badan Pusat Statistik (BPS), there were 84.13 million people working in the informal sector, 59.17% of the total productive workforce in Indonesia. The informal sector is characterized by jobs without

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job security, including gig workers. One of the most common platform-based jobs in Indonesia is ride-hailing drivers, a job supported by digital platforms and known as part of the gig economy (Gandini, 2019). Gabungan Aksi Roda Dua (GARDA), a collective organization of online ojek drivers in Indonesia, estimates that there are around 4 million online ojek drivers across Indonesia. The data is only an estimate, there is no exact data on the number of ride-hailing drivers in Indonesia, but GARDA said that the number of drivers continues to increase every year, supported by the increase in ride-hailing platforms operating in Indonesia.

Initially, platforms were used as intermediaries between drivers and consumers in transportation, food delivery, and parcel services (Frenken & Schor, 2019). However, as technology develops, the role of the platform expands and involves direct control over the work process and task distribution, blurring the line between the platform's role as an intermediary and an employer. The ride-hailing platforms that have long been operating in Indonesia are Go-jek and Grab. The platform companies Go-jek and Grab classify drivers as partners, as opposed to employees, stating that drivers will “be their own boss”, gaining “flexibility in earning income”, as they can independently decide “when, where, and how often” to work (Grab, 2021). The partner classification means that drivers are deprived of employment protections that are in line with the International Labor Organization's (ILO) decent work agenda that has been ratified in many countries' labor laws (De Ruyter & Rachmawati, 2020), including minimum wage rules and the right to holidays, social security, and social dialogue.

In some countries, discussions on gig workers' rights and digital regulation have been widely held and highlighted the balance between flexibility and labor protection, such as the UK which has classified Uber platform drivers as “workers” since 2021, which means drivers are entitled to rights such as minimum wage and paid leave. However, in contrast to what has happened in Indonesia until now, most gig workers in Indonesia are still in partner status which makes them vulnerable and has not received adequate protection. Because in practice, flexibility and independence also do not work properly and instead become an illusion for workers to align the vulnerability and injustice that drivers experience (Wu et al., 2019).

The vulnerability experienced by drivers is increased when platforms have power over drivers' work by creating order algorithms. This is because platforms can implement control mechanisms over workers' activities, through algorithms that facilitate the extraction, management, processing of data, and rating systems of service experience and consumption (Gran et al., 2020). The platform's work process represents deliberate exploitation by using technology and imposing a process of supervision over workers' work to achieve high service standards, while workers are trapped in a very weak employment status as “partners” (Prabowo & Isbah, 2022). This phenomenon shows that the increasing number of workers in the gig economy is not directly proportional to the increase in justice and welfare for gig workers. This is because most of the current drivers are still underpaid, work overtime, overwork, lack social protection, and lack long-term income security (Novianto et al., 2023).

The partnership system applied also has almost no legal protection whatsoever. This is because they are not protected under the Labor Law, as the relationship is that of partners rather than employment. Thus, partnerships in Indonesia do not have a clear legal basis and are widely used to avoid attaching worker status to partners (Izzati & Sesunan, 2022). Embedding partners in drivers further complicates the conditions of drivers in the field. They continue to accept these conditions in the absence of government restrictions, even though drivers are classified as partners without formal contracts.

Our study extends research on the working conditions of ride-hailing drivers on digital platforms (Gandini, 2019, Mäntymäki et al., 2019). In particular, we explore the dark side of

work supported by ride-hailing platforms by providing and explaining what drivers face with their work on ride-hailing platforms, which is occurring due to digital transformation and causing changes in employment relations. As such, our findings can help decision-makers and governments to better understand the conditions of platform workers.

2. Literature Review

Technological progress cannot be stopped, as well as the change from manual to digital. Changes built on the basis of digital technology usher in changes in business operations, business processes, and value creation referred to as digital transformation (Barry Libert, 2016). Based on Liu et al., (2024) the term digital transformation indicates “digital-based technological changes applied in business operations with the aim of increasing transparency, accountability, and efficiency in managing information and data that can be monitored and adjusted, measured, and evaluated”. The origin of the digital change trend begins with the emergence of mini computers in the 1970s, followed by personal computers in the 1980s, and the emergence of the internet in the 1990s and beyond.

The emergence of the internet changed so much of how companies conduct their business digitally by using the internet to compete and create new markets. Because of this transformation, companies are rapidly changing the way they do business and also changing working conditions in general (Demirkan et al., 2016). The changes that are occurring also give birth to new forms of work, which connect workers and employers through a place called a platform. Working on platforms is part of the work categorized under the term “gig economy” (Gandini, 2019). The gig economy is characterized by the formation of a capital-labor relationship between workers and digital platforms that mediate labor and consumer demand to complete small tasks and serve as market intermediaries (Gandini, 2019).

