



The use of ICTs in Namibia's SME sector to access business information services

The use of ICTs
in Namibia's
SME sector

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Abstract

Purpose – The purpose of the paper is to present current state of the use of information and communication technologies (ICTs) in Namibia's small and medium-sized enterprises (SME) sector to access business information services.

Design/methodology/approach – The paper is based on a doctoral research project on business information needs, seeking patterns and utilisation of ICTs in the SME sector in Namibia that was carried out at the University of Pretoria from 2005 to 2007. The survey methodology using both qualitative and quantitative approaches was employed to collect data.

Findings – The findings revealed that there is a very low level of ICTs utilization among SMEs while among business support organisations it is relatively high.

Practical implications – The study presents baseline data that can be used by governments and business support organisations in the provision of ICTs to the SME sector to access business information services.

Originality/value – The study provides data on which future developments in ICTs in the SME sector could be based.

Keywords Small to medium-sized enterprises, Information services, Communication technologies, Namibia, Internet

Paper type Research paper

Introduction

The small and medium-sized enterprises (SME) sector has an important role to play in developing economies not only in economic development, but also in poverty alleviation and job creation. The sector faces a number of constraints especially in accessing finance, markets, training and technology. Access to business information services has been identified as one area that needs attention from governments and business services providers if the SME sector in developing countries is to achieve sustainable levels of growth and development. Many firms in Africa operate in an information-poor environment due to lack of adequate business support services and the poor information technological infrastructures (Oshikoya and Hussain, 2007). Access to information has however been not given the same attention as other constraints to growth of SMEs like access to finance, markets, technology or training.



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Accessing business information services has over the years been greatly enhanced with the emergence of various information and communication technologies. In developed countries, because of well-developed information and communication technologies (ICTs) infrastructure and easy access to computer hardware and software, SMEs enjoy easy access to business information services. In developing economies there are many challenges regarding ICTs infrastructure and the cost of IT hardware and software. This in itself has created many problems in the area of business information services for the SME sector. As governments and business service providers try to address the many challenges facing the SME sector, it is also important that the present use of ICTs in accessing business information services be identified in order to provide more development support in this area.

Business information services for SMEs

A wide range of activities has been undertaken by business support organisations to improve the information environment of SMEs so that they are able to respond more readily to market signals (Committee of Donor Agencies, 2001). They include support for attendance at trade fairs and business exhibitions, one-stop information shops, distribution of printed information, and support for learning visits to improve the information flow from business associations. Schleberger (1998) recommended that the scope of business information services should include:

- information on business trends and markets;
- information on business organisation;
- advisory services on legal and regulatory aspects, business management, customer service, business expansion and diversification and technology;
- identification and communication of business opportunities;
- providing access to linkages, finance, markets; and
- facilitation of business partnerships.

Schleberger (1998) further stated that information has to be focused and precise and that it has to be needs based. Information has to be presented in both written and spoken form taking into account that vernacular languages may play an important role and that accessibility must take into account the social networks in which SMEs exist.

The development of fully-fledged business information services in many developing countries is however hampered by many problems. Kinnell *et al.* (1994, p. 2) identified some of these problems in a study of marketing business information services to SMEs as:

- backward computer and communication industries;
- inadequate information resources and low utilisation of them;
- poor information awareness among the public;
- immature information markets; and
- lack of information policies/or the need to adjust and intensify them.

In Namibia, the government initiated various programmes for the development of SMEs including a vendor development programme to address the market problems of SMEs (Beyene, 2002, p. 151). This programme was designed to improve: market access

for small businesses; the structure of and trading relations in the economy through SMEs and big business linkages; and improve sector linkages.

Through the above measures it is possible to match buyers to suppliers and to help establish ongoing relationships between SMEs and big businesses and provide needed sources of information (Beyene, 2002). However, Erastus-Sacharia *et al.* (1999) point out that the availability of information to the SME sector in Namibia is very poor. Small businesses complain of a lack of market information, and distribution arrangements that are oriented towards South Africa. There is very little information on export markets for Namibian products that have the potential for export. They further point out that a number of Namibian handicrafts made with locally produced materials are suitable for export. However, the Namibian's export infrastructure in this regard is poorly developed with little information on export markets.

