

## Empowering Small-Scale Women Entrepreneurs through ICTs for Socio-Economic Development

Julia N. Korongo<sup>1</sup>, Joram K. Mutai<sup>2</sup>, Benard C. Masese<sup>3</sup>, Samuel T. Mbugua<sup>4</sup>,  
Alice W. Nambiro<sup>5</sup>

<sup>1</sup>(Department of Information Technology, Kibabii University, Kenya)

<sup>2</sup>(Department of Information Technology, Kibabii University, Kenya)

<sup>3</sup>(Department of Information Technology, Kibabii University, Kenya)

<sup>4</sup>(Department of Information Technology, Kibabii University, Kenya)

<sup>5</sup>(Department of Information Technology, Kibabii University, Kenya)

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### Abstract:

Women entrepreneurs are recognized as drivers for sustainable and inclusive socio-economic growth. Despite this, Small-Scale Women Entrepreneurs (SSWEs) undergo challenges in the current global market due to limited access and use of Information and Communications Technologies (ICTs). The disruption caused by the COVID-19 pandemic is fuelling fast-paced innovation and uptake of digital technologies in all spheres of life indicating that the widespread shift to the use of more ICTs is indispensable. This is becoming increasingly clear that SSWEs are under considerable pressure in meeting business demands in the new reality. The study employed desktop research using mixed methods and descriptive approach to establish the role of SSWEs; the factors affecting SSWEs in socio-economic development and analyze the potential ICTs opportunities as tools for empowering SSWEs. The article explores how SSWEs can benefit from integrating E-business and digital marketing to foster communication and business. An analysis of the strengths, weaknesses, opportunities and threats of SSWEs in relation to ICT4D is provided and the study recommends how to foster strategies and initiatives to promote SSWEs empowerment.

**Keywords:** Empowerment, Information Communications Technologies (ICTs), Information Communication Technology for Development (ICT4D), Small-Scale Women Entrepreneurs (SSWEs), Socio-Economic Development.

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## I. INTRODUCTION

### Introduction

The role of Small-Scale Women Entrepreneurs (SSWEs) in the development of any society is undoubtedly important. SSWEs are recognized as the drivers for sustainable and inclusive socio-economic and industrial growths. More so, the increasing competition through globalisation puts SSWEs under considerable pressure in meeting entrepreneurial demands through digital technologies in the new reality [1]. Besides their positive employment effects, [2] notes that the growth and development of SSWEs can also contribute to diversification of economic stability, growth, and as a source of innovation exhibited by SSWEs start-ups. Studies show that of the 865 million women who contributed effectively to the global economy, 812 million were living in developing countries [3]. Despite this, SSWEs are facing challenges in their endeavour to meet the increased socio-economic demands due to influence in traditional and internal factors exacerbated by technological factors [4], [5] [6]. Notably, SSWEs face inter-role conflict because of the need to tackle their family responsibilities as well as engage in entrepreneurship [7] and also, due to limited access and challenges of using ICTs to meet global market demands [8][9][10].

Today, ICTs are among key indicators used to determine performance of many economies for measuring Information Society. ICTs include different electronic technologies used to manage data and knowledge and consist of the primary tools for capturing, processing, storing, manipulating and exchanging information in the digital age. ICTs are also defined as the use of internet services, highly complex to more simple devices, applications and technologies [11]. It could be argued that ICTs have potential to contribute to employment creation, gender equality, poverty reduction, opportunities to do things differently, rapid and dramatic shifts, thus spurring economic growth [12]. Economic reports and surveys [13] [14] indicated a decline in the year 2020 due to the effects of the Corona Virus 2019 (COVID-19). The consequences are tough business environment, layoffs of employees and closure of businesses, difficulties in production, services and

market access issues, poor turnover profits, low economy and harsh economic times. As a result, many sectors including Small and Medium Enterprises (SMEs) who are important drivers of economies reported decelerated growth [15]. Conversely, studies [16] [17] [18] [19] indicate that ICTs are important enablers of changes and have the power to transform economies in such uncertain situations. Accordingly, there is need for empowering SSWEs to cope with new challenges in the digital world such as the dynamic needs of customers, rapid information, competitive markets, which can be managed and contained by integrating ICTs.

