

Thailand mourns the late, great monarch, His Majesty King Bhumibol Adulyadej

His Majesty King Bhumibol Adulyadej, who was revered as the “father of the nation” among Thailand’s 67 million people, passed away 13 October, 2016.

The late Monarch was beloved among all his subjects – homes and businesses throughout the kingdom displayed His Majesty’s portrait in an honorable, prominent position, illustrating the people’s love for their king, who reigned for 70 years (1946 – 2016).

His Majesty King Bhumibol – the ninth King of the Chakri Dynasty – will be remembered as the Monarch who worked hardest to improve the livelihoods of all Thai citizens, through his comprehensive understanding of their living conditions. This earned His Majesty the well-deserved title of “father of the nation” from his people.

At His Majesty’s coronation ceremony, the monarch made the pledge that “We shall reign with righteousness for the benefit and happiness of the Siamese people”. Throughout his 70-year reign,

His Majesty proved through his tireless efforts that he truly believed that it was the Crown's duty to serve its subjects.

Following his accession to the throne, His Majesty King Bhumibol dedicated himself to visiting every part of his Kingdom. There was not a single location considered too remote for the young Monarch to travel to in order that the King could learn how his subjects lived and the struggles they endured in various rural and remote areas. His Majesty was often seen fording rivers or trekking up mountainsides in order to reach many of his subjects. The King was even known to fly by helicopter into remote areas that were inaccessible to even the sturdiest off-road vehicles. His Majesty was often accompanied on these expeditions by Her Majesty Queen Sirikit and their children. Such selfless efforts enabled Their Majesties to gain a clear understanding of all levels of Thai society.

Upon learning of the difficulties that his subjects experienced, His Majesty began researching projects and initiatives that could help alleviate their hardships and help to improve their lives. His research led to the creation of over 4,000 Royal Development Projects. Among these projects were an initiative aimed at helping hill tribe people who were engaged in unsustainable farming practices, as well as programs aimed at

improving water management and reversing the effects of soil erosion. One project generated renewable energy from palm oil, while the Chaipattana Aerator received a patent and was successfully employed around the world.

As a visionary, His Majesty King Bhumibol understood that the attempt to improve the lives of the Thai people could not be a temporary effort, so to bring about real benefits to the people, projects were long-term while also aiming to sustain and protect the nation's environment and natural resources.

The projects to help the hill tribe people were of particular importance to His Majesty, for these people were then deriving their income from growing opium in northern Thailand, in Chiangrai right in the heart of the notorious Golden Triangle. In the 1960's, His Majesty encouraged the promotion of crop substitution programs for the hill tribe people in northern Thailand, which over the years has successfully transformed the opium-growing areas into agricultural farms fully enriched with high-value products such as strawberry, coffee, macadamia, flowers and various fresh vegetables, generating stable income for tribal and rural farmers. The reduction in opium production also aided in reducing the number of drug addicted population within and outside Thailand. The clearest proof of the projects' success is

that the Golden Triangle, once known to be a stronghold of drug mafia, is now a popular tourist spot in Chiangrai.

One of the main reasons for the success of the projects was the system used to manage them. His Majesty King Bhumibol did not issue simple orders or decisions. Rather, the King utilized a detailed consortium, which he had personally devised. The first step involved researching available data, then combined this with the information His Majesty gathered during his interactions with local people. Next, His Majesty would consult with academics and officials to ensure the best possibility of success for each project. Once this stage was completed, the initiative was passed on to the government for implementation.

While he worked tirelessly for the country, His Majesty King Bhumibol felt that his people would be better served if centers were created where research could be carried out for the benefit of the projects. The idea was that the variety of climates and ecological conditions found throughout the nation could be taken into consideration. With this in mind, the Royal Development Study Centers (RDSCs) were initiated. His Majesty opened six RDSCs, covering the country's major regions, from Chiang Mai and Chiang Rai in the north, where they help to

advance the opium crop substitution projects, down to the southern province of Narathiwat.

Each center works closely with academics, the government and local communities on ways to apply research, along with modern agricultural techniques, to create sustainable livelihoods for people living in the areas using local resources while protecting the environment at the same time. Another unique feature of the centers is that they do not try to alter the land or disrupt local culture, but work hand-in-hand with the local people and resources available in each area.