The Namibia Chamber of Commerce and Industry (NCCI) launched the Access to Information and Marketing Centre (AIM) in 1996 to provide market information and support services to the Namibian business community on a cost recovery basis (Butterly, 1998). The services provided by AIM include: trade enquiry services, Namibian companies' database, business advisory services, AIM Library, publications and the NCCI web site (www.ncci.org.na).

Butterly (1998) notes that AIM received an average of only two visitors per week and that the AIM Library is completely underutilised. The report indicates that the market for business information in Namibia is small and that it is overcrowded with suppliers of free information. The report also noted the resistance among clients to pay for business information. This makes it difficult to operate a commercial business information services that is self-sustainable. If this is the situation for the wider business community then it means that for SMEs the services are also out of reach. In a more recent study commissioned by NEPRU (Namibia Economic Policy Research Unit), Arnold *et al.* (2005) identified the lack of information and awareness among SMEs as one of the major problem with the usage of business services. There is need to find mechanisms of increasing awareness of business development services in Namibia.

Public library networks have not been used successfully to provide access to business information in Namibia and other developing countries. In the United Kingdom (Kinnell *et al.*, 1994), public libraries provide ready access to directories and a range of business information sources. In Africa, public libraries have not been adequately used for this function. Muyawala (1997) has observed that the reason militating against public libraries as suppliers of industrial, technological and business information to SMEs is their image as being primarily educational and recreational. Business support organisations and other government agencies should explore the possibilities of using public libraries as avenues for disseminating business information and help demystify the role of libraries as purely educational and recreational.

ICTs in business information services for SMEs

There is a large body of literature on ICTs on the one hand, highlighting their potential to developing countries (Avgerou, 1998; World Bank, 1998; Thioune, 2003; UNCTAD, 2004) by improving the efficiency of business process and through development of new products and services, new business opportunities and markets. ICTs are also seen as having a role in improving business development services, such as financial markets, training and the knowledge market. Mutula and van Brakel (2006) have noted that:

“Information and communication technologies, particularly the internet, are having a significant impact on the operations of small and medium sized enterprises...”. Through their effective use ICTs, will help SMEs to capture global markets, sell to international customers, and compete favourably with large corporations. They can also assist in improving the legal, regulatory and policy-making environment for SMEs (Duncombe and Heeks, 2001).

On the other hand, writers like Montealegre (1999) and Qureshi (2003) point out that the technological progress is only taking place in few advanced industrial countries. Moreover the technologies are not readily available, they have to be understood, absorbed and mastered. Instead the world is fast moving towards a “digital divide” that separates the rich nations from the poor ones (Bali moune-Lutz, 2003). Avgerou (1998) argues that investment in new technology does not lead to economic growth, and increase in information activities does not necessarily imply economic prosperity. Moyi (2003) agrees that there are other more critical constraints like illiteracy, poor information and telecommunications infrastructures and many others to information flow that deserve priority in developing countries. Heeks (1999, p. 1) also agrees and points out that “serious inequalities exist that constrain the use of ICT based information by poor entrepreneurs”.

The constraints to increased ICT usage in developing countries are many and include:

- Lack of physical infrastructure and affordable access to telecommunications.
- Technology education and extension institutions are weak.
- Local supply capabilities and access to international know-how are restricted.
- Domestic demand is low due to underdeveloped public sector services and the lack of medium-scale and large scale firms driving ICT innovation.

All these constraints and many more mean that ICT diffusion into the SME sector is low (Duncombe and Heeks, 2001). The success of ICT projects will depend not only on how these constraints are addressed but also on how they complement the local institutions and social networks that permeate the SME sector. Avgerou (1998), Akpan (2003) and Moyi (2003) agree that continuing IT and telecommunications diffusion and emphasis on knowledge development activities are enabling far reaching structural changes in the world economy. Moreover the interest on ICTs and their role in SMEs can also be linked to how they can contribute to poverty alleviation given that ICTs are increasingly being seen as tools to fight poverty (Heeks, 1999).

