

Challenges of Implementing the Integrated Electronic Property Management System (IEPMS) in Zimbabwe's public sector

Alouis Chilunjika

School of Public Management, Governance and Public Policy, University of Johannesburg, South Africa.

Corresponding author: chilunjika@gmail.com.

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OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.

ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com

Also available at <https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/>

Abstract: Property asset management in most public sector entities in developing countries has been predominantly done manually. Organisations are now shifting from the archaic manual paper-based to an integrated electronic property management system (IEPMS). Adopting an integrated system of managing property assets despite being a desirable solution to property asset management is constrained by a myriad of challenges. Using the systems theory as the theoretical framework, the study examines the factors militating against the implementation of an integrated property management system in Zimbabwe's public sector. The study being qualitative relied on in-depth interviews and written documents to collect data which was analysed using thematic and content analysis. The study established that the implementation of the IEPMS in Zimbabwe's public sector is impeded by social, organisational, economic and legal challenges. The study therefore recommended ways and strategies to strengthen the smooth adoption and operationalization of the IEPMS in Zimbabwe's public sector.

Keywords: Property Management, Integrated Property Management System, Challenges, Public sector, Zimbabwe.

Introduction

In many public sector business organizations, most property management departments normally encounter operational challenges especially on the property management practice they employ to perform their day-to-day property management duties (Gurajena, 2019; Bvekwa, 2017). In developed nations like the United Kingdom and the United States of America their public sector real estate institutions have since moved from paper-based management practice that is prone to missing and misplacement of property management files resulting in failure to have a comprehensive record of the size and the nature of their real estate property stock (Vermiglo, 2021). Bharati and Chaudhury (2006) asserted that most of developed nations have since adopted some digital property management practices like the use of property management software packages to administer their duties since these software packages have proven to be efficient in transparency and accountability.

The Swedish public sector has implemented a radical market-oriented reform of its real estate management in a quest of enhancing accountability, transparency and wanting to manage real estate in a more efficient way, (Halvitigala and Gordon, 2014). State-owned properties were allocated to several entities that leased their properties to authorities on conditions like those on the open market; the entrusted entities would adjust their property management systems to suite the changing circumstances. The reform created economic incentives for authorities in the public sector to economise on premises. In Poland and Slovakia, the public sector has also adopted the principles of good governance as tools for effective management. These principles among others include openness, participation, accountability, and effectiveness. Considering this, Poland and Slovakia governments discovered that to attain sustainable real estate management, it is vital to use real estate information systems that are up to date and precise (Brackertz and Kenley, 2002)

South Africa through the Department of the Public Works had since started making some strides in running away from paper-based property management system that is characterised by bureaucratic chaos to improve of the state's immovable assets. On the creation of the state property database, Kaganova and McKellar (2016) further argued that

in 1999 the then Minister of the Public Works in South Africa through the ideas around the National Fixed Asset Register Initiative (NFARI) ensured that state owned assets and properties were captured into one database to be able to reduce the corruption and fraud cases that were rampant across the governments departments. Al-Rashidi, (2010) asserts that there is however a greater need to ensure that the property register and database is up-to-date so that it is easier to determine the state property portfolio. Zahid, (2018) stated that in Kenya the measures noticed included the creation of a national state property database that can be used nationally and the proposed establishment of a state property company that can deal with the management of the properties.

The Zimbabwean public sector is still adhering to its paper-based manual property management practice which usually results in manipulation of property files and missing of records. There is also accumulation of huge rental arrears due to delayed preparation of rental invoices, and statements because the state is using a manual management practice which is fragmented. The paper-based system is vulnerable to manipulation and missing of property records leading to loss of data and ultimately distortion of the entire property performance system (Bvekwa, 2017). The current corporate governance practice in relation to property management have not been able to effectively improve the efficiency and the effectiveness of the public property management practice (Chigudu and Chirisa, 2020). This is because of issues like corruption, inconsistencies in policies, lack of commitment and the absence of the rule of law and issues related to political interference. Corruption has been institutionalized and this adversely affect the property management operations (Gurajena, 2019; Matavire, 2018).