There is no doubt that the Royal Development Projects and RDSCs greatly enhanced the quality of life for people living in Thailand's rural areas. However, His Majesty's most significant achievement was the creation of the Sufficiency Economy Philosophy (SEP), which was introduced in 1974.

The Sufficiency Economy Philosophy encourage people to live within their means and not abuse natural resources in order to enhance sustainability and create resilience to external challenges. The core principles are quite simple; live a life of moderation, applying reasonableness and self-control – this philosophy also aims to utilize a bottom-up approach. The Royal

Development Projects and RDSCs has served as testbeds for various applications of the philosophy, such as the RDSC at Khao Hin Sorn, which tested practical application of the philosophy on farming and agriculture.

Over the course of more than 40 years, the philosophy has become ingrained among Thai citizens, regardless of their gender, age or economic status, and it has become part of their daily lives, particular following the hard lessons learned from the 1997 economic crisis. It has even become a key element among the business practices of large Thai corporations. The philosophy has not only taken hold throughout the kingdom, but was also adapted and applied in several other countries, such as the Democratic Republic of Timor-Leste, the Lao People's Democratic Republic and the Kingdom of Lesotho. Thailand also continues to share its positive experiences implementing the philosophy with the international community, such as the G77 countries.

His Majesty King Bhumibol's lifetime dedication to his people and his efforts to protect the environment did not go unnoticed within the international community. In 2006, His Majesty was awarded the first United Nations' Human Development Lifetime Achievement Award. The UN recognized that His Majesty's focus

on helping to develop small-scale agriculture, farming technologies suitable for the country's geography and the proper management of water resources to better cope with drought and floods had in turn helped to benefit millions of His subjects living in the country's rural areas.

His Majesty was also awarded the IAUP Peace Award by the International Association of University Presidents in 1986, the UNEP Gold Medal of Distinction by the UN Environment Program in 1992, and the World Health Organization (WHO)'s Plaque in 2000, along with numerous other international awards, which all acknowledged His Majesty's dedication to his people and his country.

His Majesty's life-long devotion towards advancing and refining Thailand's agricultural sector resulted in a significant improvement in the welfare of Thai people and paved way for Thailand to become the world's number one net food exporter.

Through royal development projects, Thailand became self-sufficient through its ability to feed itself as well as the rest of the world.

King Bhumibol Adulyadej: Thailand's International Monarch

His Majesty King Bhumibol Adulyadej, the “Father of the Nation” to the people of Thailand who passed away on 13 October 2016, led a remarkable life filled with valuable achievements. His Majesty's passing left an indelible influence not only on His people but also on the international community.

His Majesty was born in the United States in Cambridge, Massachusetts- being the only monarch born on US soil. Spending His formative years in Europe, mainly in Switzerland, His Majesty studied science and then politics before acceding to the throne in 1946. Despite growing up in the West, His Majesty was instilled by the Princess Mother, HRH Princess Srinakarindra, with the values and traditions of the Thai people. Thus, His Majesty's background was a unique convergence of Western and Eastern cultures. This was reflected in His Majesty having a wider range of interests than other Thais of His generation, ranging from the arts such as music, photography and painting, sports such as sailing- to scientific inventions and innovations. His Majesty King Bhumibol was a true “Renaissance Monarch” in every aspect.

His Majesty's grandfather, King Chulalongkorn the Great, also known as King Rama V, had guided Thailand into the modern era. The King enabled Thailand (or Siam as it was then known) to be the only country in Southeast Asia to not be struck by the wave of colonization. King Rama V achieved this by learning tactics from the West and by travelling to Europe in 1897 in order to make Siam known to the Western monarchs – to showcase them that Siam was a civilized nation and not a land of 'barbarians'.

Early in His Reign, His Majesty King Bhumibol Adulyadej followed in the footsteps of His illustrious forebear. In less than a decade, from 1959 to 1967, His Majesty, accompanied by Her Majesty Queen Sirikit, visited 27 countries. He met with important leaders of the world, reaffirmed ties forged in Europe during the time of Rama V, addressed the US Congress, and placed a small country like Thailand firmly on the international map. Apart from merely “showing the flag”, the trips were also opportunities for His Majesty to learn the best skills and practices from developed Western nations, which He would later utilize to the benefit of the Thai people.

