DISASTER RELIEF AND PREPAREDNESS: MODELING CRISIS COMMUNICATION DISASTER INTERVENTION FROM 2014-2016 FLOOD IN MALAYSIA

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Malaysia suffers from many flood disasters in the last decade or so. Although it is strategically located on the world map, near the equator with greater exposure to the sun, Malaysia is highly influenced by the wet and dry seasons that bring in heavy continuous rain and thunderstorms due to an intense change in the climate regime. Local studies have been conducted over the years to address the flood issues in Malaysia dated back as early as 1990s up to the most recent in 2014. It is important at this stage to point out that there are no traceable documented researches on communication during flood disaster, crisis communication during or after a flood disaster, or any relevant analysis of communication activities or processes pre, during and post flood in Malaysia. Hence the need to address this issue and propose appropriate communication concept is important. This study will examine the efficiency of current state of communication management undertaken by the related authorities during the recent flood disaster. It will also evaluate various level of coordination between the public and stakeholders in times of catastrophe. Ultimately this study intends to propose a model for crisis communication framework specific to natural catastrophe management in the Malaysian context. Interviews will be done two-fold. Firstly, it will gather information from media organizations as to what they have experienced and seen in the recent natural catastrophe. Secondly, data will be gathered from the second group of respondents who were affected by the natural catastrophe. The end-product of the analysis of these two groups of data would be the proposed model of Crisis Communication Disaster Intervention Plan that will contribute to the communication and media studies scholarship as well as increase the likelihood of communication activities and policy specifically towards the management of natural catastrophe in Malaysia.

Keywords: *Malaysia, flood, disasters, communication, and crisis* introduction

I. INTRODUCTION

Flood disaster management is a shared responsibility of diversification among agencies, non-governmental actors, the private sector and the whole society. Agency coordination and coordination diversification is indispensable and full cooperation is a cornerstone of the alignment and coordination network and strengthened. In addition, capacity building through training and inter-agency cooperation is very important in improving the efficiency of disaster management. Good coordination between governments agencies deem important in shaping a concerted action. Furthermore, the existence of non-governmental organizations active in Malaysia should be involved together in the management of natural disasters. The proposed

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use of NGOs, Malaysian Red Crescent Society in every level of management can also assist in disaster relief and management operations. This coordination can exploit existing resources and assets and is able to launch more operations. Non-governmental bodies and non-governmental actors and the population should also be involved in the policy, evaluate and make judgments in Disaster Management and Relief Committee. Each nation has its own particular determination to managing disaster. Malaysia has its techniques which can be utilized as a part of an all-encompassing way to give data and help pre-catastrophe, during and post, Malaysia needs to enhance pre-disaster communication framework to keep the negative effect of catastrophe.

The threatening nature of disaster challenges the ability of the affected community to confront the adversities and survival. At the core of survival is the emotional impact of disaster survivors is depression and anxiety that affected the quality of life of those affected (Johari & Ahmad Marzuki, 2013). In terms of length and duration of traumatic implications of disaster, researchers have indicated that posttraumatic distress can last for a long term (Nandi & Vlahov, 2005; Norris, Baker, Murphy & Kaniasty, 2005; Warchal & Graham, 2011). The breadth of long established research also indicated that natural disasters which cause disruptions of physical infrastructure can create emotional instability towards the victims (Morgan et. al, 2003; Galea, Nandi & Vlahov, 2005; Nasir, Zainah & Khairudin, 2012; Seyle, Widyatmoko & Silver, 2013). As Bradel (2014) elucidates, the exposure to traumatic natural mishap causes distress and impairment towards the psychological conditions of victims who are caught without any measures of preparedness for survival. Comparatively, Man, Jalal and Ullah (2014) investigated the extent of posttraumatic stress disorder (PSTD) and psychiatric complexities among the 2010 flood victims in Pakistan. The correlations were explicated with three aspects of relations disaster exposure characteristics, cognitive distortions and emotional suppression. The severity of distress among flood survivors who are at risk for developing posttraumatic sequels involves women and children, a vulnerable group that suffer from depressive symptoms, stress, anxiety and impaired well-being (M. Shafique Sajid, 2007; Ugwu & Ugwu, 2013). Likewise, Bradel and Bell (2014) in their research found that women who suffer extreme exposure to a disaster interpret the disaster in a negative way and are most likely to develop negative psychological outcomes. Hence, substantial intervention support the survivors to recuperate is crucial. The struggle for survival and having the ability to recuperate and in maintaining a relatively stable, reciprocal and functional fitness for posttraumatic emotional distress among flood survivors' in Malaysia demanded for investigation to be carried out. In as much as emotional sufferings differ in the way the flood survivors' emphasize, it is crucial to observe the circumstance and how it affects the individuals to face, recuperate and have control over the predicament of flood aftermath.