In simple terms, Graham et al., (2020) explain that work in the post-platform decade is characterized by gig work. This work is also characterized by the absence of a formal relationship in the form of an employer, but a working relationship in the form of a partnership or independent contractor (Wulansari et al., 2024). For gig workers, as someone who works in the gig economy sector is called, digital platforms become the main point of contact that replaces direct interaction with employers or employer representatives (Mäntymäki et al., 2019). Platform-based work is changing the traditional working mechanisms that occur between workers and employers, so it can be said that digital changes play an important role in the conditions of workers at work and affect many things when someone works on a platform. Therefore, we are interested in examining how digital transformation changes working conditions from the perspective of gig workers, namely ride-hailing drivers.

In principle, the gig economy allows workers to take jobs anywhere that offers allure, where workers can freely set their own schedules (Larsson et al., 2019). However, amidst all the prosperous narratives, the development of the gig economy is not free from criticism. In fact, criticism of the gig work phenomenon is more directly targeted at the lure of work freedom it offers (Muntaha, 2024). The main argument of this criticism points to the employment vulnerability experienced by gig workers (Keban, Hernawan, 2021). Instead of freedom and flexibility, gig workers are faced with income uncertainty and far from decent work standards. In the case of gig platforms, Gandini (2019) developed work process theory and found that in reality there are still parties who control the work process of gig workers, namely the feedback and rating system on the platform. The platform will be the party that provides consumers to drivers, so that drivers will get income. The feedback and rating system from consumers makes

drivers have to sell their services with good service, at least to meet the expectations of these consumers (Muntaha, 2024). The accumulation of feedback and ratings obtained by drivers will become a matrix that then turns into a controller that dictates how the work process of the drivers. As a result, drivers with poor rating and feedback matrices will get fewer bonuses, which in turn will result in fewer orders (Sunardi, 2021).

Gig workers are often characterized by flexible working hours and no fixed employment status, leaving them without social security, and paid based on the amount of work completed rather than time worked (Graham et al., 2020). This is still happening without any rules that favor drivers. While at work, drivers are vulnerable to road accidents. Therefore, there is a need for protection that truly protects ride-hailing drivers who work in the informal sector to get the same rights as workers who work in the formal sector.

Some researchers (Graham & Anwar, 2018; Kraus et al., 2023) argue that digital transformation will open up new opportunities as added value in almost all economic sectors. This is because digital technologies support online labor markets and help clients operate without borders. Furthermore, previous research (Mäntymäki et al., 2019) shows that despite their convenience, ride-hailing platforms exert control and power by pricing rides based on demand and by using consumer ratings to evaluate drivers, thus the platforms exercise algorithmic control over drivers.

3. Method

This research uses qualitative methods. Qualitative research is research that produces descriptive data from observed objects (Moleong, 2018). Qualitative research helps in describing phenomena related to research. The qualitative approach and case study methodology is the most reasonable way to assess aspects of business behavior and culture (Eisenhardt, 1989). Through this approach, we can dig deeper into the digital transformation in the gig economy to see the working conditions of ride-hailing drivers. Thus, this approach is intended to provide a comprehensive understanding of the working conditions of drivers.

The informants interviewed were drivers from the Go-jek and Grab platforms who had worked for more than 6 months. The sampling technique used was convenience sampling. Interviews were conducted until they reached a theoretical saturation point, where the data generated from the interviews did not generate additional information. A total of 10 drivers were interviewed, and the data collected will reveal various aspects of working conditions in ride hailing drivers. The main methods used were observation and in-depth interviews. Informants, namely drivers of Go-jek and Grab platforms, were approached directly with the aim of exploring drivers' work experiences related to the work system implemented by the platform, workplace safety and social security, as these seem to be issues in gig economy employment. Interviews were conducted for approximately 30 minutes, recorded, and then transcribed for further analysis. The interview recordings were transcribed and then the data was analyzed using a thematic approach. Validity was ensured by means of source triangulation by using multiple sources of data to compare and verify findings. Researcher and site triangulation also helped to ensure that the analysis was unbiased and included a variety of perspectives.

To develop the case study, primary data was collected in Medan. The location determination is based on the operational coverage of online ojek in Medan city. The research location was chosen by considering the distribution of drivers scattered in strategic locations, such as around universities, restaurants, and hospitals. This location becomes the distribution area of online ojek drivers because it has high mobility, such as in the university area adjacent to student

residences and restaurants. Case studies allow research focus on specific conditions, capturing situations that are important to the phenomenon under study.