It can be noted that the use of integrated management systems is of paramount importance due to its usability, easiness of conducting property management duties and its ability to enhance accountability. However, if property management practice of the public sector is not modified into an integrated property management system, accountability, and transparency of property management performance in the public sector will be compromised. It should thus be noted that the establishment, adoption and operationalization of an IEPMS is encumbered by a myriad of organisational/institutional, economic, legal, and social hindrances. It against this backdrop that this study focuses on assessing the factors militating against the successful adoption and operationalization of an integrated electronic property management system in the Zimbabwean public sector.

Literature Review

Defining Property Management

Establishing policies, objectives, and goals, as well as putting those methods into practice to attain those goals and objectives, are all part of managing property. Singh, (2018) defines property management as an activity that aims to govern ownership interests in real estate while considering the owner's short- and long-term goals as well as the specific use for which the property is held into account. From a practical standpoint, property management is defined as the work done to manage and maintain the development, including its facilities (Greenberg, 2019; Bevir, 2016; Dixon, 2015). This is done at a level that will preserve or enhance the development's value, create a safe, functional, and conducive living environment for occupants, keep or restore every facility in an efficient working order and in good state of repair, and project a good image.

According to Epstein (2019), property management is responsible for all necessary reporting, accounting, upkeep, and decision-making to guarantee the financial and physical health of real estate assets. In this perspective, the author examines three aspects: the management of a building's non-physical aspects, such as legal and tenure issues, the management of a building's physical aspects, such as building maintenance, and the economic management of a building's operational property assets, such as asset acquisition, asset disposal, and asset development. The management of physical assets, which includes maintenance, organizational use management, which includes space management or user requirements, and financial management, which includes property valuation, acquisition and disposal, property investment management, and tenancy management, may all be included in the core business of property management.

Simply put, property management is the area of an estate agent's job that deals with overseeing other people's properties (Maletswa and Boshoff, 2015). In this situation, the property owner turns into a principle and, although if the properties do not actually belong to him, he is responsible for managing or overseeing them as if he were the owner. He now represents the owner. The owner or lessor counts on the agent to represent him and look out for his interests. Shah, Tan and Kumar (2004) noted that most estate agencies oversee properties on behalf of their clients. These frequently serve as the foundation around which a firm is built, and they frequently spark the development of subsequent work that generates revenue, such as valuation, feasibility studies, or sale.

Challenges of executing new property management framework in the public sector

According to Greenberg (2019), the public sector struggles to manage its property maintenance programmes as well as strategic management issues involving procurement, disposal, and surplus strategic real estate (Shir and Fang, 2004; Shah *et al.*, 2004). Additionally, they struggle with financial management, performance assessment, and the management of external stakeholders, like customers or other governmental organizations (McGill, Hobbs and Klobas, 2011). The issues are brought on by a reactive approach to managing immovable properties, competing interests in real estate, a lack of consistent monitoring, and insufficient information (Royal Institute of Chartered Surveyors, 2014).

On the one hand, inadequate or improper property management strategies, challenges in putting planned strategies into practice, a lack of management incentives, and specific management procedures in the public sector worsen the situation (Saxena, Shao, Nikiforova, and Thapliyal, 2022). As a result, there are inherent inconsistencies in general corporate administration and vague audits that have no discernible impact in the public sector's approach to managing its property (Greenberg, 2019). Additionally, the property management staff lacks or is lacking in certain skills and abilities, and departments are duplicating tasks because of unclear roles and responsibilities (Brackertz & Kenley, 2017). Therefore, it's necessary to implement benchmarking and set standards (Dixon, 2015).

On the other hand, difficulties in the public sector include a lack of a unifying policy framework, connections in the management of public property assets, economic inefficiencies, and inadequate information (Kaganova & McKellar, 2016). Additionally, there are indicators that ownership and management should be separated from accounting and asset management reform, transparency, and accountability (Kaganova and McKellar, 2016). The main issues that affects the public sector in property management, as noted by McGill *et al.*, (2011), are a lack of interest by senior management, political interference, poor financial analysis, short-termism, insufficient human and financial resources, and a persistent data shortage.

To fulfill their social and welfare obligations, public organizations must have immovable property to enable their agencies to provide the public with effective and efficient services (Vermiglio, 2016). By itself, this leaves room for conflict between the end user and the government owner department of the property (Singh, 2018). The owner department's failure to establish goals and objectives that are understandable to the end users is primarily to blame for this (Bevir, 2016). On the other hand, users might not comprehend or simply follow the management guidelines established by the owner departments (Zahid, 2015; Wang and Han, 2006; Worley International Ltd, 2000).