After that period of international travel, His Majesty returned to Thailand and never travelled abroad again. When asked why, His Majesty responded that He wanted to understand Thailand better in order to help the Thai people. For the remainder of His Reign, His Majesty travelled to all the remote corners of Thailand, no matter how underdeveloped or difficult to reach, visited all of Thailand's provinces, and met with local residents from all walks of life – farmers, fishermen, merchants, local administrators – to listen to their views and needs. His Majesty provided technical advice to government agencies in forming solutions to help the common people, bringing about

a synergy between local traditions and modern methods. During all of His domestic travels, His Majesty was invariably accompanied by Her Majesty Queen Sirikit and other Members of the Royal Family. From a young age, Members of the Thai Royal Family were instilled with Thai culture and values, including the responsibilities to the Thai people. For this reason, They continue to work until this day to help support and improve the lives of Their subjects.

His Majesty consistently maintained that Thailand is inherently an agricultural country and should never abandon its roots- repeatedly emphasising that Thailand must be able to feed itself. His Majesty therefore attached a great deal of importance in helping agriculture flourish. He applied His knowledge in sciences, mainly acquired from His previous trips abroad, to create and support over 4,000 Royal Development Projects. The Projects focused on increasing the efficiency and effectiveness of farming methods, using modern techniques such as crop substitution, water management, reversing the effects of soil erosion, along with inventions and innovations such as artificial rainmaking, the Chaipattana Aerator and generating renewable energy from palm oil- many of which received patents domestically and abroad. Ultimately, this resulted in a significant improvement in the livelihood and welfare of the majority of Thailand's farmers.

In this holistic approach to sustainable development, His Majesty was a visionary far beyond His time. Almost every priority that the world now focuses on in the Sustainable Development Goals (SDGs), His Majesty had been advocating for and practicing for many decades. His Majesty first outlined the Sufficiency Economy Philosophy (SEP) in 1974, an approach that encourages people to live within their means and not abuse natural resources in order to increase sustainability and create resilience to external challenges. Its core principles, giving importance to living a life of moderation and applying discipline and self-control, are at the heart of sustainable development- a cause that the world now views as a priority agenda. Over the course of more than 40 years, His Majesty's philosophy continues to be ingrained in the minds of the Thai people, particularly following the hard lessons learned from the 1997 economic crisis. Currently Thailand continues to openly share its positive experiences and promote the philosophy with the international community.

The significance that His Majesty attached to agriculture has evolved Thailand into one of the world's leading agricultural powerhouses today. Now Thailand is not only able to feed itself; it also contributes immensely to the maintenance of global food security. Today, many of His Majesty's inventions and innovations, such as artificial rainmaking, are increasingly being applied abroad. Such remarkable achievements that have created a positive impact on a local and global scale have earned His Majesty the recognition and accolade of "Thailand's Development King" by the United Nations and the international community. This is a title well-deserved for His Majesty King Bhumibol Adulyadej in light of the incredible legacy He has left behind.

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The Royal Rainmaking

Water scarcity is one of the most pressing issues facing our world today. The United Nations estimates that more than 40 percent of the global population live in conditions where there is shortage of water. In most of the agrarian countries where agriculture represents a significant source of GDP, the need for water consumption in the sector has inflated to more than 80 percent of the overall demand.

In Thailand, farming activities take up almost 70 percent of total land use. This requires a high amount of water supply, mostly for the agro-industrial sector. The result is a sporadic dry spell throughout the country. Coupled with high levels of deforestation over decades, the lack of rainfall intensifies aridity, especially during the dry season.

Having shown interest in science and technology at a young age before enrolling in the Faculty of Science at the University of Lausanne, His Majesty King Bhumibol Adulyadej employed his knowledge based on his vision to improve the living conditions of the people, especially for disadvantaged farmers who continue to suffer from shortages of water. In 1955, during a visit to the most remote areas in Thailand's northeastern provinces, His Majesty observed how weather conditions were cloudy, yet not producing any precipitation. The incident marked the beginning of artificial rain making, acknowledged by Thais as the 'Royal Rainmaking Project'. His Majesty had realised the feasibility of this project after conducting a series of relevant research on meteorology and weather modification.