Existing research on transfer of information technology to developing countries has recognised the following: the need to develop skilled manpower, to learn from past mistakes of other countries, to use proven technologies and to employ consultants or develop international partnerships to import expertise alongside technology (Montealegre, 1999). The literature seems to address conditions and weaknesses in technology transfer, but as Montealegre (1999) argues, the gaps in the literature are on actions and behaviours and the lack of a comprehensive underlying theory to explain ICT transfer to developing countries. Akpan (2003, p. 272) agrees that there are difficulties in making an argument about the utility of ICTs in the development project of poor countries in the absence of empirical evidence that shows a connection between ICTs and socio-economic development. Duncombe and Heeks (1999) believe that most

of today's research on ICTs is overshadowed by what they call "techno-centric" approach studies that make technology the starting point instead of information. The studies blame technical faults for information projects failure and yet there are other underlying causes that have not been adequately addressed such as information needs and practices.

E-readiness

E-readiness is an assessment of how ready a country is to participate in the networked world to become a knowledge society/economy. It is a sum total of numerous factors that determine the readiness in terms of areas deemed most critical for ICT adoption (Kupurubandra *et al.*, 2004; UNCTAD, 2004). Government and the private sector play important roles in the e-readiness of a country by creating an environment that can support electronic commerce. Government is also involved in creating stable environments for developing new industries, enhancing global competitiveness of companies, promoting innovations and fostering their competition. According to Jutla *et al.* (2002, p. 1) because of its significant potential, electronic business is now the focus in many countries, and governments are playing critical roles in nurturing the e-readiness of various industry sectors.

Promoting the use of ICT by SMEs in developing countries should be a major priority of national e-strategies – as a key instrument in the advancement of the information society called for by the World Summit for the Information Society (WSIS) (UNCTAD, 2004). While the UNCTAD (2004) reports of recent surveys showing an increasing number of SMEs (in Thailand, Ghana, South Africa, Morocco, Nigeria, Senegal and Uganda) connected to the internet as well as having a web presence on the increase, the adoption of e-business is however low. Developing countries face major challenges in terms of e-readiness in infrastructure development, the state of their economies, improvement of social and cultural environments, and nurturing business culture as well as improving the regulatory framework. Developing countries are still a step behind in comparison to developed countries. This puts them in a poor state of e-readiness (Kupurubandra *et al.*, 2004, p. 2).

To overcome the challenges to e-readiness, Jutla *et al.* (2002) present a conceptual model that creates a partnership between government, private sector, public sector departments and agencies, industrial and research organisations, public research players and educational institutions. In the conceptual model, Jutla *et al.* (2002) propose that several dimensions like: knowledge and innovation, infrastructure and access, regulatory, trust and financial infrastructure, skills distribution, access to content and e-government leadership must be addressed by government efforts to foster an e-readiness climate especially for supporting the small and medium enterprises.

In Namibia the e-sectors are growing and so are government efforts towards e-governance and creating an enabling environment (Stork and Aochamub, 2003). Namibia's telecommunication system is modern and efficient. According to Stork and Aochamub (2003, p. 9) the fixed line density (i.e. telephone per 100 inhabitants) increased from 3.11 per cent in 1992 to 6.41 per cent in 2002 and the number of installed telephone increased from 45 000 in 1992 to 121,413 in 2003. Beyene (2002, p. 142) notes that 90 per cent of the telecommunications network is on digital lines and the consensus among SMEs was that the telecoms infrastructure poses no major problems to them. Namibia has an ICT policy framework in place and several other sectors'

needs like education, health, industry and commerce are also being addressed. However Stork and Aochamub (2003) still see several limiting factors that are holding back more rapid ICT deployment in Namibia and these are:

- Lack of IT literacy and in particular in rural areas.
- High communication costs owing to monopoly by one telecommunications service provider.
- Under-utilised radio spectrum.
- Lack of e-commerce and e-banking legislation.
- Absence of a Namibian automatic clearing bureau for bank transactions.
- Language barriers with respect to internet content which is largely in English.

While ICTs have changed the way of life in Namibia, they have done so for relatively few Namibians (Stork and Aochamub, 2003) including the SMEs. Although the role of the state in development of the SME sector is clearly spelled out in various documents and policy frameworks (Namibia Vision 2030; National Development Plans), the same is not the case in the Draft e-Governance Policy for Namibia – 2004. Government needs to address issues of e-readiness in support of this sector if it is to play a meaningful role towards the creation of a knowledge society/economy and in poverty alleviation and job creation.

