A Product Service System Design for Fitness Activities Based on Active Ageing a Proposal of Fitness for Xishan Style Council

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Abstract. This paper is about a design proposal for the "Style Council" (Xishan Style Council is local government department which take charge of organizing cultural and fitness activities. http://wt.jsxishan.gov.cn/zgxswtj/.) of Xishan, Wuxi, China to offer a service which help the residents, especially the elders, to do fitness in a healthy and social interactive way. It aims not only to improve physical health but also to build up a friendly relationship among the neighbors.

This service will be developed under the active ageing policy (WHO 2002) released by WHO (World Health Organization) followed by the Chinese government too. Because of this policy, many fitness spaces emerged and equipment was produced under the help of sponsors and "sports administration" (Sports Administration is a government department which take charge of Sports Events, training athletes, improving the physical fitness and exercise etc. http://www.sport.gov.cn/.). Nowadays local government has the mission to integrate fitness resources including sponsors, fitness groups, coaches and temporary spaces to build up a fitness system which elders can easily join. But this top-down fitness system is not working well in many places.

In this proposal, we analyze this integration work in Xishan with the aim to modify and improve it toward a lifestyle which bring both physical and psychological health to people.

According to the Social innovation journey (Fassi et al. 2013) after having investigated the user's needs, we design a service system which aims to offer multi- experienced fitness activities for elders and encourage sponsors to support this activity.

Keywords: Fitness life style · Active ageing · Social innovation · Service design

1 Introduction

As China is coming into super ageing society (Zhang 2011), fitness activities for elders have become a serious social challenge in urban contexts. Even if great effort has been paid by government and local enterprises, elders still find it hard to have an appropriate

fitness space. In east China, rapid urbanization and large amount of old migrants make the public space crowded both for normal use (walk paths, rest areas, shopping squares) and for fitness one (square dancing etc.). This resulted directly in the conflict between those people who are using these spaces in their free time (i.e. fitness people) and local resident who are suffering from the noisy or overusing of their living place.

To deal with this problem, Chinese government released "active ageing" and "health ageing" policy to invite companies and NGOs to take part in the fitness program. Beside this, "National Fitness Program" was launched in 2011. This plan has invested a large sum of money in fitness equipment, coach training and holding fitness events. During the past 4 years, community fitness programs are wildly developed. Unfortunately, this top-down public fitness system have given rise to a large burden on government, that's why many local governments started to invite non-government sectors to deal with the problems like capital shortage, engagement, social participation etc.

On the other hand, many companies are taking these national wild fitness activities as opportunities. Sponsors cooperate with residents in many ways to enhance their social influence but cooperation are limited due to reliance, information accessibility and weak organization.

This applied research is focusing on helping Xishan "Style Council" to effectively cooperate with sponsors, residents and other stakeholders to improve the local fitness system of activities.

2 Background

Square dancing is one of the most popular fitness activity in Chinese towns. It is basically done by a team of people usually meeting after dinner (6–8 pm) in public spaces (i.e. squares, parks, underground stations, large sidewalks etc.) to train themselves for contemporary dance performances guided by a team-leader. This activity has a long history rooted in the Chinese culture to cooperate and spending their free time together. The aging people who had experienced the cultural revolution in their teens, started to look for new activities to practice during in their spare time as ways to keep fit (Chen 2011). In the last years due to the renewal of many public spaces, new development urban system and the people ageing, the square dancing is being considered more as a problem than an opportunity by the local people. In Xishan District, Local Style Council believes it is a cost-effective activity for the elders. The positive aspects are obvious, elders socialize and interact through dancing, moreover, dancers bring vitality to the city. To support square dancing, Xishan Style Council has planned to involve more public spaces including more than 30 school playgrounds and to employ almost 900 coaches to tutor elder people, with the aim to reduce the negative impact of square dancing, make it work under the control of "neighborhood committee"[1]. Style Council hopes to build up a system according to two main aspects:

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[1] Neighbourhood community is a self-management organization at the grassroots level in China. They are in charge of mediation of disputes among the people and activity organization.

1. Use public social resources like coaches, temporary spaces and school equipment so to not create new spaces;
2. Pay more attention to the local residents, their needs, habits and environmental wellness.

To help improving the actual system through a product service system design approach we started a research activity by analyzing the user needs in-the-field we firstly did field research and analyzed the needs of different stakeholders. This gave us some insights about fitness habits in urban contexts and feedback by the local residents. Both of them were useful to start to identify the design opportunities and then the outputs.

3   Design Methods

3.1   Design Process

"Solutions to many of the world's most difficult social problems don't need to be invented, they only need to be found, funded and scaled" (Rodin 2007).

To deal with the community fitness problem, we first found some effective existing solutions. Further we interviewed several stakeholders including government officers, sponsors and participators to find a new fitness life style which can be scaled in Xishan. We used a user-centered design approach based on questionnaires, survey ethnography research to develop possible scenarios where elders could get more sense of belonging, respect and wellness (Fig. 1).