The first experiment was conducted on 1 July 1969 under the supervision of His Majesty, with Mom Rajawongse (M.R.) Debariddhi Devakula, an expert in agricultural engineering, as an assistant. With the initial result being a success, in 2003 His Majesty was granted a patent from the European Patent Office for weather modification through the Royal Rainmaking technology.

Ever since the invention was introduced, it has gone through a series of transformations, enabling transfers of technological expertise and attracting cooperation from different actors with a common hope to enhance the efficiency and effectiveness of the artificial rainmaking process. In doing so, the following steps are employed: 'agitating' to activate cloud formation by using weather modification techniques; 'fattening' to activate the accumulation of cloud droplets, and lastly 'attacking' to initiate rainfall from the cloud.

The project later evolved into the Bureau of Royal Rainmaking and Agricultural Aviation under the Ministry of Agriculture and Cooperatives. The establishment manifests the technology's success and practicality in alleviating the water resource management crisis in Thailand. In addition to this, the project serves as a basis for providing technical cooperation to countries with the same desire to combat droughts and improve water management.

The success of artificial rainmaking drew global attention and brought in requests for knowledge sharing from several Asian countries. The calling has been pronounced as far as the Middle East, where farmers suffer from arid climates and extremely long periods of dry season. Jordan, experiencing a range of 20-200 millimetres of rain annually, has so far been the only country eligible for the operation due to its uniquely disadvantaged geography and climate conditions. The operation is expected to ease the side impact of climate change suffered by the country, which causes a decrease in precipitation from 15 to 60 percent per year.

Since its birth in 1969, the Royal Rainmaking project continues to alleviate drought problem in Thailand's rural area enabling farmers to harvest without disruption. The Royal Rainmaking Project was made possible through His Majesty's persistent efforts, talent, skill and most importantly, a sincere and genuine regard for his people and country.

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His Majesty King Bhumibol Adulyadej and the Thai Muslim community

Much has been written about the love that Thai people have towards His Majesty King Bhumibol Adulyadej, who during His 70-year reign had dedicated Himself to improving His people's lives. His Majesty stood by the oath which He gave during the coronation ceremony, that "We shall reign with righteousness for the benefit and happiness of the Siamese people." Nevertheless, little did anyone know of the close relationship between His Majesty King Bhumibol and the Thai-Muslim community living near Thailand's southern borders that made up part of the country's overall population.

According to the late Thanpuying Samorn Bhuminarong, a prominent leader of Thailand's Muslim community, a strong bond had been maintained between His Majesty the King and the Thai-Muslim community during His reign. For many Muslims in Thailand, the King was and continues to be a source of inspiration, guidance and support. The King tirelessly worked to promote religious and cultural diversity in Thailand, constantly stressing the importance of peaceful coexistence among the country's different religious, cultural and ethnic groups.

His Majesty's and the Royal Family's uniquely special, deep-rooted bond with the Thai Muslim community was the product of not just support and guidance, but rather His Majesty's actions that reflected a genuine respect and interest in the religion and most importantly the will to promote acceptance and enhance tolerance throughout the country.

The late King Bhumibol, known to be fond of languages, was a key force behind the publication of a Thai edition of the Al-Quran. His Majesty's fascination of Islam's holy scripture of the faith was initially sparked in 1962 when He was presented by the Consul of Saudi Arabia with a copy of the English edition of the Quran. After studying the text, His Majesty expressed a desire to commission a Thai edition. The King proceeded to ask Thailand's Islamic spiritual leader, the Sheikhu'l Islam (Chularajmontri), to prepare a direct Thai translation of the original Arabic version so that copies can be distributed to all parts of the Kingdom.

In 1968, Their Majesties the King and Queen presided over the ceremony to commemorate the 1,400th anniversary of Quran, despite that Thailand is not a majority-Muslim country. On this occasion, the first Thai edition of the Quran was published and copies were royally conferred to masjids across the country. His Majesty also explained the importance and benefits of translating the holy Islamic scripture into Thai, as it will allow Thai Muslims with limited or no knowledge of Arabic to study and gain a deeper understanding about the principle teachings and practices of Islam.

His Majesty had openly developed a keen yet genuine interest in Islamic culture and history. Every year, the King or a member of the Royal Family, as His Majesty's representative, participates in the ceremony commemorating Mawlid al-Nabi, known as the birth of the Prophet Muhammad.