Research problem approach

To date there are no studies on the use of ICTs in relation to accessing business information service in the SME sector in Namibia. This, research therefore sought to investigate the current use of ICTs in Namibia's SME sector to access business information services. The utilization of ICTs by both SMEs and business support organisations was investigated in order to assess the current levels of use and the potential of the technologies in increasing information dissemination and increase enterprises' competitiveness. In terms of ICTs as a technology based means of transmitting information and enhancing knowledge, increasing productivity and creating new products, they have an important role to play in the SME sector. The study specifically looked at the ownership and use of ICTs, their usage, e-readiness among SMEs. It also looked at the ownership and use of ICTs in the dissemination of business information to SMEs by business support organisations.

The survey methodology was used and two questionnaires were distributed to 338 SME operators and 60 business support organisations. A qualitative assessment of business information services was also carried in 15 business support organisations. The final respondents of the study were 197 SME operators (65 per cent) and 35 business support organisation (55 per cent).

Findings

Use of ICTs by SMEs

The findings showed that SMEs (Table I) own at least between one and five telephone lines, faxes, cell-phones, PCs and post boxes. Very few enterprises indicated that they did not own a telephone or mobile phone at all.

The most widely used communication tools in enterprises were indicated as: cell-phones (72.5 per cent), telephones (57.3 per cent), fax (37.3 per cent), e-mail (19 per

cent) and internet (12.5 per cent). The findings showed a heavy dependency on telephone, fax and mobile phones by enterprises as a means of communicating with customers, suppliers and service providers. Mobile phone technology (Table II) is clearly emerging as an important communication tool among business enterprises while the internet and e-mail have not yet been fully embraced.

The study made an attempt to establish the frequency of use of various computer-based operations found in a business. The data in Table III show that the use of computer-based operations in the enterprises is ranked as follows: word processing (47.6 per cent), financial and accounting packages (35.1 per cent) and spreadsheets (32.3 per cent) are the most widely used packages. The least used computer-based operations were indicated as desktop publishing (14.1 per cent) and other packages (31.7 per cent).

Enterprises were asked to indicate if they use the internet for business purposes and 42.7 per cent indicated that they did while 57.3 per cent indicated that they did not. The data in Table IV also indicate a low usage of the internet in marketing of business products and services (21.8 per cent), looking up of products information (22.8 per cent), purchasing of goods and services from suppliers (20.8 per cent) or the provision of after sales service to customers (13.25 per cent).

Communication tool	None (%)	1-5 (%)	Above 5 (%)
Telephones	15.8	76.8	7.4
Fax	33.7	62	4.3
Cell-phones	6.3	79.6	14.1
PCs (computers)	40	50	9.8
Post boxes	18	78.2	3.2

Table I.
Ownership of ICTs by
enterprises

Communication tool	Most frequently (%)	Frequently (%)	Less frequently (%)	Not used (%)
Telephones	57.3	25.9	5.9	10.8
Fax	37.3	24.3	11.4	27
Cell-phones	72.5	20.3	4.4	2.7
E-mail	19	14.1	17.4	49.5
Internet	12.5	15.9	14.2	57.4
Other	4.8	9.5	14.3	71.4

Table II.
Use of ICTs by
enterprises

Type of computer operations	Very often (%)	Quite often (%)	Not very often (%)	Not at all (%)
Word processing	47.6	10.6	5.9	35.9
Spreadsheets	32.3	19.2	9	39.5
Desktop publishing	14.1	11	14.1	60.7
Accounting/financial management packages	35.1	13.7	11.3	39.9
Other computer programs	31.7	8.7	8.7	50.8

Table III.
Frequency of use of
computer based
operations

The emergence of the internet and related communication tools as business platforms has also brought its own challenges to enterprises. It was important therefore in the study to establish the major difficulties that enterprises face in conducting business over the internet. The findings indicated that the major problems associated with internet access among enterprises include; low internet speed (42.6 per cent), uncertainty about suppliers (21.1 per cent) and contract terms and guarantees (14.8 per cent) and logistical problems (14.8 per cent) related to acquiring and installing the necessary hardware and software to access the internet.