When implementing IPMS, top management's (leadership's) role is crucial (Chilunjika and Chilunjika 2024; Chilunjika, Uwizeyimana and Chilunjika, 2023). Prior to implementation (to ensure adequate funding, political will, programme awareness, and adoption and support from stakeholders) and post-implementation (for financial resilience of IPMS). Previous studies demonstrate that the lack of dedicated leadership caused the failure of the IPMS implementation. For the successful implementation of IPMS programmes, researchers concur that a proper IT infrastructure should come first, and they add that this is one of the major challenges in developing countries where people do not have proper access to the Internet, electricity, or computers (Matavire, 2018). Studies reveal that because IPMS development and implementation are expensive and require ongoing funding, many developing nations view financial support as a major obstacle. The availability of resources must be considered for reliability and sustainability goals (Dixon, 2015; Al-Rashidi, 2010; Too and Too, 2010; Delone and Mclean, 2003).

Theoretical Framework

The study is informed by the systems theory.

Systems Theory

As a theoretical discipline for examining systems and their properties, system theory was created (Ludwig von Bertalanffy, 1959). A system has been defined as "a collection of dynamic elements preserving integrity via mutual interactions". The theory's fundamental tenet is holism, which holds that problems can be solved more readily when an entity is viewed as a whole and can thus be better comprehended. It is assumed that an organization is made up of many individuals who have a common method of operation. It is also needful to have an understanding of the environment in which an organisation operates. According to systems theory, a system is formed and controlled through interactions between its constituent parts (Nevo & Wade, 2010), and it focuses on how the parts relate to one another.

Systems theory places more emphasis on how parts are arranged and related to one another than on breaking down an object like the human body into its constituent pieces or elements (such as organs or cells). The characteristics of the

system are determined by how the elements are arranged and by how they interact. This suggests that the interplay between the intricate integration of ICT components in a programmed computing system and its relationship with the environment is what gives ICT its value. System theory is applicable in this study since IPMS is a system by nature and is made up of components that are interconnected to provide a service. Failure to establish a seamless symbiotic relationship within the system makes the implementation of the integrated system a flop. As such, there is need for a well-coordinated system of interlaced activities that connect to achieve the desired objectives.

Materials and Methods

The research being qualitative in nature was informed by the interpretivism research philosophy. Purposive sampling was used to select the interviewees (who comprised of the directors and other officers in the Ministry of Local Government and Public Works particularly those in the Property Maintenance, IT, and Valuation and Estate Management Departments) as well as the written documents which were then analysed using content and thematic analysis techniques.

Presentation and Analysis of Research Findings

Property management challenges being faced in adopting the IEPMS in the public sector

The study established that the challenges faced in the adoption and operationalisation of the IEPMS are social, legal, organisational and economic.

Social Challenges

The study established that the adoption and implementation of the integrated property management system is hampered by some social challenges. To this effect, the study noted that the culture, which has not been fully exposed to new technologies, presents the biggest challenges to implementing IPMS, not technical ones. The cause is that IPMS projects in developing nations are frequently contracted out to the private sector, which might disregard cultural sensitivities. It could lead to unintended consequences and a disconnection between the programme's intended goals and the public campaign promoting IPMS. They pointed out that some of the officers in the systems are technophobic hence they are resistant to the changes. It was observed that when the people at the helm are not keen to improve, it negatively affects the way the organisation can improve. The Architect noted that: We are faced by issues related to the fact that some of the leaders are elderly and despite the experience they have garnered for years, they are accustomed to their old ways of doing things. They want to do things the old-fashioned way and when it comes to change, they are resistant to the change. We have been pushing the issues of technological advancements, but our leaders are still adamant to continue with the existing systems.