4. Result and Discussion

The increasing trend of research on the gig economy started in late 2019, and peaked in 2022 until now. This shows that the gig economy is very important especially in the industrial era 5.0 (Guduru et al., 2023). In this era, humans are required to be able to adapt and innovate, especially ride-hailing drivers who work based on platforms. Ride-hailing has recently become more popular because it offers convenience in it (Saxena, et al., 2024). The work looks relaxed and flexible, but if examined further, there is actually income uncertainty, working hours are so long, coupled with weak social security for drivers. Based on the author's observations and interviews in the field, there are several important findings:

Labor Control

Go-jek and Grab use the same management mechanism to ensure that everything is controlled according to the needs of the platform through computer control. This includes control through GPS from the driver's phone, consumer ratings, and driver-customer interactions that occur on the platform (Veen et al., 2020). GPS provides information about location, destination, navigation and travel time. This makes the work process of the driver transparent to the platform company, allowing for tracking such as, average speed and time spent performing tasks (Prabowo & Isbah, 2022).

The addition of the feature of using facial verification when drivers login to their accounts has been carried out by Go-jek and Grab since 2020. Facial verification is enforced to ensure the driver's account is used by other parties. The platform protects passengers from the identity of the driver who will take them to their destination or deliver food (Prabowo & Isbah, 2022). The verification feature is considered to be a solution to driver account abuse such as, buying and selling accounts, renting accounts, or borrowing accounts that are prohibited by the platform to manipulate driver data without the platform's knowledge. As Arif said,

“We have to do face verification when activating the account, more than one verification a day because sometimes the platform suddenly asks us to verify again. It was made so that drivers don't lend/rent accounts to other drivers” (Interview 5).

Platforms collect data that is used to derive patterns and shape and apply platform algorithms (Choudary, 2018) to drivers. However, drivers do not have access to the information used by platforms in applying algorithms, putting drivers at a disadvantage. In fact, platforms use data with the aim of increasing revenue by optimizing their workforce to satisfy customers, but at the expense of drivers by limiting their right to access information that could help them make service choices (Choudary, 2018).

Through the data collected, platforms use it to create algorithms that confuse drivers. Drivers are not sure exactly why they get so many orders, for both short and long distances, not to mention delivery orders, which are usually more expensive than passenger deliveries. There is a belief that if they keep their accounts active, get five stars, and don't cancel orders, then they will get many orders every day, and in the end it will make it easier for drivers to reach their targets. The only party that knows and runs how drivers get orders is the platform company as well as the party controlling the system through algorithms. Aji stated,

“...I have activated the account from the morning, but there are very few orders coming in even though it is not the vacation period for college students” (Interview 7).

The mechanism of algorithm management is used by platform companies with the purpose of determining which drivers will receive orders from consumers. This power allows the platform company to determine which drivers are disciplined, undisciplined, suitable, and not in accordance with the company's interests (Novianto et al., 2023). As the control and activities of the drivers are centralized in the platform, the work of the field workers (drivers) becomes long. They cannot really choose the right time to work, which customers to serve, or which location to choose to complete the work (Wulansari, 2023).

The control exercised by the platform is not only through algorithms, but also using gamification methods (Gandini, 2019). This type of control is used to bring out the best in individuals to increase the motivation of drivers. The platform assigns jobs called “missions” for drivers to complete, just like a game, and makes drivers do whatever it takes to complete them. When the driver is successful in completing the mission, the platform will assign a new mission to the driver, and so on until the driver deactivates his account. This system makes the driver work hard to complete the mission every day.

Gamification is actually an approach that uses game components to solve non-game problems (Marisa et al., 2022). The purpose of gamification is to motivate its users, in this case drivers. The driver's motivation is continuously improved using the platform's gamification system, so that the driver continues to work. Gamification implemented by the platform uses elements such as, missions, targets, and levels. Targets are set by the platform for drivers to complete each month in the form of accumulated missions that have been completed by the driver for a full month. The target achieved by the driver will affect the level of the driver's account, so the driver will continue to strive to achieve the target set by the platform. When the target is achieved, the driver's account level will increase. Conversely, when the target is not achieved, the driver's account level will remain but is in danger of leveling down. Wawan, one of the Grab drivers, for example, said,

“My level (account) is still a member, the lowest. The orders that come in are not as many as those who are already at the champion level. The target may not be achieved, because now it's the end of the month and there are still less than 300 orders, so my account level continues to be like this (low)” (Interview 2).