The emphasis on building an environment that enhances quality of life is however included in the current 10th Malaysia Plan (10MP) (PM tables RM230bil 10th Malaysia plan, 2010). The Malaysian government stressed on the importance of ensuring that the society's quality of life improves in order to achieve strong and sustainable growth. Measures to improve the role and status of women are also given top priority in the 10MP as women are said to be a good indicator of a dynamic and progressive country (PM tables RM230bil 10th Malaysia plan, 2010). To correspond to the to the government's commitment, scarce literature in examining flood disaster impact which focus on potential social psychological impact (Bevel, 2010) which is often overlooked therefore, must be integrated in future intervention plans. The magnitude of flood disaster in Malaysia shed light on critical factors in determining the need to establish targeted policies as an intervention plan into the disaster risk management policy in Malaysia. The fact that flood risk management across the globe are changing and moving towards a comprehensive approach in response to new scientific approaches, research findings on posttraumatic emotional distress is limited thus it is vital to investigate in order to effectively minimize the emotional sufferings to flooding while ensuring the resilience for survival. Indeed, the need to integrate the intervention of treatment and care warrant an urgent call for national initiatives to assist these vulnerable flood survivors to recuperate following the 2014 flood crisis in the Malaysian context. Considering the numerous events of disaster occurring around the globe in recent years, and in particular, the case of Malaysia, it is imperative that posttraumatic intervention be given more attention than it has in the past. Consequently, new interventions are vital and must be implemented to ascertain that flood survivors are able to face less long-term negative traumatic outcomes possible.

The 2014-2016 disaster have left us so much to be learned and improved. Early preparation and simulation of what we have and what works need to be done and tested multiple times and continuously. The need for a known centralized body where everyone can refer to is crucial. The level of commands and communication need to transparent for effective communication flow and crisis communication and management. Integration, unity and teamwork among all of us are needed especially during a disaster. Put aside political, religious and personal belief but need to focus on supporting humanity. The national Public Service Announcement (PSA) for safe steps when the earthquake hits by Manny Pacquiao as the Ambassador can be a good example to create awareness to the public. Malaysia especially the newly established NADMA should take this example of PSA to create the awareness and give the information about the safe steps when the floods hits so that public can make the preparation earlier.

II. PROBLEM STATEMENT

The prevalence of natural disaster posed a significant level of threat beyond expectations and control over unpredictable events. The threatening nature of

disaster challenges the ability to confront the adversities not only by the affected community but also the governing authorities. In a state where the vulnerable community at-risk grapple for survival without any measures of preparedness, the expectations for response and recovery lies in the interventions by the governing authorities. The case of the recent flood event in East Coast Malaysia were cited as the most devastating event ever witnessed in the history of Malaysia.

Many experts just like (Therany, Pradhan, & Jebur, 2014) believe that floods in Malaysia are caused by a combination of man-made factors and of natural causes. Poorly or unorganized developments, the emergence of squatter settlements, poor drainage system, and deforestation are among the contributing man-made factors while extreme monsoon rainfall, change in climate, rain storm and shallow river are some natural forces that present possibilities of flooding inMalaysia.

The magnitude of flood disaster in Malaysia shed light on critical factors in determining the need for a crisis communication management policy to be in place. The fact that flood risk management across the globe are changing and moving towards a comprehensive approach in response to new scientific approaches, research findings within the domains of natural sciences, arts and social sciences (Klijn & Schweckendiek, 2012), modeling the good practices of crisis communication management through a well-integrated approach to crisis communication plan is warranted in guiding crisis response following the flood crisis in the Malaysian context. This paper undertakes an analysis of crisis communication disaster from the 2014 flood catastrophe in East Coast Peninsular Malaysia.