The study also indicated that another difficulty faced by developing nations in successfully implementing IPMS is the digital divide. The failure of the initiative has been attributed in large part to citizens' unequal access to information due to literacy issues, the cost of equipment, transportation, or communications services, or both. The Estates Officer highlighted that: At one point in time, the government introduced an easy to do business programme especially on how an application for space is processed but the workshop was not finished because the senior management were not in attendance probably because of the technicalities involved. We have had so many workshops to try and put the motion of digitalised property management systems over the years, but the senior managers always point out that there is lack of funds. Although it cannot be disputed that financial constraints are one of the problems for the adoption of a property management system, in some circles, it can be observed that they the senior managers are not privy to the ideas and there is a serious digital divide. Other studies by Epstein (2019) demonstrate that IPMS programmes fail because of knowledge gaps. Researchers discuss people's experiences as Bangladesh and Botswana, two countries with low programme awareness prior to the putting IPMS projects into action. These researchers maintain that before implementing the IPMS programme, an awareness campaign is successful (Singh, 2018; Shih and Fang, 2004; Brackertz and Kenley, 2002). Researchers concur that the main barrier to the implementation of IPMS is a lack of ICT literacy, particularly in developing countries where the rate is very low (Halvitagala and Gordon, 2014; McGill et al., 2011; Worley International Ltd, 2000).

Additionally, the study observed that the absence of stakeholder involvement in such projects antagonises the overall success of the project. The Valuer noted that: such a project requires buy-in from all the parties that are involved in the adoption and operationalization of the integrated system. To support this view, the Estates Officer highlighted that: the top management and senior government officials should ensure that there is mutual engagement with the people in the operational level. These are the very people who will work with the integrated system hence they must be consulted at any given stage so that they make their input on how this system should be implemented. To further

buttress this notion, the Maintenance Manager highlighted that the success of every project is determined by the extent to which the stakeholders are engaged prior to, during and after the implementation of a project. By and large, failure to do proper and wider stakeholder engagement makes it difficult for the IEPMS to be operationalized in the public sector.

In line with the above responses, it can be argued that there is still a lot of work to be done as the leaders at the top are not predisposed to stakeholder engagement and also changing the existing system in which property management practice is done. Additionally, it was observed that social hindrances may also act as the bureaucratic hindrances as the structures are the ones which block any change that is feasible for the betterment of the system (Hurovi and Chilunjika, 2024; Masiyakurima, Chilunjika, Muzvidziwa-Chilunjika, 2020; Chilunjika, 2016; Zhou and Chilunjika, 2013). This is in line with Kaganova and McKellar (2016) who stated that management authorities and the normal public are inclined to change, and many are hesitant to involve IPMS as an elective method of managing public property.

Organisational difficulties

The study also observed that organizational difficulties also play a key role in obstructing the seamless adoption and implementation of the IEPMS in the public sector. It was noted that one of the major difficulties in implementing IPMS programmes is resistance to change. The Public Works Manager noted that, resistance to change is most successful when it is institutionalized, so you would see that public institutions are at the forefront perpetuating old and archaic methods of property management. In support of this the Valuations Officer averred that, the old crop serve as the gatekeepers and are comfortable to perpetuate and safeguard their old ways of doing things, regardless of their ineffectiveness. They always tell you that this is how we have been operating for the past two decades. Some believe that IPMS has the potential to upset an ingrained structure, which would upend entrenched bribery and corruption schemes and eliminate the legacy of system. In support of this, the Maintenance Officer noted that, new systems such as the IPMS, can bring about transparency and accountability, and once openness has been instituted a lot of shenanigans and unscrupulous dealings in property management in these government institutions are going to be exposed. A lot of people will get arrested. By and large, it can be argued that IPMS carries so much potential disruption in a long-established structure as a lot of systems, processes and units are reconfigured, and restructured. The study reveals that although many people are hesitant to use IPMS as an alternative method of managing public property, government officials and the public are predisposed to change (Saxena et al., 2022). Simple inertia plays a part in resistance to IPMS; not all resistance to IPMS is malicious.

The study also established that the lack of a clear-cut robust legislative and policy framework for IPMS hinders the implementation of an integrated property management system. Accordingly, the Maintenance Manager noted that without political commitment on the part of the top leadership and policy makers the adoption of IPMS will be a pipeline dream that will never come true. Any meaningful and realistic governmental initiative should be backed by some robust laws and policies. The Valuations Director supported this by noting that: there is no policy framework to support the adoption of IPMS in Zimbabwe's public sector. This means that nothing will come to fruition in terms of its adoption and operationalisation.