Use of ICTs in business information delivery services

The use of ICTs in business information services is very important in order to achieve better networking among service providers and also to provide faster, efficient and coordinated services to SMEs. In order to understand the level of ICTs utilisation by business service providers several issues were examined in the study including their ICT profiles, means of communicating with SMEs and what they see as obstacles to SMEs accessing a broader range of ICTs and the use of the internet as a business communication tool.

The findings on the ICT profiles of business support organisations as indicated in Table V showed that most organisations have a range of ICTs: telephones, faxes, PCs, PC with internet access. However only 35.7 per cent of the business indicated that they have cyber cafés reserved for SMEs to engage in information searches and for use for other computing needs.

A total of 80 per cent of the business support organisations indicated that their PCs are networked while 20 per cent indicated that they are not. Of the business support organisations, 44 per cent indicated that they are subscribers to external online business information databases while 48.1 per cent indicated that they did not and 7.4 per cent indicated that they planned to subscribe to online databases. About 70 per cent of the business organisation responded that they provide information services through e-mail while 30 per cent did not. 46.9 per cent of the organisations also indicated that they receive information requests from SMEs through e-mail while 53.1 per cent did not

Table IV.
Use of the internet by
SMEs

Nature of internet use	Yes (%)	No (%)
Marketing the enterprise products	21.8	78.2
Facilitating access to product catalogues and price lists	22.8	77.2
Purchase products from suppliers	20.8	79.2
Providing after sales support	13.2	86.8
Other (specify)	5.6	94.4

Table V.
Information and
communication
technologies in business
support organisations

Communication tool	None (%)	1-5 (%)	5 -10 (%)	Above 10 (%)
Telephones	0	48.4	12.9	38.7
Faxes	6.5	67.7	3.2	22.6
PCs	6.5	41.9	25.8	25.8
PCs available for information research by SMEs	57.1	35.7	7.1	0
PCs with internet access	12.9	45.2	22.6	19.4

receive any requests from SMEs through e-mail. In terms of communicating with SMEs, business support organisations were asked to indicate the ICTs that they use most to keep in touch with SMEs. The data in Figure 1 show that the mostly widely used tools are the telephone, fax and cell-phones. The least used are e-mail and the internet.

The findings showed that many of the business support organisations have a desire to provide services to SMEs through e-mail and the internet, but they are limited because most SMEs are not connected to the internet. The findings also indicated that the most widely used means of communicating with SMEs are telephones, faxes and mobile phones, while the least used means are e-mail and the internet.

Discussion

The level of ICT utilization among the SMEs is low while among the business support organizations it is relatively high. SMEs are not effectively using the newer technologies especially the internet to explore business opportunities and there are many reasons cited for the low usage of ICTs including costs of the technologies, poor internet connections and speed and most importantly lack of awareness of what the internet offers.

In terms of the utilisation of computer-based operations, the findings showed that the most widely used operations by SMEs were word processing, spreadsheets and accounting packages. The results also showed that these computer-based operations had a high impact on business operations. It is clear however, that the utilisation of more sophisticated operations in the SME sector is very much limited. There was no indication of the use of computer operations in production and technical processes. Kyobe (2004) noted a similar trend with regard to SMEs and information technologies (IT) utilisation in South Africa. ICTs were not used to create links with suppliers or to differentiate products and services or to enable innovations to a great extent. Moyo (2003) also found that in Kenya small enterprises do not find IT useful.

According to Lee (2003), the lack of internet technology diffusion and sometimes telephone access has hindered the take off of e-commerce in developing countries. Studies on Namibia (Stork and Aochamub, 2003) have shown that while ICTs have advanced relatively well in other sectors, the SME sector is yet to fully embrace them.