The absence of mechanism and constraints in flood disaster in Malaysia were outlined by a local researcher (Chan, 2012). However findings disregard crisis communication as an important policy in flood risk management. Past studies on local flood incidents focuses on areas other than communication that is crucial in any given issue management process. Studies on the important area of communication seems to be lacking or in all not present. This research will address the gap where the questions as to why crisis communication were used during the recent catastrophe and how it can be best used through the proposed model will be answered. This paper undertakes an analysis of crisis communication disaster from the 2014 flood catastrophic in East Coast Peninsular Malaysia and will propose a model that can best be used in a natural catastrophe management.

III. RESEARCH QUESTIONS

1. What are the various level of coordination between the authorities, publics and stakeholder? How do they work?
2. Why is there a need for a crisis communication framework specific to natural catastrophe management in Malaysia?

IV. LITERATURE REVIEWS

Flood can be defined as a body of water, rising, swelling and overflowing land not usually thus covered (Department of Irrigation and Drainage Malaysia, 2014). Also overflowing of the bank of a stream lake or drainage system of water onto adjacent land as a result of storm, ice melt, tidal action and channel obstruction (Department of Irrigation and Drainage Malaysia, 2014).Naturally there are two types of floods that affect Malaysia but more often than not, it is categorized as the monsoonal flash or tidal floods. The last decade saw Malaysia suffer from many flood disasters. Malaysia, although strategically located on the world map, near the equator with greater exposure to the sun, is highly influenced by the wet and dry seasons that bring in heavy continuous rain and thunderstorms due to an intense change in the climate regime. Typically saved form major natural catastrophes like typhoons, volcano eruptions, earthquakes and hurricanes, flood is considered Malaysia's biggest nightmare. Malaysia is affected by flood because of the heavy monsoonal and conventional rainfall, flat topography on both coasts of Peninsular Malaysia, heavy siltation of rivers and human activities (changed land use due to deforestation, agricultural practices and urbanization) (Maksom, 2012).

According to Khan, Shaari, Bahar and Nazaruddin (2014), some recorded flood cases in the country occurred in 1926, 1931,1947, 1954, 1957, 1963, 1965, 1967, 1969, 1971, 1973, 1983, 1988, 1993, 1998, 2001, 2006, 2007 and 2010. They added that a report from the Department of Irrigation and Drainage stated that about 29,000 sq.km or 9% of total land area and more than 4.82 million people (22%) are affected by the flood annually.

Many experts just like (Therany, Pradhan, & Jebur, 2014) believe that floods in Malaysia are caused by a combination of man-made factors and of natural causes. Poorly or unorganized developments, the emergence of squatter settlements, poor drainage system, deforestation are among the contributing man-made factors while extreme monsoon rainfall, change in climate, rain storm and shallow river are some natural forces that present possibilities of flooding in Malaysia. When floods dramatically displaced the entire community, poor interventions in crisis communication management not only aggravate the intensity of damage but liability corresponds to the authorities control over the emergency management in crisis situation. Crises communication is regarded as an essential aspect of disaster crisis management for governments (Atkinson, 2014). As cited by Ulmer, Sellnow and Seegar (2015), the current crisis communication has effectively categorized strategies that employ to preserve image and reputation rather than creating opportunities through managing crisis. Thus, during the course of the recent flood situation, the Malaysian leaders as front liners were criticized as failing in their efforts of response; relief and reconstruction (Hold public inquiry into 2014 floods -The Malaysian Insider, 1 st Feb 2015). The absence of mechanism and constraints in flood disaster in Malaysia were outlined by a local researcher (Chan, 2012).

However findings disregard crisis communication as an important policy in flood risk management. Past research explicates the relation between intervention through information-sharing and preparedness for disaster (Bradley, McFarland and Clarke, 2014). Tariyel Jalalli (2012) posits insufficient communication in the media leads to negative media coverage and poor perceptions as damaging the reputation of the government and its legitimacy. Similarly, the significance and the growing awareness worldwide with regards to the dynamics of social media is gaining interests in areas of crisis communication in events of disaster, In light of crisis communication management issues, the interactive social media which provides real-time information during flood crisis (Arpaporn Winijkulchai, 2012) can be as paralyzing for response and recovery to be deployed (Muhammad Imran, Castillo, Lucas, Meier & Rogstadius, 2014). Through information space that is decentralized and devoid of hierarchy, social media has the potential to increase and lead to misinformation as well as unauthorized leaks of truth in information causing unfavorable crisis communication handling (Giroux, Roth & Herzoz, 2013). Hence, taking into account and integrating both opportunities and threats of social media in disaster situations is deemed necessary to shape the communication strategies effectively (Flew, Bruns, Jean, Crawford and Shaw, 2013).