Levels are applied variously and differently in each company as a way to prioritize schemes, such as basic, silver, gold, and platinum levels on the Go-jek platform, member, fighter, knight, and champion levels on the Grab platform. This ride-hailing driver leveling scheme is used by the platform to prioritize drivers who are at a high level and not prioritize drivers with low levels to get orders (Kusnadi, 2024). This means that the high level will affect the number of missions given by the platform to the driver. This leveling also has a tendency to discriminate against low-level drivers, meaning that low-level drivers are not prioritized to get orders, ultimately affecting the small income that drivers will receive.

Achieving targets in the existing level system in Go-jek and Grab makes drivers continue to work, as a result they force themselves to achieve targets. Drivers work very long hours due to the setting of order targets, the platform's work system that uses algorithms, and coupled with the competition between applications (Megantara et al., 2024) which makes it more difficult for drivers to get orders every day. The operational costs incurred by drivers every day are also

a burden on drivers, including the costs of food, gasoline, and vehicle repairs. The conditions faced by drivers are not indicative of decent and fair work in accordance with the International Labor Organization (ILO).

The algorithm and gamification applied to drivers occur due to digital transformation, which not only has positive but also negative effects. Drivers are controlled by machines so that their space for movement becomes narrow, not free and flexible as characterized by work in the gig economy. Work control continues to occur, even exploitation of drivers is getting deeper (Wulansari, 2023). This means that although drivers are given the freedom to work when and where, control over their work, namely who they serve and how much the rates are, is still regulated by the platform, even the means of production for work are provided by the drivers themselves, not by the platform. Thus, it can be seen that there is an asymmetry of power between the platform company and the drivers.

Illusory Flexibility

The concept of flexibility is often associated with gig work on ride-hailing platforms such as Go-jek and Grab. Flexible work gives workers the power to organize their working hours according to their personal needs, usually in the form of reduced working hours (Chung, 2022). At first glance, a job as a driver does offer great flexibility as drivers can freely determine their working hours and are free to determine and choose the location of work. The freedom in working hours provided by the platform makes them work longer hours compared to formal workers. Robi stated,

“I start working at 7am until 11pm, I even go home at dawn. Everything will be done for the sake of earning an income, otherwise we wouldn't eat” (Interview 1).

This time flexibility has not led to a reduction, but rather an increase in working hours. Long working hours become a problem when drivers are on the road every day, putting them at risk. The drivers' decision to continue working more than 12 hours per day is not without reason. They do it to meet the targets set by the platform so that they can increase their account level. Because when they are already at a high level, their account will be prioritized, drivers call it the “gacor account”, so they will easily get orders, when they reach the target, they will also get additional income in the form of incentives. Dika stated,

“I work every day...I only take a day off during Eid (religious holiday), if there is no urgent need I keep working” (Interview 4).

Meanwhile, Yasir, a Go-jek driver said,

“If you take most of the day off, you won't get any income. Actually, the important thing is to be diligent (work continuously), if you are lazy, you won't get (the target)” (Interview 3).

Drivers are free to take time off at any time, but from interviews that have been conducted, drivers only take time off when there are important and urgent needs, such as holidays during religious holidays, family needs, and illness. As research conducted by (Liu et al., 2024) shows that a high level of order completion can also earn high income. Determining the number of order targets that must be achieved by drivers every day (to get daily incentives) and monthly from the accumulated results is the main factor that makes drivers work all the time to meet their living needs. This daily income target is also closely related to the safety and compliance

of driver traffic on the road so that their driving behavior is very risky and tends to violate the rules (Djunaidi et al., 2024). The system implemented does not benefit drivers who are partners, where partners should be treated well because of the mutual benefits between the platform company and the driver.

When compared to other forms of gig economy and partnerships, all of the vulnerabilities above are common symptoms (Schanz, 2022). The vulnerability is very unequal with the exploitation and appropriation of added value from each work done by partners under the pretext of flexibility. This flexibility is actually a euphemism for a form of exploitation. (Arrasy & Haganta, 2024). So it increasingly shows that the flexibility echoed by the gig economy is false. The party that is harmed by this system is still the driver, not the platform company.

Lack of State Protection for Drivers

Traditionally, platform workers are usually classified as self-employed or freelancers. The same is true for ride-hailing drivers, as they are not classified as platform employees, but partners. Therefore, ride-hailing drivers are not entitled to formal worker rights, such as social security.