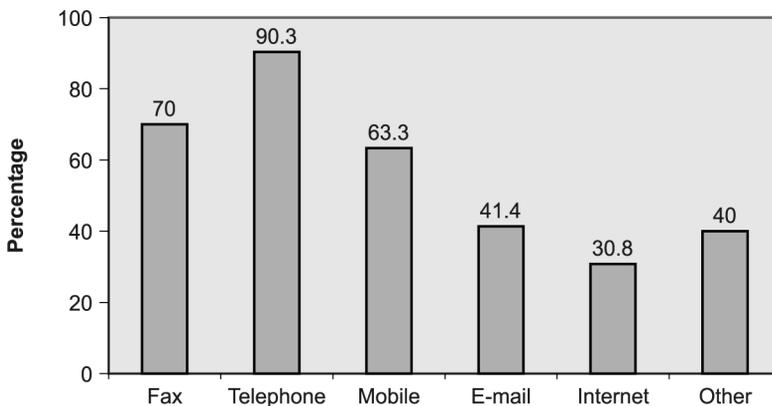


Figure 1.
ICTs most used to
disseminate business
information to SMEs

According to Chacko and Harris (2006), the use of e-business techniques has emerged as an efficient gateway for SMEs to take greater advantage of opportunities in global markets. Most SMEs are still lagging behind large corporations in using the internet as an efficient business tool. The findings of the study indicate that only 42.7 per cent of the enterprises indicated that they used the internet for business. Furthermore, the enterprises surveyed indicated that they hardly used the internet for searching business products and services, for looking up products catalogues, conducting purchases from suppliers or providing after-sales services to customers via e-mail and the internet.

There are a number of obstacles that SMEs face in using the internet for business purposes. The major obstacles cited were low internet speed and uncertainty about contracts and delivery guarantees offered over the internet, and the lack of confidence over payment methods. Stork and Aochamub (2003) established several factors that are still holding back the full development of e-business services in Namibia as: lack of IT literacy among many people, high communication costs and the monopoly of one telecommunications service provider, the lack of e-commerce and e-banking legislation, that many businesses both large and small are not yet ready to conduct business over the internet and the language barriers with respect to internet content which is largely in English. There is need for coordinated action on the part of government and business service providers to address issues of e-readiness in order to support the SME sector to join the mainstream economy.

The above discussion would suggest that direct dissemination of business information to the majority of SMEs via the internet is not a viable option at this stage. However, considerable opportunities exist for the use of these technologies for the exchange of business information between business support organizations. Further, there has been considerable success in South Africa and other countries in the use of Local Business Services Centres (LBSC) to act as telecentres and/or resource centres for dissemination of information to SMEs (Butterly, 1998). In this model, the LBSCs are established with full internet connectivity. They also provide access to business services (at a price) to SMEs through the assistance of a trained business councillor. It is noted however, that these centres tend to be more effective in urban areas of high technical competencies and less successful in the more rural and less developed areas.

Conclusions

The study has established that there are a number of obstacles that SMEs face in using ICT, especially the internet for accessing business information services. There are several factors that are still holding back the full development of e-business in Namibia. The study has also established that in Namibia, the number of business development service organizations providing technology services to SMEs is small. It was also established that service providers feel that the low level of perception of ICTs among SMEs, the cost of investment, import and maintenance costs contribute to their low usage. There are various interventions that government and business service providers that can be put in place in order to improve the use of ICTs by SMEs in Namibia to access business information and e-business services. The interventions by government and business service providers should address issues relating to:

- The building of more small business information centres in the country through private/public partnerships and equip the centres with more ICTs for use by enterprise operators.
- The reduction of costs of computer hardware and software by suppliers and find alternative direct suppliers other than South African based ones who often charge more for hardware and software solutions.
- The use of more mobile phone-based technology services by service providers to reach out to more SMEs as the country is increasingly witnessing the introduction of mobile-phone based services.
- The marketing of more SME tailor-made software packages for accounting, information management, production and technical processes.
- The provision of more training services and opportunities for SMEs in use ICTs to access business information and e-business services.

The enterprises themselves also have a big role to play in ensuring that they use ICTs adequately to access business information services. In this regard SMEs should consider the following issues:

- The increased use of information technologies in their business operations.
- Use technologies to enhance the various business and social networks that exist among and that are often used as sources of business information.
- The increased use of information technologies to enhance marketing and production processes especially in improving their global competitiveness.
- The increased use of information technologies in enhancing their technical capabilities in order to respond effectively to customer needs and take advantage of changing production patterns.

While technology could and should play a very useful role in enhancing access to business information services by SMEs, it would be a mistake to view this as a panacea for all the difficulties faced by SMEs in Namibia. Instead, technology should be one of several approaches to the problem of information access. Many of the difficulties relating to the overall level of access to business information involve issues such as business information coverage and quality, networking and coordination of services among business service providers, the promotion of business information services, inadequate training in use of business information services by SMEs and lack of human resource capacity in information dissemination activities and many others.

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