His Majesty and the Thai Royal Family engaged in steps to acknowledge and prioritise the concerns and needs of minority Thai-Muslim communities that often perceived themselves as neglected. To increase Their presence, Their Majesties the King and the Queen travelled to the South to reside in the royal palace located in the province of Narathiwat. The palace was built with the intention of enabling Their Majesties to be closer in proximity to the Thai Muslim communities.

Having a residence in the south enabled Their Majesties to conveniently meet with local communities in order to best understand their concerns and needs. Such knowledge had then eventually formed the basis of various royal development projects aimed at improving the lives and welfare of Thai-Muslims in Thailand.

The late King Bhumibol's work approach was based on the principles of "Understand, Access, and Develop", which stressed that all parties concerned, including government officials and local communities, must be on the same page in understanding the issues. This would enable issues to be resolved more efficiently and pave way for development. In practice, it is an approach that focuses on citizens' participation.

For example, some areas in the Southern provinces faced challenges such as drought and soil conditions of high salinity and acidity content. His Majesty's solution was to provide specific species of plants and animals that were suitable for breeding in drought and poor soil conditions. This enabled agricultural workers to be able to feed themselves and have regular sources of income.

The worldly King's public embrace of minority cultures and values sets a strong example for all Thais to respect cultural and religious differences. This ultimately propelled the nation towards greater tolerance and pluralism.

His Majesty had recognised the importance of forging personal ties with local representatives in the South. The most famous example was his friendship with Uncle Wahdeng PuTeh or "PohDeng", known as the "Friend from Saiburi." Uncle Wahdeng was a local fruit farmer whom His Majesty first met during a trip to the Saiburi district in Pattani Province in 1992. His Majesty was impressed with Uncle Wahdeng's humility, honesty and local knowledge, and asked Uncle Wahdeng to show Him around the area, asking him about the needs of the local communities. During subsequent visits to the Southern Provinces over the years, His Majesty would always request to meet with "PohDeng", and "PohDeng" would often send the best produces from his fruit orchards as gifts to His Majesty. Their friendship continued until Uncle Wahdeng passed away peacefully in 2012 at the age of 96.

His Majesty visited local religious schools and masjids across the country and made personal contributions from His own funds to support their activities and causes. The King also provided medical supplies and sent royal doctors to visit and treat ill patients.

His Majesty encouraged the Thai Government to build a Central Masjid in each of the Southern Border Provinces and then personally attended the opening of each Central Masjid. In 1990, when His Majesty went to reside at His seaside palace in Hua Hin, He visited a local Muslim community in an area that had a small masjid, the Masjid Nurul Ehsan, which was built on a very small plot of land. Upon being made aware of the needs of the local community, His Majesty granted additional land to the community for the masjid. Subsequently in 1996, His Majesty made contributions from His own funds for the construction of a new Masjid Nurul Ehsan on the same site, which was completed in 1999.

Last but not least, His Majesty saw great importance in improving the education system for Thai Muslims. His Majesty appealed to educators and relevant agencies to consider ways and means for providing a strong religious education with a methodical curriculum so that Thai Muslims can thrive in society.

The late King Bhumibol also initiated development projects to assist Thai Muslims in their career development. Development Centers were set up in various parts of the country, including the Phetchaburi and Narathiwat provinces, enabling the once impoverished populations to have an opportunity to become self-sustainable and improve their welfare.

The late King's personal attention and care to the Thai Muslim community over the years, along with the support for the various Royal initiatives and projects for the community, were testament to His respect and support for Islam and devotion to all His subjects who practice the faith. Such was reflected by not only the reverence that Thai Muslims have towards His Majesty and the Thai Royal Family, but also the acknowledgement and respect from Islamic communities in other countries including Saudi Arabia and Iran. The beloved King Bhumibol Adulyadej's passing on 13 October 2016 brought together in unity Thailand's Muslim population and the rest of Thailand to embrace their common love by mourning their revered King, whose generosity, self-sacrifice, wisdom and grace had touched the hearts of all Thais.