These findings do tally, with Zahid (2018) who noted that the availability of a clear policy and legal framework for IPMS implementation is crucial, according to researchers, who also concur that the lack of an appropriate policy for IPMS implementation hinders its implementation in developing countries. Researchers concur that people in developing nations are hesitant to use IPMS due to data security and privacy concerns, particularly during the transaction stage. People think about giving their personal information such as their name, photograph, date of birth, ID number, and credit card information to the government through unsecure websites and apps that they worry will be misused (Intauno, Chilunjika and Poshai, 2024, Chilunjika and Uwizeyimana, 2024; Poshai, Chilunjika and Intauno, 2023; OECD, 2016; Nkwe, 2018).

Legal Challenges

The study also established that the sound and seamless adoption and implementation of the IEPMS is hindered by the legal challenges that are faced within the public sector. In light of this, it was noted that issues relating to the protocols and procedures tend to impede upon the implementation of the integrated system. The Public Works Deputy Director who pointed out that the Government Policies, and Acts of Parliament affected the rate at which issues are processed. What was striking from the responses given was about the time taken by the Ministry of Finance and Economic Development to approve new rental rates. This delay would make the public to run away from private sector properties where they are charged in USD to apply for space from state properties where they take advantage of the low rates

charged payable at interbank rate. Moving on, Estates Officer 1 argued that: we face challenges especially when it comes to issuance of tenants, invoices, and statements since we prepare these manually and when we request to have a property management system like the MDA, there are so many protocols to be followed which hinder the progress.

The Deputy Director Estates Management We have had problems with changing the rates as the tenants who were using the premises were now paying peanuts, but the processes to implement such changes are protracted. The IT manager noted that: we have always advocated for an integrated system, but the senior management are delaying the full implementation citing lack of approval by the Senior Management. The Legal Officer noted that: It is of much concern that we are the ones who make the laws which try to bar us from the progress that is imminent. There is need to improve on the ways of doing things so that we progress. I am not saying we should break the law but what I think is that there is need to work on supporting what can see as a noble idea.

Economic Challenges

The study also observed that economic challenges have also impeded upon the adoption of IEPMS in the public sector. To this effect, the participants generally cited inflationary pressure which the nation is currently facing which they said was affecting the basis for property management budgetary systems. The following responses were noted. The Maintenance Officer highlighted that: There has been delays in the maintenance of the existing infrastructure. The leadership in the maintenance department pointed out that the local government coffers have been in strain for some time now as the rentals are taking time to be reviewed yet paid at interbank rate. This will mean that eventually tenants will be paying peanuts which will not suffice to conduct maintenance works and as we speak, most of our commercial buildings like Cecil House are in a dilapidated state and this alone scares away prospective tenants. Similarly, the Valuation and Estates Director averred that: We have had issues of a transition from a paper-based management practice to the use of a property management system that aids property managers to efficiently administer their duties especially in reporting and alerting them on properties that needs to be maintained. The major problem we face is of funding. Moving on, the IT Officer noted that: We are very much concerned by the way in which things are right now as there are delays. As I have noted, the administration has been fighting with the Treasury to have access to the foreign currency but there has been postponement in relation to the release of funds which have nothing to do with electronic systems, hence the ideas are barred.

To support the above responses, it was pointed out that the public sector is concerned about the initial costs yet there are benefits in the future (Chilunjika, 2023; Chilunjika, Mutema and Dube, 2021). However, when analyzing the respondents' sentiments, one would argue that if the property is well managed, its rentals alone will be enough to cater for repair and maintenance especially when the property managers are kept abreast with what is happening in the market.

Still under the economic challenges, the study established that high installation costs were identified as a hindrance to the full implementation of the IEPMS. The Information Technology Officer noted that: There is a high possibility of being able to integrate the systems like the SAP system that the accounts personnel are using, but we have had challenges related to the installation costs. The issues of costs are being cascaded from the top Ministry officials but there is a need of engagement and reengagement. In support of this, the Valuer alluded that: We really need to be proactive not reactive when it comes to property management issues. The way we conduct our estate management duties need to be overhauled by adopting a property management system that is fast with improved communications. The manual-based property management practice that the Ministry has adopted for years is inefficient and fabricated for it takes time to inform property managers on buildings that are now due for maintenance. With the suggested systems, there will be improved service since Estates Officers are timeously alerted on issues that require agent attention. However, the system is very expensive to install.

