Research on System Design of School Enterprise Cooperation Based on OKR Working Method

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Abstract: *To provide effective, feasible, efficient and user-expectant services for people with intellectual disabilities, service centres for people with mental handicap and recipients of university services from the perspective of user needs. A conceptual model of a service centre system for people with mental handicap based on the OKR working method is developed to identify service touchpoints and design the system to meet the needs of users through user journey mapping. Based on the OKR working method, the problems are analysed in depth and a conceptual model of the objectives and outcomes of the cooperation between the care institutions and universities is developed from the three-way contact points of universities, care institutions and mentally disabled care recipients, so as to optimise the cooperation model between the service centres for mentally handicapped people and universities.*

Keywords: *OKR working method, Service Centre for the Mentally Handicapped, Universities, System design*

1. Introduction

With the in-depth development of the school-enterprise cooperation model, many universities and enterprises have also achieved fruitful results when conducting research on school-enterprise cooperation projects. School-enterprise cooperation allows the management and market advantages of enterprises to be brought into play, which constantly improves the core competitiveness of enterprises and helps to promote the transformation of scientific and technological achievements and the implementation of practical results. The specific path of school-enterprise cooperation mechanism innovation, technological innovation, model innovation, forward-looking in the understanding of certain issues[1]. Through the establishment of school-enterprise partnership, universities and enterprises can achieve effective resource sharing, and enterprises can outsource part of their work to universities to complete, which not only broadens the economic sources of universities, but also improves the efficiency of enterprises. The school can also reflect the development characteristics of the enterprise, and realize the in-depth integration and exchange of knowledge, technology and talents between the school and the enterprise[2]. For example, the cooperation between Hebei Jiaotong Vocational and Technical College and Great Wall Motor Company Limited, the cooperation between Hunan Railway Professional Technology College and Hunan Huadu Intelligent Technology Company Limited, the cooperation between Chengdu Industry and Trade College and Dongfeng Yueda Kia Automobile Company Limited, etc. These are all excellent school-enterprise cooperation carried out in different industries.

Most regional care providers are still in their infancy and have not developed a standard model of care. Collaboration with universities is also a new opportunity sought by most care providers, and with the advent of the post-epidemic era, care providers are now being asked to develop into a diverse space. At present, Nanjing Normal University Of Special Education is the only independent provincial undergraduate university in China that focuses on training special education teachers and also on higher education for the disabled and the training of specialists for the disabled, and it is also the university that is currently able to combine universities and mentally handicapped people institutions most closely[3]. There is still little research on university-enterprise cooperation between universities and mentally handicapped people institutions, which includes not only services for people with mental disabilities, but also the challenge of how universities can combine their professional and human resources strengths with mentally handicapped people institutions to achieve better and more coordinated cooperation. Therefore, it is urgent to develop school-enterprise cooperation for the mentally handicapped people sector to meet the diversification needed to enhance the innovative synergy and optimise the governance structure system.

This study focused on a questionnaire survey of staff and families of people with disabilities in 159 service centres for people with mental handicaps in Hunan Province and the community at large. The research was carried out in cooperation with the Changsha University of Science and Technology, including the Clear Sky Charity, the Hunan Provincial Qingquan Sunshine Volunteer Service Centre and the Tianxin District Yizhi Home, to understand the current situation of care institutions for people with disabilities. Based on the OKR working method, the problems were analysed in depth through the construction of a service system model, and the cooperation between universities, service centres for the mentally challenged and service centres for the mentally challenged was explored from the point of contact between universities, service centres for the mentally challenged and the disabled.

2. The application of OKR working method in school-enterprise cooperation

OKR, The Objectives and Key Results (O-KR) method, O - Objectives and KR - Key Results, is a framework for defining and tracking objectives and their results, KR is a method and tool for achieving "O" and is a pathway option that can be continuously tried and tested and actively replaced. Its main objective is to define the 'goals' of the company and the team and to define measurable 'key results' for the implementation of each goal. The OKR method is a set of management tools and methods for clearly tracking goals and their completion, invented by Andy Grove, founder of Intel, and introduced to Google for use by John Doerr. The OKR method was introduced to China in 2014[4].The OKR working method is rarely applied in school-enterprise cooperation. Applying the OKR working method to the user requirements analysis of school-enterprise cooperation systems helps to clarify the user requirements of school-enterprises, the contact points, and select the user requirements contact points that are important for the design of school-enterprise cooperation systems. The analysis of the user travel chart can be collated and analysed to obtain the optimal design requirements for this system based on the user requirements of both school and business partners.