The scheme used is a partnership relationship, the platform company is positioned as an intermediary, not an employer. In practice, the partnership relationship does not run equally, where the relationship is actually used for the benefit of the platform company's profitability, because the work risks that were previously borne by the company are now borne by the workers (Novianto et al., 2023; Wulansari, 2021). The partnership classification results in the company not having obligations like the employment relationship between workers and employers, where the employer will give orders or employ workers, while the workers will receive wages in exchange for the work that has been done. By implementing this mechanism, the income of drivers who are classified as partners is not protected by the minimum wage scheme, which can be described as: "no work, no income" (Wulansari et al., 2023). As expressed by Agus,

"we (drivers) are only partners, not workers of the company, so if we don't work and follow the policy, we don't get any income. Even our voices are not heard by the company and the government" (Interview 9).

Robert, a Grab driver, said

"the demonstrations we held seemed in vain because our voices were rarely heard, it would be better for us to keep pulling (working) than to demonstrate. I'm also afraid that my account will be suspended, so I can't work" (Interview 8).

In the midst of various problems that occur, the role of the government in regulating work relations on transportation platforms is important, especially during the period when more and more workers are working as partners on gig work platforms (Vallas & Schor, 2020). Protests by drivers have often been carried out, ranging from peaceful protests to work strikes. However, the government does not seem to take the protests by drivers seriously, even the policies taken do not benefit drivers, but rather benefit platform companies. It is appropriate for the government to regulate the gig economy by regulating the labor market, ensuring an equal position in partnership relationships, and openness of data used by platform companies in controlling the management of algorithms applied to drivers.

Regarding demonstrations, Go-jek and Grab platform companies also have rules that violate the rights to assemble, express opinions, and associate. Ride-hailing drivers who voice their

driver's aspirations or protest in public will be given sanctions in the form of dismissal or termination of partnership. Like the Grab platform, it has rules in the form of a general code of ethics for Grab partners, namely "Participating in any illegal demonstrations against Grab, as well as being involved or provoking other partners to carry out activities that can damage public facilities or harm other parties, and/or harm any party including Grab". The sanctions given are termination of the partnership relationship and being reported to the authorities (<https://www.grab.com/id/kodeetik/>). Meanwhile, on the Go-jek platform, these rules are contained in the Go-jek rules of procedure (Tartibjek) which prohibit drivers from "Inviting other drivers to carry out demonstrations/sweeping/offbid/anything that can harm the company or disrupt public order". This shows that protection to ensure job security, decent pay, social security, and political rights of online drivers as citizens is very much needed (Rainditya, 2024). The absence of regulations that specifically guarantee the rights of fair work in partnership schemes in Indonesia is actually not without reason. The interests of the application are increasingly dominating in determining profits, tending to defeat the interests of workers in getting a decent job. The absence of government intervention has perpetuated the power of the partnership relationship between the platform and the driver (Heeks et al., 2021) making the mechanism of the partnership contract tend to be used to justify practices where workers do not get decent wages, long working hours caused by the urge to work overtime, no sick leave, social security, compensation when an accident occurs, and others.

5. Conclusions

The digital transformation of the gig economy, particularly in the ride-hailing industry, has created new opportunities for flexible work, but also presents challenges for gig workers. The flexibility promised by gig work is largely illusory. While drivers can technically choose their own working hours, the pressure to meet targets set by the platform forces drivers to work very long hours, often exceeding 12 hours per day, in order to earn enough income and qualify for incentives.

The concept of flexibility used by platforms is used to disguise exploitative work practices. Ride-hailing platforms such as Go-jek and Grab implement various forms of control through digital mechanisms such as tracking, customer rating systems, and gamification. These technologies allow platforms to closely monitor and control driver behavior, while drivers have very limited control over their work environment, working hours, and even their income. In addition, the gamification of work implemented by platforms through mission completion targets, account level systems, and incentive rewards further exacerbate the pressure on drivers to continue working harder, making it difficult for drivers to achieve physical and mental well-being.

Drivers also face income uncertainty due to algorithmic management and order fluctuations, yet drivers receive very little social protection. The absence of formal labor regulations and state intervention leaves drivers vulnerable to exploitation and unsafe working conditions, as they have no access to job security or retirement savings. The power asymmetry between platforms and drivers further exacerbates these issues, with platforms benefiting from reduced operating costs at the expense of driver well-being.

Thus, while the gig economy is often lauded for its flexibility, work in the ride-hailing industry presents significant challenges for drivers, including worker control resulting in long working hours, income instability, and inadequate job protections. The digital transformation is not only changing the nature of work, it is also exacerbating the vulnerabilities of gig workers, raising

critical questions about the sustainability and fairness of this type of work model in the future. Policymakers need to create regulations to protect workers in the gig economy and ensure that the digital transformation creates better, fairer, and more sustainable working conditions.

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