### ***Background of the Study***

According to [10], SSWEs are owners of approximately one-third of registered businesses in the world, half of which are in developing countries. They are also considered as sources of employment generation, contribute to economic growth and social transformation. Women entrepreneurs also make up significant contribution to the Gross Domestic Product (GDP), are diverse and are to be found in great numbers in all the main economic sectors, including agriculture, horticulture, pastoralism, transportation, trade, services and manufacturing. Use of ICTs is considered as a catalyst for providing unique and immeasurable opportunities to empower SSWEs in different ways in these economic sectors [18] [19] thus creating potential opportunities for different entrepreneurial undertakings. Studies show that in the span of just a few months, the disruption caused by the COVID-19 pandemic is fuelling fast-paced innovation and uptake of digital technologies in all spheres of life; consumer and business digital adoption rates have catapulted five years ahead [12] and accelerated business process transformation.

Currently, the trend of service delivery is towards the deployment of services over the Web thus transforming traditional economies into information and knowledge-based economies [20]. Riding on such opportunities, [8] observe that businesses have witnessed the penetration of ICTs using concrete innovations, inventions across the entire socio-economic spectrum. For example, grocery stores are shifting to online ordering and delivery as their essential business. In addition, customer behaviors and preferred interactions have also notably changed, and while they continue shifting, the uptake in digital technologies and services is a reality [12][16][21][22]. It is evident that post-COVID, businesses will retain at least to some degree, preferences for the use of digital services, indicating that the widespread shift to the use of more ICTs is indispensable. Arguably, the majority of SSWEs still depend on 'word of mouth' for promoting business, and are not fully exploiting the different types of ICTs available to conduct business, hence the need for promoting SSWEs empowerment in ICTs.

### ***Problem Statement***

Today's technology is helping enterprises in creating different plans and customer-focused strategies deemed crucial for improvement of loyalty and repurchase behavior [4] [23]. However, studies indicate that SSWEs are not well equipped to create plans and strategies to meet market and business demands of the New Digital Economy (NDE). To begin with, past statistics indicate that three out of five small establishments fail within the first few months of operation. This is due to among others, lack or limited ICTs knowledge and skills, lack of information about market, competition, financial constraints and lack of utilization and limited awareness about digital marketing. These further create barriers for SSWEs in terms of access and delivery of products and services to customers which can hinder SSWEs socio-economic growth. In addition, SSWEs lack enough interventions to help them access and use ICTs. This underscores the importance of participation from different stakeholders including policymakers, governments, private sector and civil society in addressing these ICTs access and usage constraints. Consequently, without addressing the interests underlying the use of ICTs by SSWEs such as access to technology and development of skills, can lead to design and implementation decisions that result in interventions that may further exacerbate existing disparities and further problems. This concludes that, apart from low socio-economic growth, SSWEs need to be empowered to fully exploit and utilize the available ICTs.

### ***Aim and Objectives of the Study***

The study was conducted to establish the factors affecting the development of SSWEs and examine the potential ICTs opportunities in empowering SSWEs socio-economic development. The study was guided by the following objectives:

1. Explore the factors affecting SSWEs in relation to ICT4D.
2. Analyze the potential usage of ICTs in empowering SSWEs.
3. Recommend how SSWEs can integrate ICTs as an empowerment tool for socio-economic development.