3. Research methods and processes for optimising school-enterprise cooperation systems

3.1. Innovative research based on the OKR working method

The OKR working method is used to build management systems and optimise the implementation path of system design. It facilitates mutual coordination between team members and balances the sustainable development of individuals and teams, allocates resources flexibly, promotes internal synergy and external matching of the organisation, and thus adapts to change. It also helps to enhance the motivation of knowledgeable team members and can maximise their self-driven, self-challenging and deeper-potential pursuit of goals, and is therefore suitable for co-creative team management path needs[5]. It allows the team to focus on important goals that are truly valuable and allows all team members to share responsibility and keep in sync, working together to achieve key tasks. The use of the OKR method of working can provide research directions for the systematic optimisation of school-enterprise cooperation.

3.2. The research process

The research process was divided into three steps, the first of which was to identify key target outcomes in the touchpoints through user journey mapping and then finally to improve on the key target outcomes. Secondly, a study of system design strategies based on the OKR work method, applying the OKR work method to the hierarchical division of labour and defining the key target outcomes for each department. The final step is to obtain a conceptual model for the design of a system based on the OKR working method for childcare facilities, and finally a diagram of an optimised service system.

3.2.1. Capturing user requirements elements based on user journey maps

Finding touchpoints, mapping user experience, understanding touchpoints based on an example of the OKR working method for university services goals (user journey map) and mapping some of the touchpoints for each service phase to find optimisation points in the collaborative system.

The touchpoints can be divided into three forms: information touchpoints, physical resource touchpoints and social touchpoints. Information touchpoints are the channels through which information is transmitted and exchanged. The physical resource contact points emphasise the configuration of the physical service tools, service facilities and service environment in the place where the service takes

place, enabling the linkage and continuity of resources, information and services[6]. Social contacts are centred on the social role of people with intellectual disabilities and consider the construction of social relationships for people with intellectual disabilities, not only to build connections and enhance emotional support within the person with intellectual disabilities and within the family. It is also necessary to consider the social role attributes based on differences and to establish intergenerational interactions and communal relationships between people with intellectual disabilities and other age groups in terms of needs, abilities, experiences and other aspects.

By looking for pain and opportunity points through all the contact points before, during and after the partnership between the university and the care provider, as seen in the care provider's journey map, staff, students and care provider managers can improve their services in a more targeted and purposeful manner. This is a key factor that can enhance the overall strength of the partnership. Each touchpoint is designed as a channel to obtain key results, namely participant satisfaction. High satisfaction points are pleasure points, low satisfaction points are pain points, and both pleasure and pain points can be translated into key factors for improvement in a collaborative system optimisation map[7].

3.2.2. Research on system design strategies based on OKR working method

The construction of a system is not just about the role of individual elements, but about the interconnectedness and interaction of the elements as a whole, with each element complementing the other and each doing its own job to ensure the long-term continuity of services and the long-term sustainable operation of the three. Care institutions mainly provide rehabilitation training for mentally handicapped persons, employment training, and mentally handicapped persons mainly communicate their claims through the care institutions. The university can provide more diversified and specialised services for people with mental disabilities, so we also apply the OKR working method in our system strategy, so that there is a clear division of labour and the KR and O at each level are interlinked according to the principle of chain decomposition. OKR is both a goal management and communication tool and a quality assessment and evaluation tool[8].