As in Malaysia's case, local studies have been conducted over the years to address the flood issues in Malaysia dated back as early as 1990s up to the most recent in 2014. Some areas of focus in these researches are given to categorizing disasters in Malaysia (Ahmadun, 2006), flood disaster management (Chan, 1995), flood mitigation and flood risk management (Loi, 1996), flood vulnerability assessment (Yeganeh & Sabri, 2014), web-based support system for flood response operations (Katuk, Mahamud, Norwawi, & Deris, 2009), flood warning system (Hashim, Hamdan, Zakaria, Hamzah, & A.Salleh, 2013), information sharing and governance of flood management in Malaysia (Maidin, Othman, & Ahmad, 2014), use of social media in disaster relief (Chong, Leong, Pan, Bahri, & Khan, 2014), a statistical study focusing on the assessment of flood impact (Khan, Shaari, Bahar, Baten, & Nazaruddin, 2014) and flood mapping (Therany, Pradhan, & Jebur, 2014). Thus, it is important at this stage to point out that there are no traceable documented researches on communication during flood disaster, crisis communication during or after a flood disaster, or any relevant analysis of communication activities or processes pre, during and post flood in Malaysia. Hence the need to address this issue and propose appropriate communicationconcept.

The magnitude of flood disaster in Malaysia shed light on critical factors in determining the need for a crisis communication management policy to be in place. The fact that flood risk management across the globe are changing and moving towards a comprehensive approach in response to new scientific approaches, research findings within the domains of natural sciences, arts and social sciences (Klijn & Schweckendiek, 2012), modeling the good practices of crisis

communication management through a well-integrated approach to crisis communication plan is warranted in guiding crisis response following the flood crisis in the Malaysian context. This paper undertakes an analysis of crisis communication disaster from the 2014 flood catastrophe in East Coast Peninsular Malaysia.

V. METHODOLOGY

The dominance of qualitative approach has been well debated, stressing on its strengths and limitations. As echoed by Denzin and Lincoln (2008), a qualitative researcher stressed on socially constructed nature of reality, the intimate relationship between the researcher and what is studied and the situational constraints that shaped inquiry to answer questions that focused on how social experience is created and given meaning. Thus, this research will be conducted using the qualitative method. The method allows the researchers to collect non-numerical data, acquire deep understanding of a phenomenon and reveal the respondents' range of behaviour (Miles & Huberman, 2006). Data will be collected from 20 victims and survivors from Kuala Krai in Kelantan who were affected by the recent East Coast floods. Data collection through in-depth interviews on a one-on-one basis in a natural setting will be adopted. The natural setting is vital in order to avoid the researcher controlling or manipulating the environment (Miles & Huberman, 2006). The researchers intend to select victims and survivors using the convenience sampling method whereby those who are willing to share their thoughts and feelings will be taken to participate in the research. The selection however will not be bias in terms of gender, race, age, and religion. Due to the short period of research (9 months), the research that will be conducted will be non-clinical therefore data collected will be solely based on the feelings and emotions of the victims and survivors on the tragedy. Data gathering will also adopt a series of protocol and format of how the interview sessions will be conducted through the process of recording, transcription and analyzed so as to formulate rational and sound recommendations for the study. Most importantly, the sequence of methods will be used in this research, taking into account the process through planning the research, data gathering process until the phase of analyzing and reporting the findings. Data gathered will then be analyzed for codes or themes using the NVIVO software. These themes help to determine the patterns of posttraumatic emotional symptoms of those affected thus assisting in developing an intervention plan to recuperate and reconstruct the lives of the victims and survivors.