**II. METHODS AND MATERIALS**

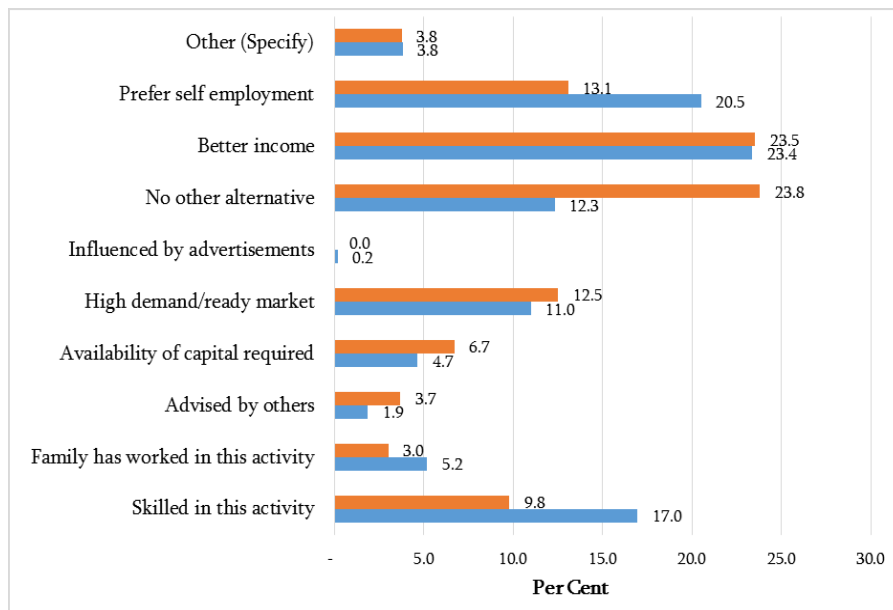
**Approach and Methodology**

The research was conducted using desk research which includes reviewing relevant secondary texts, policy and economic documents, websites, journals and periodicals. The study used both mixed methods and descriptive approach to review the literature that provided baseline information about the status of SSWEs and ICTs in relation to ICT4D. This study sought to explore how SSWEs can be empowered through interventions and integration of ICTs, in particular, through E-business and digital marketing.

**III. RESULTS AND DISCUSSIONS**

**Overview of SSWEs in relation to ICT4D**

The role played by SSWEs in the development of any society is undoubtedly important. The world marks the International Women’s Day every 8<sup>th</sup> day of March to celebrate the contributions and participation of women around the world. In many developing countries, there is consensus that the informal sector (where many SSWEs are categorized) is steadily growing. However, it is more difficult for women to find formal employment compared to men in many developing countries [15]. Thus, [24] notes that starting a business is often the only way for women to improve their socio-economic situation and become self-sufficient. Figure 1 shows findings of a survey conducted by [25] giving different reasons for starting a business.



**Fig. 1: Reasons for starting a Small Business**  
*Source: KNBS MSME Survey 2016*

It is evident from Fig. 1 that small entrepreneurs preferred self employment due to better income and also because there is high demand and ready market for their products and services. More so, being skilled in their respective entrepreneurial activities and there being no other alternatives were other key reasons. Further, the [25] indicated that a significant proportion of SSWEs were formal, while majority fell within the informal economy accounting for 846,000, that is, 83.6% of SMEs.

In addition, the [1] observes that there have been unprecedented advances towards achieving gender equality worldwide due to multiple obstacles and barriers regarding the issues of culture and law. More so, there have also been calls for empowering women by inspiring, supporting, promoting and fostering women entrepreneurship for socio-economic development. More specifically, the success of business requires investment and use of ICTs which has become a vital platform for both business information and transactions processing [3]. In support of this, the chair of Smart Africa, Rwandan President Paul Kagame noted that COVID-19 has shown the potential and significance of ICTs. Accordingly, Smart Africa has potential to realize intra-Africa trade, socio-economic integration as envisaged in the African Continental Free Trade Area [26]. He further remarks that the pandemic has shown that ICTs connectivity is not a luxury but a requirement and for businesses to advance, utilization of digital platforms will be necessary. On the same note, [4] observe that when establishments such as SMEs understand the technology trends that are driving success, they will be better positioned to address and solve problems in business. Hence, the ability of SSWEs to utilize ICTs effectively is

essential, since ICTs can facilitate continual adaption to change and skills development associated with SSWEs business environment. There is opportunity for a great leap forward if SSWEs want to use ICTs not just for socializing but for digital marketing and E-business.