For example, after identifying the objectives of the current supported employment product partnership development between the university and the care provider, a challenging objective O was developed after a multifaceted discussion and broken down into multiple key outcomes KR. There are two main sections: the development and design category for universities and the production category for care institutions and people with disabilities, followed by a hierarchy from top to bottom. The key results of the higher level are the objectives of the lower level, and so on, forming 2 or 3 levels of OKRs from top to bottom. All information should be open and transparent, all members should be aware of the objectives of this cooperation O, and the higher management of universities and Service Centre for the Mentally Handicapped should be aware of the implementation of key results at all levels, in order to facilitate the division of labour between the various regions, as shown in Figure 1.
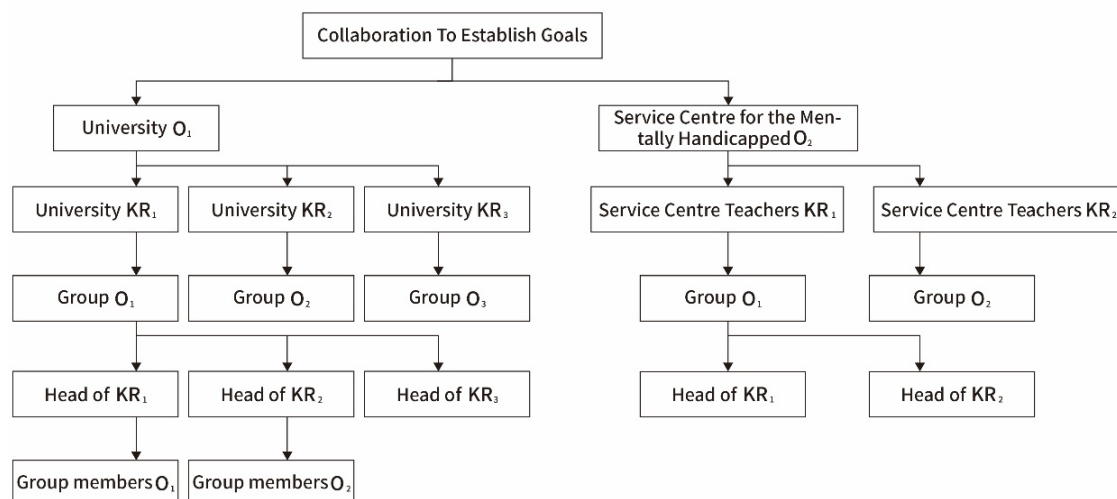

Figure 1: OKR Work Method Hierarchy Breakdown

3.2.3. Conceptual model of system design for mentally handicapped service center based on OKR working method

OKRs clarify expectations: what needs to be done (as soon as possible) and exactly who will perform

it, and its allows members to align both vertical and horizontal goals[9]. This study uses the OKR working method in relation to the core motivations of care providers and mentally handicapped people to discuss a new approach to contact point service design, and to this end develops a conceptual model for the design of school-enterprise systems based on the OKR working method. The service system diagram, on the other hand, is a scenario-based analysis tool that helps designers to identify specific design locations in design concepts and service constructs and to visualise the relational issues in the system in a clearer way[10].

According to research, the most significant source of stress for staff in care facilities comes from the people they serve, due to the high level of stress they feel when dealing with clients for long periods of time, often investing a lot of emotion and experience while educating and caring for them, but lacking effective interaction and feedback. According to incomplete statistics, the phenomenon of brain drain exists in some care institutions almost every year, and there are very few staff members who have obtained university degrees or above in the institutions. The continuous brain drain has further led to a shortage of staff in the institutions, which requires overloading to complete the work tasks, with high work intensity and prone to burnout, and the lack of talents is also detrimental to the development of the institutions. This has led most care providers to look for new approaches, and the school-enterprise partnership approach to find professionals to serve the care clients and get more strength into the care providers is what they are looking for, and this is the core motivation for the care providers and the mentally challenged, as shown in Figure 2.
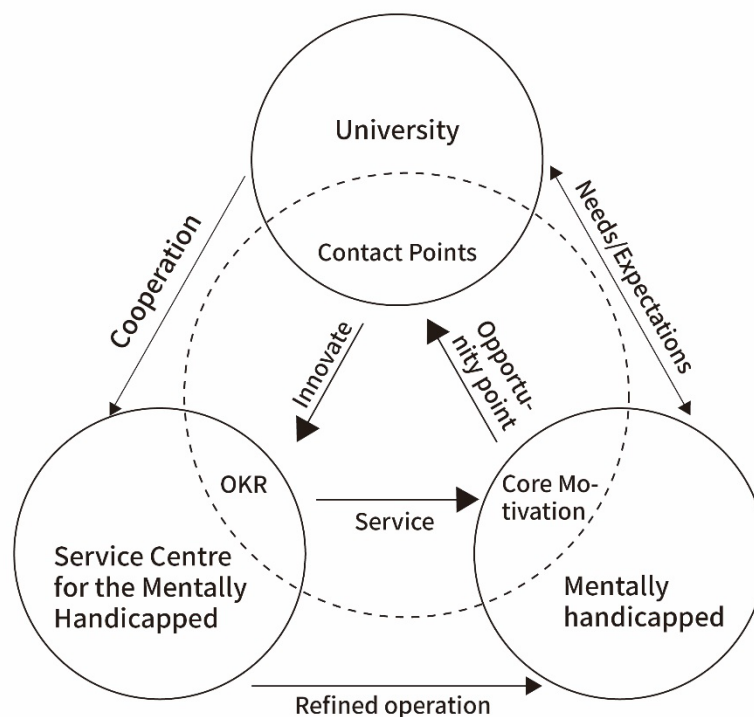