VI. RESULTS AND DISCUSSION

(A) The degree of coordination between authorities, publics and stakeholder

The incident of floods in the East Coast Malaysia shows that these problems arise because the federal government, especially the MKN has no Standard Operating

Procedure (SOP) comprehensive covering all aspects. At the same time, the state governments, especially the Kelantan's state government has no comprehensive SOPs to coordinate the movement of victims through the JKKK. In this case, the responsibility dealing with the major flooding cannot be totally by the federal government but also by the state government. They have been elected by the people because of the trust and so that they have to be responsible too in dealing with the flooding in order to maintain the safety and welfare of its citizens through state agencies and JKKK. The main problems of non-preparedness federal government and the state governments in dealing with major flooding disaster were due to the attitude of senior government officials who are still in the comfort zone. In earlier incidents, the federal and state governments usually see a perspective based on the perspective of the current, which are all considered to be no problem. The study shows that all agencies and communities must be engaged in disaster management to be more efficient (Kafle, 2005). Mounting officials with expertise is highly desirable to coordinate the regional level, local and regional. Improve training for local authorities, especially in mitigation and preparedness.

(B) The state of MKN- Experts

The function of MKN at that time, especially the national Disaster Management Centre is to coordinate the management of disaster at the national level. So in this building, the task of National Disaster Command Centre is to gather all inputs or reports from not only Kelantan but also from all states that were affected too. MKN will deploy manpower through army, polis, JPAM, MKNs role during disaster. MKN involved High rank officers, which include ATM, PDRM, Professors in various fields and many more. Floods requires management strategic and include the proper planning to enable affairs and matters concerning flood issues can be effectively addressed, particularly in reducing the number of victims killed and property destroyed (Kafle, 2005). The identification, analysis, treatment, monitoring and evaluating of a disaster risk are called as Community-based disaster risk management (CBDRM) in which at risk communities that actively engaged to reduce their vulnerabilities and enhance their capacities. The program involves the local communities to create awareness throughout training, sharing knowledge and risk assessment mapping, technical training in first aid, search and rescue, firefighting and disaster management to specialized groups of volunteers in the community and also establishing the Community Emergency Response Team (CERT) at the community level and helping the communities in developing crises/ Emergency plans and providing the essential items on need and emergency basis.

(C) Lack of coordination between authorities, agencies, publics-excerpts

IPK Kelantan, the headquarters contingent of state police, opened one operational room/center. Then we have the MKN operational room that is the center of

coordination. Other department such as the police, fire brigade, the Army has their own centre as well. Army-they just waits for orders. We also have those that were opened by the SUK for each state. In that operational room/center also requires the involvement from the police, army and others. Reliability and accuracy of news either through formal channel or social media is questionable, during disaster, causing confusion among victims. People are confused with orders from various authorities. It is supposedly from MKN to the Police Force and then orders are disseminated to the respective authorities. Traffic and crime related will be the responsibility of PDRM. However, there are conflicting information from different centers. Latest information are not shared in most time. This complicates our tasks". In Malaysia, the floods occurred every single year, especially in the East Coast states during the northeast monsoon. To reduce the impact and effect on the victim in the face of this phenomenon, the concerted action and cooperation among government agencies, NGOs, the voluntary, private sector and the public need to be adjusted to mount a response to disasters. Flood disaster management should be strengthened and coordinated with government agencies that have responsible with the tasks and roles according to their expertise and the goal that was created.

The pre-crisis phase, the crisis situation and its aftermath are the ongoing process of crisis communication (Ulmer, Sellnow, & Seeger, 2007). The purpose of the communication is to reduce uncertainty about the response, resolution, the negative perception and the blame of the situation (Stephen, Malone, & Bailey, 2005). For authorities, the goals of crisis communication are to help restore order and minimize damage to people and property, prevent panic by providing information related to the crisis event, facilitate informed decision making and strengthen the self-efficacy of citizens. The effective crisis communication must have strong stakeholder relationships so that it may prevent breakdown in established organizational structures (Ulmer, Sellnow, & Seeger, 2007).