Honoring a Down to Earth King on World Soil Day

He sat at the pinnacle of His society, but constitutional ruler King Bhumibol Adulyadej of Thailand was a monarch and a man who was down to earth. For much of His 70 years on the throne – the longest reign of any monarch at the time of His passing – King Bhumibol traveled to the poorest and most remote corners of His Kingdom, sitting on the ground with farmers and villagers, listening to their problems and responding with over 4,000 sustainable development projects to better their lives. Many dealt with improving water, agriculture, livelihoods and health. As one of His closest aides said, however, “we were always confronted with soil issues.”

Those issues could be vexing. But the late King’s innovative solutions to soil problems earned him the first Humanitarian Soil Scientist award from the International Union of Soil Science in 2012. In 2014 the United Nations designated His Majesty’s birthday on December 5th as the annual World Soil Day and the year 2015 as the International Year of Soils, with events held in New York, Rome, Bangkok and cities around the world. In a message to the UN, the late King said that in order to ensure “viable, long-term food security and a sustainable ecosystem, [soil] issues must be addressed as an urgent priority.”

Most people take soils for granted. Soils, however, are as essential to life as the air and water. Healthy soils support food production. The forests and fields they nourish host one quarter of the world’s species, and are a source of fuels, medicines, fibers and animal feed. Soils store and filter water, and play a crucial role in preventing and mitigating climate change by absorbing and storing massive amounts of carbon. Healthy soils are essential for a sustainable future.

But soils are a finite resource. Just 22 percent of the earth’s land surface can be used for producing 95 percent of our food. One third of that has been degraded by erosion, contamination and desertification, with much of it damaged in the last half century. “The world status of soils is quite scary,” said Claire Chenu, a soil scientist at AgroParisTech. As Jose Graziano da Silva, Director-General of the Food and Agriculture Organization noted, it can take up to one thousand years to form one centimeter of soil. “And this same centimeter can be destroyed in only a few minutes.”

That type of destruction was evident to King Bhumibol when He visited the community of Huai Sai in the province of Petchaburi in 1983. The late King looked out at a former forest reserve and saw a dry and barren landscape – except for rows of pineapple plants. “This place will become a desert,” He predicted. In their desire to earn more income, farmers had plunged into monocropping – planting a single crop while eliminating all other vegetation and

upsetting the natural balance of the ecosystem. The soil had been sapped of its vital nutrients, and chemical fertilizers could restore them for only a limited period. It was a problem plaguing farmers in many parts of the world.

King Bhumibol initiated a holistic program to restore the area. Today, Huai Sai is a mixture of thick forests with abundant wildlife, family farms and gardens, along with agricultural, environmental and community projects. The late King's approach encompassed principles He would later crystalize in His theory of Sufficiency Economy in 1998. Rooted in the Buddhist ethos of moderation and balance, the Sufficiency Economy is a set of principles designed to minimize risk and build resilience to internal and external shocks. Its principles can be applied not only to family farms, but also to national economies and other professions.

In 2007, the United Nations Development Programme wrote the "Sufficiency Economy has great global relevance during these times of economic uncertainties, global warming and unsustainable use of natural resources. It places humanity at the center, focuses on well-being rather than wealth, makes sustainability the very core of the thinking."

The approach advocates diversification. Farmers are urged to build ponds for fish breeding and irrigation. Instead of one cash crop, they grow and rotate several using natural, organic fertilizers and pest management. Diversification protects against fickle markets, and sustains soil health. "He always says 'use nature to restore nature,' " said Sumet Tantivejkul, who oversees the King's projects at the Chaipattana Foundation, a non-governmental organization implementing developmental projects that are in line with royal initiatives.

In northern Thailand the late King planted rows of vetiver grass – dismissed by some as a weed – to prevent the erosion destroying vital watersheds. He would use it in the Northeast where vetiver's deep roots and ability to draw nitrogen into the earth would hold the dry, sandy soil in place and enrich it, increasing yields for poor farmers. In the Deep South, He would use other innovative methods to turn tens of thousands of hectares of peat swamp into productive farmland.

Even though King Bhumibol is no longer with us on this December 5th, millions of Thais and others who appreciate His legacy turned out to honor and show their love for him at home and abroad. Many will commemorate His achievements in sustainable development, science and even the arts. And many will also realize the day is World Soil Day, when environmentalists and soil scientists in every corner of the earth pay tribute to the late King whose name, Bhumibol, means "Strength of the Land."

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