Figure 2: Conceptual model of service design for service center for mentally handicapped based on OKR working method

With the development of the times, the specificity of the service users and the lack of a mature theoretical system have led to higher requirements for the professionalism of the service staff. It is also an opportunity to promote the differentiated content composition of Service Centre for the Mentally Handicapped when the school-enterprise partnership model takes on new forms and occurs at new touch points. It is a breakthrough for further improving the current plight of childcare providers.

Throughout the development of the school-enterprise partnership, the touch points that are sufficient to influence the decisions and behaviours of the school-enterprise partnership are improved to achieve the OKR objectives and key results. For school-enterprise cooperation, using the OKR working method means putting all the contact points into a system where they form a complementary mix, making each of their parts clearly targeted, hierarchical and relevant to the satisfaction of the university's cooperation with the care provider. Corresponding the real and potential needs of people with mental disabilities to the details of the innovative design of contact point services for school-enterprise cooperation cooperation. Only by starting with the expectations of people with mental disabilities can school

enterprises become each other's first choice and coordinate their cooperation in order to meet the expectations of users for school enterprise cooperation.

4. Keeping the green horse OKR work method system practical case study

Practical examples have found that the OKR working method makes the touchpoint objectives and key results clear and is more result-oriented and likely to achieve its objectives. Using a practical case study of cooperation between the College of Design and Art of Changsha University of Science and Technology and Sunny Day Care's supported employment product, the essence of design lies in practice, and in response to this paper's reliance on theory to produce a conceptual model of design to a final system diagram. The best way to test this is also through practical projects. Therefore, in the project output of this paper, both the design conceptual model generated in this paper guides the actual implementation of the project, resulting in a set of service system diagrams with theoretical basis and research significance, and the concrete implementation of the project provides research samples to test the rationality and scientific validity of the system diagrams. So the sequence of construction of this paper, from analysing the contact points, building the model and then testing it in practice before refining the system diagram, is a circular facilitation process with some scientific validity.

4.1. Clarify key outcomes in user journey mapping touchpoints based on OKR working methods

Before universities work with Sunny Day Care (pre-service information touchpoints), Sunny Day Care needs to make the most of its resources, and universities may use the experience of consulting with others who have been involved in helping people with disabilities, visiting and searching for information on care providers as a reference factor in their decision to go. Differentiated information on various models of care through internet media and literature searches will generate interest from universities in working with care providers. Sunny Day Care has been looking for opportunities for school-enterprise collaboration and has been exploring ways in which school-enterprise collaboration could lead to this collaboration. At the same time, a multi-faceted presentation on the internet and multi-media interaction can increase the chances of the services done by the care provider in the community appearing in front of the eyes of potential university targets, thus reinforcing the impression and further facilitating quick decisions and trips to the care provider for co-teaching.

When universities decide to go to a care facility based on expectations, i.e. in service (physical resource contacts), the extent to which the various needs of the university are met in the care facility and whether there is an unexpected gain and sense of fulfilment. After just one experience, it can determine the perception of the university's experience of this partnership for disability support, and can influence whether the university will be willing to work with them again in depth and carry out more activities. Therefore, the managers of Service Centre for the Mentally Handicapped can make innovative design of contact points and display of the characteristics of Service Centre for the Mentally Handicapped according to the different purposes of activities of universities, different professional characteristics and different talent characteristics, so as to convey more targeted contents to teachers and students of universities and thus establish long-term contact and cooperation between universities and Service Centre for the Mentally Handicapped. For instance, design studies could be combined with supported employment products so that they can see what the current products in care facilities look like and to what extent, and work together to design and collaborate on products that are more in line with the general public. We found when we worked with Clear Sky Charity that they would talk about their plight based on our expertise, which saved us more resources and time when working with Clear Sky Charity. The innovation of contact points for different characteristics will allow universities to see more visually and clearly what they can do in the social services of care institutions and what services university students can offer to people with disabilities through their specialisation.