The different message strategies need to be addressed to different stakeholders since the needs; expectations and media use vary between public group (Stephen, Malone, & Bailey, 2005). As we know, the flow of information is crucial to make the efficient communication between the response organizations, how the public groups response to the organization in form communication expectations and provide the consistent information about the problem in hand. The information must be provided timely so that it can help minimize the negative impact to the stakeholders and also the organization (Huang & Su, 2009).The mistake that we can see when the authorities communicating with the citizens is when they were keeping it silent in order to prevent the panic among the citizen. The availability of information will gives the public the opportunity to evaluate the risk and make informed choices on actions (Reynolds & Seeger, 2005). The golden lines of crisis communication are the honesty, candor and openness. To reduce anxiety, the accurate, extensive and timely information have been expected and to activate

people in self-efficacy and protective measures. For response organizations it is a challenge to conduct communication that is timely, accurate and consistent. In crisis situations, people want explanations of what happened as well as answers to what is being done to minimize similar risks in the future.

What we have gauged on the actual communication process during the disaster
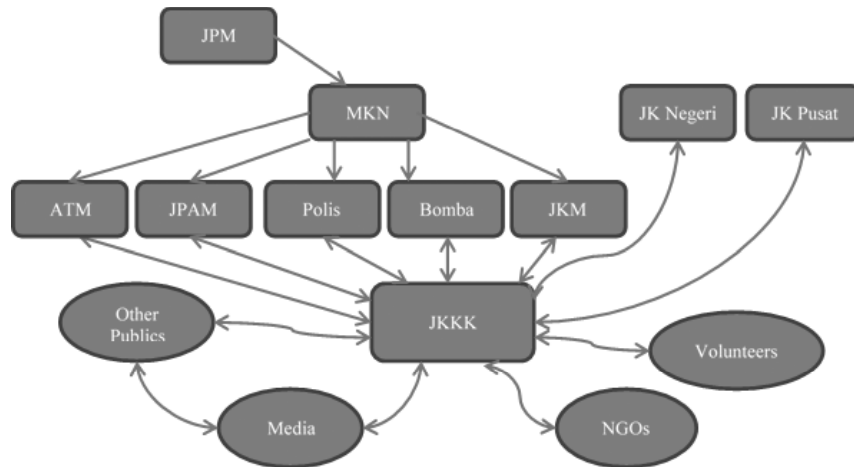

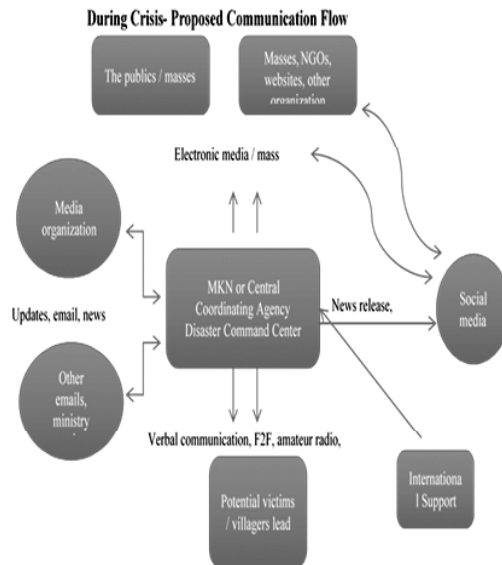**Figure 1:**   Actual Communication Process during the Disaster

Figure 2:   Proposed Communication Flow during Communication Flow Preparedness by authorities, publics and stakeholders

VII. CONCLUSION

There are a lot lessons that could be learned during the 2014 flood catastrophe and we have identified some recommendation could be used in future for policy formation, planning structure and crisis communication execution. Some of them are as follows:

- Early preparation and simulation of what we have and what works need to be done and tested multiple times and continuously
- The need for a known centralized body where everyone can refer to is crucial. The level of commands and communication need to be transparent for effective communication flow and crisis communication and management
- Integration, unity and teamwork among all of us are needed especially during a disaster. Put aside political, religious and personal belief but need to focus on supporting humanity
- Transparency in the dissemination of information should be done effectively
- Each group's function and responsibility should not only be clear to the group but also to others as well. This is to avoid redundancy of tasks where during crisis; it can cause money, time and lives.
  i)   Identify and test more crisis sites/asylums, for example, group corridors, schools, mosques, and so forth and gathering zones so that when disaster happens, the sites can truly be a secured site
  ii) Future construction of houses and base that could withstand future disaster;
  iii) Rescue and care team during the disaster need to be trained and equipped with necessary equipments
  iv) Post crisis management should be strengthen where non-profit/non-governmental groups should also be included and mobilized to help victims and those affected.

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