Similarly, Estate Officer 2 noted that: In the previous year I had the privilege to visit Malaysia as there was a seminar in relation to efficient property management practices by the public sector. We learnt that the system was adopted in stages depending on the availability of funds. The only challenge in Zimbabwe is that there is no stable currency as in our fellow nations like South Africa. As a suggestion, there is need to peg everything in the United States currency so that the value of the cost is preserved over time. Like what Malaysia did, it is implementing the property management system in stages in its various departments, the various departments were integrated.

The above sentiments are in line with the works of Kaganova and McKellar, (2016) who pointed out that there is need to adopt what other nations did to reduce the delay in full adoption. The technocrats and engineers have the task of mapping the way forward. With all the IT systems and contemporary technologies, this wastefulness persists today. Audits have discovered missing or untraceable assets worth millions of dollars throughout the two Gulf Wars and the

years that followed (Singh, 2018; Bevir, 2016; Dixon, 2015). At the end of the day, a large portion of the PM that was used to purchase those assets was either the public funds that we citizens worked hard to acquire and pay in taxes, or what future generations would pay in interest on borrowed funds. Lack of sufficient and efficient property management results in higher costs for stakeholders, including taxpayers), shareholders, or donations (in the case of a non-profit organisations) (Chilunjika, 2021; Epstein, 2019; Greenberg, 2019; Royal Institute of Chartered Surveyors, 2014; Zhou and Chilunjika, 2013).

Conclusions and Recommendations

The manual and paper-based property management practice that the public sector is currently using in administering its properties and assets is prone to manipulation and missing of property records leading to loss of data, and ultimately distorts the entire public sector property performance reporting system. Therefore, there is need of an integrated electronic property management system that aids property managers in the public sector to have a centralised cloud-based database of all state properties designed in an automated way that enhances accountability and transparency.

IPMS' adoption eradicates a paper-based property management system that is mostly practiced in developing country's public sector which has resulted in accumulation of huge rental arrears due to manual management practice that is fragmented (Kaganova and McKellar, 2016). The study found that there are social, economic and legal challenges. The legal challenges pointed out to the issues related to the approval of proposal and delaying the process of implementation. More so, it emerged from the study that the implementation of IPMS in the public sector is being constrained by resistance to change from public sector's senior management officials as they are technophobia. Some public sector officials view IPMS as a monster as it will cut off their shoddy deals that includes manipulation of property files for selfish gains. The economic challenges majorly pointed to funding. The study concludes that the benefits to be brought about by adoption of an integrated property management system outweighs the social, legal, and economic challenges raised by the respondents.

The study recommends the necessity of collaboration when implementing IPMS programmemes, which calls for cooperation and coordination between public and private organizations as well as at the local, regional, and national levels for the achievement of IPMS goals. Additionally, there is need for stakeholder involvement as the stakeholders' involvement in IPMS projects is crucial from the start. To raise (but not resolve) the issues with IPMS forces that leadership is dealing with, outside consultants are needed.

A successful IPMS programme requires an ICT-friendly legal framework. It can be difficult to pass laws and regulations in many jurisdictions because there aren't many legislators, judges, or staff who are knowledgeable about the issues raised by government technology use. After the problem is brought to light, it is up to the legislature to set priorities for societal interests and create laws that support IPMS development while preserving key elements of the neighborhood social structure (Saxena et al., 2022; Maletswa and Boshoff, 2015; Bharati and Chaudhury, 2006).

There is a need to involve the Ministry in question in aligning the policies which govern the implementation of rightful actions. The paper-based management system can gradually be abandoned then the development of an Integrated Electronic Property Management System should be done progressively and in stages starting with the subsystems before it is developed into a fully-fledged system that integrates other departments like Accounting, Engineering, and the Property Departments. There can be integration of residential properties first and then commercials properties and more as funds permit. However, efforts to adopt an integrated property management system must be intensified and there should be some capacity building and training of the Estate Managers, architects, and other technocrats to appreciate on how the newly introduced property management system works.

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