The point of contact after the service is also the social touchpoint, and the innovation focuses on triggering the desire of university staff and students to share, to show the community what has been done and what has been achieved in collaboration between the university and the care provider, and to win the praise of the rest of the community, as well as to plant the seeds of the university's willingness to revisit. And this part of the contact point innovation should not start when the college leaves the care facility and the mentally challenged person, but while the college staff and students are still in the care facility. Through their contact with mentally challenged people, hands-on teaching, and sharing of results, they have seen mentally challenged people learn one simple skill and technique after another. Seeing a small improvement in a care facility because of a small part of themselves created a desire for teachers and

students to share and became fodder for them to share. To realise that even after the university students and teachers have left the institution, they can still maintain close contact and communication with the institution and form factors that may influence the subsequent development of the institution, so that the institution can be seen by a wider community and caring companies, as shown in table 1.

Table 1: Example of a pre-service combined with OKR working method for a university service goal (user journey map)

Stage	Pre-Cooperation	Cooperation in progress	After the cooperation
Core Motivation	1. Helping the mentally handicapped. 2. Supporting people with disabilities through professionalism. 3. Understanding the culture and education of service centres for the mentally handicapped. 4. Integration of mentally handicapped persons and service centres for mentally handicapped persons into society.		
University conduct	· Search for information. · Conduct a survey of similar service centres for the mentally handicapped.	Intuitive contact	Share and communicate with the public.
Contact Points	· Recommendations from other activity participants.	· Direct contact with service centers and people with mentally handicapped to obtain information.	· Triggering the desire to share among university students and teachers.
University Expectations	· Fast-tracked by colleges to service centres for the mentally handicapped. · Collaborative teaching for effective practicepractice.	· Get information directly related to your profession. · Want to know what universities can do for service centres for people with mentally handicapped.	· What we have done and achieved in this collaboration.
Opportunity Point	· Internet, various media Reports on information displays	· Display of information by category.	· Hands-on teaching and sharing of results. · Mentally handicapped people are taught simple skills and techniques.
OKR Working Method	**Target of contact points**		
	· Show more information. · Organise as many series of events as possible to prompt decision making by universities to visit service centres.	· Service centres for people with mental handicaps should have information clearly categorised and accurately communicated to universities.	· Lead to more advice being shared by university staff and students. · Improve the chances of working together again and attract more universities.
	Key results		
	· Opening self-publishing accounts to gain more traffic and bring more attention to people with mental disabilities. · Displaying information in many aspects on search engines, social media, official accounts, uploading pictures related to the service centre, etc.	· Displaying accurate information on the distribution of service centres for the mentally handicapped. · Make the service centres for the mentally handicapped manageable by population, so that the teachers of the institutions and the social workers are oriented to different setions. · Establishing a self-media side	· Designing in-depth collaborative practical teaching between universities and people with mental disabilities, with interactive retention punch cards to share. · Provide ongoing services on the China Volunteer Platform, allowing university teachers and students to keep a tally of their service hours at the care facility.

4.2. Study of a practical case strategy based on the design of an OKR working system

We take some stock of progress and set and discuss the next stage of OKR after two to three months, depending on the length of the university course and the duration of the project, depending on the completion of the O objectives. Conducting an end-of-month review of this phase, in which a review discussion is held based on the key results KR completed in each region. The new adjusted KR indices for each level are then made public and rewarded, while there are no penalties for non-completion, only re-adjustment and discussion of teams that do not complete the key results KR, focusing mainly on the process, with rewards and penalties as secondary aspects. And set the milestones for the following month. February-March review on time, communicate the process and target control, and summarise and reward and punish at the end of time.

A practical example of the promotion of the supported employment product "Keeping the Green Horse", a school-enterprise partnership, was used to evolve the process of the management system. The

total OKR for the supported employment product "Keeping the Green Horse" is：

Objective O - To complete the design to production of all green horses within two months and sell them to complete the expansion of publicity.