***The Essence of SSWEs Empowerment through Interventions***

According to [11], ICT has become entwined with both the theory and the practice of development. ICTs are not just about technologies it is also about the ability of people to make use of them. Today, ICTs are the drivers of the NDE and considered ‘new normal in business.’ Many innovation and business strategies can be applied by integrating ICT solutions as enablers of generating value, profits, overcoming entrepreneurial challenges, create more efficient, better connected, more competitive economies as well as more employment opportunities and better business performance, thus fostering empowerment to SSWEs [27] [28] [29]. It has also been noted that ICTs have the ability either to increase inequalities or to lower them, depending on the socio-economic set-up perspectives [22] [24]. Notwithstanding the importance of ICT4D, [11] and [18] observe that inequalities exist between society in terms of ICTs accessibility and usability. Among this is the digital divide that is more pronounced in Sub-Saharan African countries than elsewhere in the world. The gap is rather pronounced in women who are most disadvantaged. Hence, studies [9] [15] [24] [29] argue that women empowerment is an important undertaking within different economies and for society at large as we embrace a new and defining time for inclusive and sustainable development. More so, studies show that SSWEs have limited government support in terms of policy, laws and services [5]. Therefore, in order to take advantage of ICTs access and use, governments need to develop and deploy inclusive policies and guidelines to support SSWEs development and transformation. In Kenya for instance, the [13] established such key initiatives as:

1. Women Economic Empowerment Strategy 2019-2023;
2. Women entrepreneurs as beneficiaries of different funding disbursed through the Uwezo fund, Women Enterprise Fund and Youth Enterprise Development Fund; and
3. Women entrepreneurs’ participation in public, private sector tenders.

In addition, the GOK has introduced a number of initiatives targeted for SSWEs to enable them cope with the current demands. These initiatives include, among others: funding some SSWEs projects in partnership with the World Bank and Non-Governmental Organizations (NGOs); and providing a favorable ICT Sector such as laying down of the fiber-optic cable and rural electrification for E-readiness. The following section discusses how SSWEs can be empowered through ICTs.

***Empowering SSWEs through ICTs***

It is considered that the present and future prospects for SSWEs are based on their ability to adapt and survive in the NDE. ICT solutions can also play a key role in empowering women entrepreneurs [28] thus overcoming access to and increasing their income from entrepreneurial opportunities. Global voices have concurred that with the advancement of ICTs such as Industry 4.0 and Web 3.0, women entrepreneurs have opportunities to accelerate the future of ICTs especially E-business and digital marketing. Realizing such gaps, Google established ‘Google My Business’, a free SMEs hub to offer SMEs in Kenya free website set up and an online profile creation services [30]. Another initiative was designed by Entrepreneurship Wylde International dubbed “Boost with Facebook” to equip SMEs with digital skills for promoting their products and services online using social media platforms. This in order to enable SMEs leverage digital technologies to stay visible, help them build resilience and to remain competitive [15]. It is evident that consumption is the main driving force of economic vitality and growth thus stimulating consumption and promoting market demand is necessary [31] to boost SSWEs’ online platforms. The following section describes how SSWEs can specifically benefit through digital marketing and E-business.

***Empowering SSWEs through Digital Marketing***

Digital marketing is a strategy that supports advertising approaches and building customer loyalty in a cost-effective way by reaching and connecting to a wide scope of areas [22] [32]. As shown in Table 1, it revolves around 5Ds namely, Digital Devices, Digital Platforms, Digital Media, Digital Data and Digital Technologies [32].

**Table 1: The 5Ds Marketing Types**

Digital Marketing Type	Categories and Forms	Uses
Devices	✓ Connected devices forming the Internet of Things, Smart phones, Computers, Smart TVs, Smart watches and other gadgets	✓ To interact with business audiences through different platforms and technologies
Platforms	✓ Wide range of online platforms like Social media, Websites	✓ Incorporation into digital marketing strategies for promoting SSWEs work
Media	✓ Different electronic media like: mobile	✓ To communicate, interact and giving

	applications, messages, emails, the web, search engines	attention to SSWEs brands
Data	✓ Relevant information about SSWEs customer profiles that can be publicly shared	✓ Necessary for analyzing customer shopping preferences and patterns for giving competitive advantage to SSWEs
Technologies	✓ Modern technologies like online stores, kiosks, shops	✓ To display advertisements about SSWEs brands to encourage target customers

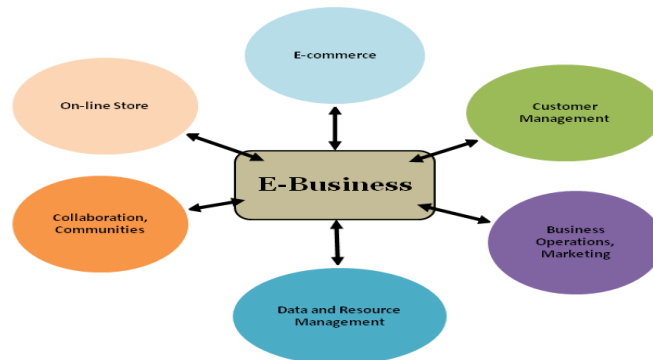
The building blocks of the 5Ds as main pillars of the electronic marketing world for SSWEs include:

1. *Identity*: having a well designed website as a foundation for all marketing efforts.
2. *Conversations and Sharing*: having user-friendly and responsive engagements with customers.
3. *Reputation*: having an online presence is an opportunity to avoid any negative thoughts from consumers.
4. *Content*: this is the ability of SSWEs utilizing current content that is relevant to different customers and marketing information.
5. *Social Media*: entails SSWEs using different online channels to facilitate communication with customers.
6. *E-commerce*: this entails SSWEs buying and selling of products and services over the internet using mobile phones and websites.

The benefits of SSWEs integrating digital marketing include: creating a web presence thus promoting business visibility and also enhancing self-confidence. SSWEs marketing activities like online advertising, sharing of products, services and content over social media platforms is key in business [19] as shown in Table 1 and this can be achieved using common platforms such as: WhatsApp, Telegram, Facebook, Instagram, YouTube, among others, which is the trend today in communication, marketing and conducting business [21]. In addition, Telco’s such as Safaricom have developed ICT solutions specifically for SMEs that include E-commerce platforms like M-pesa services pochi la biashara business wallet, lipa na M-pesa, mobile, fixed and cloud services, internet solutions using fiber and data bundles plans and website hosting, email services and sale of mobile devices [33], which is equally important for empowering SSWEs.

**Empowering SSWEs through E-business**

On-line business or E-business is any commercial transaction or any kind of business that includes sharing information across the internet. E-business includes using different kinds of digital ICTs to support and optimize business processes [21]. Fig. 2 shows the different components of E-business that can be relevant to support the engagement of SSWEs in business.



**Fig 2: Examples of E-business Engagement Components for SSWEs**

The benefits of SSWEs integrating E-business can broadly be categorized into three areas:

1. *Information*: information to maintain relations with customers globally, marketing of business, sales and after services, business operations, digital literacy and access of educational toolkits for self training.
2. *Communication*: this include on-line communication which is considered as supplementary to ‘word of mouth’, virtual office and space, virtual meetings and social engagements through different social media platforms and collaboration with different social groups and communities.
3. *Transactions*: transactions mainly using E-commerce (electronic commerce is the buying and selling of products, goods and services or the sending or receiving of money or data over a digital platform for example, the mobile money transfers) and V-commerce (virtual commerce is the transacting of business in form of products, goods and services over the Internet, for example using websites and artificial intelligence platforms).

Adopting E-business can enhance SSWEs entrepreneurial activities and engagements with other businesses (B2B), with consumers (B2C) and with government (G2B). Beyond the usual business benefits of adopting ICTs, [17] identified four key benefits to female entrepreneurs as follows:

1. That ICTs can shield SSWEs from gender discrimination by providing a degree of anonymity;

2. That ICTs can support information and knowledge sharing amongst SSWEs;
3. That ICTs can facilitate SSWEs to have the flexibility to work remotely, thus allowing for stability of domestic responsibilities and entrepreneurial tasks;
4. That adopting ICTs can help underprivileged SSWEs manage their business in terms of time and cost efficiencies.

It can be further said that SSWEs are increasingly becoming a key target group for ICT initiatives whereby, access and use of these tools is considered a precondition for poverty alleviation, socio-economic development as well as for SSWEs empowerment. [19] further note that the rapid expansion of ICTs and an increased use of the internet to carry out E-business transactions and digital marketing can therefore, empower SSWEs towards socio-economic development. The following section presents a summary of an analysis of the strengths, weaknesses, opportunities and threats (SWOTs) of SSWEs in relation to ICT4D.

**Summary of SWOTs for SSWEs**

Based on the foregoing findings, the study examined the SWOTs of SSWEs in relation to ICT4D as shown in Table 2.