KR1 - Improve the design form of the green horse.

KR2 - Select materials that match the abilities of people with mental disabilities and improve the quality of the green horse production.

KR3 - Innovative means of selling and promoting the Green Horse.

OKR for the design sector in higher education.

Objective O - To improve the design form of the Green Horse.

KR1 - To make analogies and analyse all the green horse forms currently on the market.

KR2 - Combine innovative designs for the green horse.

OKR for the design and prototyping department at the university.

Objective O - Select materials that match the mentally handicapped people.

KR1 - Try out all the materials that fit and make the production process easy to follow.

KR2 - Consolidate the materials into a kit.

OKR for childcare providers.

Objective O - To improve the quality of green horse production.

KR1 - Training and teaching of teachers in Service Centre for the Mentally Handicapped by university volunteers.

KR2 - offline contact, teaching and collaboration with mentally challenged people.

KR3 - Institutional teachers, institutional counsellors, rehabilitators and other institutional staff to teach the mentally challenged population.

OKR for Service Centre for the Mentally Handicapped and university communication departments.

Objective O - Innovative means of promoting the sale of green horses.

KR1 - Optimise the sales process and organise regular online and offline production and promotional activities.

KR2 - Organise external human resources to assist in the promotion of the sale.

Doing a good job of promoting the implementation, mid-term review and evaluation and feedback system, etc., for the key objectives and results that have been completed and not completed to make timely adjustments and summaries. This system model, which was also perfectly proven during the summer, can better help the cooperation between our universities and childcare organisations to do their respective jobs, and we have successfully helped childcare organisations to increase their income by thousands of dollars during this Green Horse promotion.

4.3. OKR working method based school-enterprise cooperation system practical case service system diagram

Based on the previous research, we have optimized the system design process of school-enterprise cooperation based on OKR working method by building a system model and clarifying the relationship between the three. It was found that some of the main problems that existed before could be described as: low connectedness of the participants, complex cooperation needs, deficiencies in the process of cooperation, lack of clarity of purpose, etc. Improvements were made.

We identify specific design positions in the construction of services between the various systems and analyse the relationships that exist between those involved in the system in a visual way, thus sorting out the relational issues in the system more clearly. In this school-enterprise cooperation system, we act as the overall planner to fully mobilise our human resources and become the driving force for collaborative cooperation. Combining the products and services in the system to form a sustainable and positive interactive closed loop has also been optimised and improved through practice and testing in this design

project. A diagram of the constructed service system is shown in Figure 3.

Figure 3: Service system diagram

5. Conclusions

The OKR working method system developed in this study guides the innovation of contact points for school-enterprise cooperation based on the needs and expectations of people with mental disabilities. Ultimately constituting a service design system map between the care provider, the university and the mentally challenged person, the collaboration between the three as a whole can better optimise the collaboration process between the university and the care provider. Allowing childcare providers to target and develop differentiated content and establish key nodes and breakthroughs in strategic deployment. To better adapt to the current market environment in order to achieve continued innovation and growth for mentally handicapped people providers. The design of service innovations before, during and after the service in care institutions must be based on the realities of the service centre for the mentally handicapped. Strategies should also be developed in relation to the current state of development in different regions.

This study is limited by the fact that only a small number of care providers have collaborated with universities as a sample for service design innovation. Firstly, the sample of this study is limited by the region and if a higher level of accuracy is to be obtained there should be a need to expand the scope of the study in the future to incorporate the characteristics of care providers in other regions. Secondly, this study focuses on holistic planning from the perspective of the manager of the care facility, with people with mental disabilities and universities also having a correspondingly decisive role in the development of the care facility. Future research elements could therefore be considered from a multi-party collaborative perspective. The service for people with intellectual disabilities is still in the exploratory stage of development, and there are many shortcomings and shortcomings in the operation model and social environment. Optimising development paths in the light of the problems identified during the exploration process and maintaining a strong link between the institution, its clients and the university. In order to create higher value, service centres for people with mental disabilities should keep up with the times and actively develop their innovative service models[11].We are fully motivated to participate in the construction of services and increase social awareness in order to form a model of tripartite cooperation between care institutions as the main body combined with university and social support.

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