**Table 2: Shows summary of SWOTs for SSWEs**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>✓ A fully liberalized economy with no restrictions</li> <li>✓ Perception of SSWEs as an engine of growth</li> <li>✓ Contribution to GDP in diverse ways</li> <li>✓ Juggle business with family responsibilities</li> <li>✓ Uniqueness in branding of individual SSWEs' products and services</li> <li>✓ Formation of strategic alliances to enhance business opportunities like business incubators, internships, women self help groups</li> </ul>	<ul style="list-style-type: none"> <li>✓ Limited ICT/Digital awareness, use, skills related to entrepreneurial linkages</li> <li>✓ Resistance to change, technophobia - avoidance, fear</li> <li>✓ Lack of relevant content and information on markets for products and services</li> <li>✓ Cultural beliefs</li> <li>✓ Self limiting and fixated mindset</li> <li>✓ Limited laws, policies and regulations</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>✓ Focus on niche markets, growing market and demand with crises, demands, like COVID-19</li> <li>✓ Participation of SSWEs in public, private sector tenders, procurement</li> <li>✓ Key participants in BPO, blueprints such as Vision 2030, UN SDGs, Kenyan Big 4 Agenda</li> <li>✓ Venturing into Digital Shift</li> </ul>	<ul style="list-style-type: none"> <li>✓ Competition and Gender inequalities</li> <li>✓ Global crises</li> <li>✓ Technological challenges</li> <li>✓ Inadequate infrastructure</li> <li>✓ Punitive taxes like the recently introduced Digital Service Tax (DST) in Kenya, high interest rates</li> <li>✓ ICT Security and Privacy issues</li> </ul>

There is need for supporting and promoting SSWEs to venture into the digital shift. For instance, the United Nation's Sustainable Development Goals (SDGs) and the Kenyan Vision 2030 blueprint envisage a fully developed, knowledge wealthy society as we approach 2030. That stresses the importance of the development of the ICT sector and the use and access to ICT by all. This means that the GOK and other development partners can further support SSWEs by facilitating additional initiatives as a way to encourage ICT adoption by SSWEs.

**IV. CONCLUSION**

ICTs are powerful catalysts for socio-economic empowerment of women. The dissemination of ICTs has benefitted women in different ways in particular the traditional role of women has now been redefined. However, through periods of crises such as the current COVID-19, the situations harm the performance of many SSWEs in terms of production, marketing and turnover profit. To reduce their lost sales during such crisis, SSWEs can benefit from integrating ICTs to foster communication which enhances knowledge creation, sharing and dissemination of information. Digital World is here to stay in terms of investments, operations, services, products and delivery. SSWEs can be induced to embrace the digital shift in their ventures to manage business operations as the widespread uses of ICTs are transforming society and economies. In summary, ICT4D is an initiative aimed at bridging the digital divide through the use of digital technologies thus contributing towards socio-economic growth and progress. It is evident that the adoption or non adoption of ICTs such as E-business and digital marketing can also have direct impact on the growth and success, or survival or failure of SSWEs entrepreneurial ventures. This study proposes the following strategies and approaches that will guide SSWEs in using the appropriate ICTs for their entrepreneurial ventures.

## V. RECOMMENDATIONS

For Government and Other Stakeholders:

1. *Improve women's economic empowerment interventions*: the current interventions are limited to overcome all obstacles facing SSWEs.
2. *Promotion of social inclusion*: further provision of Public Services through a series of high-profile E-government initiatives such as those provided in Kenya at the country-wide Huduma Centers, and the E-citizen digital platform can provide new mechanisms for SSWEs engagement and thus promote social inclusion.
3. *Foster Competition*: the government and other development partners should create a favorable environment such as offering tax rebates to foster SSWEs competition alongside other types of enterprises.

For SSWEs:

1. *Refocus Digital Shift*: SSWEs should seize the potential ICTs opportunities and re-focus digital shift efforts towards changing customer expectations, doing business and gaining competitive advantage.
2. *Capacity Building*: SSWEs should leverage on digital and ICT Skills through life-long learning in order to promote online visibility for entrepreneurial advancement and survival strategies.
3. *New Opportunities*: to look out for new opportunities by investing in ICTs especially social media as an important catalyst for empowerment.
4. *Embrace New Digital Economy*: SSWEs should integrate ICTs to foster new strategies and practices in relation to E-business and digital marketing.

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