3.2   Analyze Existing Solutions and Problems

The currently running fitness policy brings positive impact to residents but it still in need of some improvements. To make it work better and extend its coverage to more people, we figured out some effective solutions based on the in-the-field research then analyze the positive and negative aspect of these cases.

Cooperation with Sponsors. Sponsors including shop owners, banks and local companies play an irreplaceable role in the existing fitness system in Xishan. They have a strong will to support the fitness activities especially square dancing, while dancers also hope to get uniforms, video equipment and financial support from
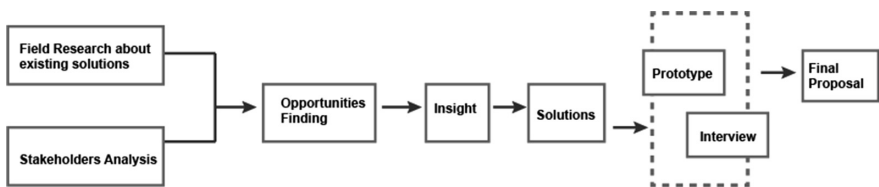
Fig. 1. The overall methodology of this project

sponsors. In the cooperation between sponsors and Style Council, there is benefit on both sides. According to the active ageing policy, Style Council has the responsibility to engage government-sponsored enterprises in social development business where several stakeholders can participate. By investing in dance teams, sponsors do their commercial publicity in a cost-effective way. In this process, to build a trust relationship is necessary for both sides. Dancers need to hope the background of sponsors while sponsors also hope to know the social influence of the dancing teams. Sponsors hope to employ a team with good social image and can dance in line with the advertising character.

Temporary Space for Fitness. As cities became crowded Chinese local government tried to find temporary spaces to meet the needs of fitness people. In Xishan, two kinds of temporary spaces have been used for fitness and entertainment under the help of Style Council: the market area and the primary school playgrounds.

Style Council will open 33 primary schools playgrounds to public fitness and let the market spaces be used by fitness people after lunch, when market is ended. This allows schools to be used as multi-functions places where people could go, meet and share their interests. To use these places properly, Style Council is still looking for a good way to organize these fitness activities. Management, kind of activities, organizational form and other issues are still unsettled.

Actually, this service started with a test including only one school opened for residents in the weekend. A company is managing this temporary space and charging small fee for admission.

3.3   Main Stakeholders Analysis

To know the roles of each stakeholders and the relationship among them we did some in-the-field research activities including interviews, surveys and questionnaires.

Role	Goal	Opportunity
Government	Deal with the ageing and social health problems	"Active aging policy"
Sponsor	Work for corporate social responsibility	Invest in the fitness movement
	Brand behavior	
	Advertisement	
Fitness participants	Health needs	Do fitness
	Emotional needs	Attend the fitness movement
	Sense of belonging	Same sport clothes
		Cultural and recreational activity
Coaches	Personal passion	Being paid for the coach work

The analysis of the stakeholders put the base for a scenario including a a new fitness life style built on two main factors:

1. "Active ageing policy" which encourages the elders to join the nationwide fitness programs and eliminate social discrimination against elders.
2. A new form of co-management system with such broad participation including sponsors, residents and coaches.

In Xishan, many Government departments (Worker Clubs, Culture Palace, Labor Unions. etc.) are working for the community fitness. Style Council is in charge of organizing the fitness events and coaches payment while Sports Administration, Culture Palace and Elders Universities are invited to train the coaches. Such a big and complex system did not work effectively because every administrators treat their job as temporary work. Although there are many coaches do regular work but they are mainly volunteers, their motivation totally depends on their personal interest.

Another driving factor for the coaches is self-fulfillment, sharing skills bring self-gratification to them.

4   Challenges and Opportunities

To create a new fitness lifestyle, we conclude the main challenges from the consumer's perspective as below:

Trust: There is always a barrier between the sponsors and dancers, especially for small shop owners because they are not well-known for residents. Dancers know a little about the advertising content and the background of sponsors, so they always do not want to be responsible for the advertisements. As the result, most of the sponsors we know are estate agent or state-owned enterprises like banks. A "bridge" and "agency" between dancers and sponsors to build trust relationship is needed.

Accessibility: Distance, time cost and the fitness content are all accessibility issues. The new fitness service system should allow elders to take part in freely. According to an in-the field research among 100 elderly people done in November 2014 we figured out that they are not good at using tickets, credit card or smartphone to approach the fitness place and pay for the service, a new way for them to enter the fitness space is needed (Fig. 2).

Information: Elders like to get the information in a traditional way, talking directly or mention them with physical advertisement are more effective than SMS.

Fig. 2. Field research to find best way to access fitness activities

A low-technical communication which is suitable for their living habits should be established for the elder fitness people. Traditional information platform, like the newspaper reading board, posters and Propagandist Manual should be used. For the sponsors and other residents, they need quick and detailed information, so an online platform is needed.

Space: Fitness activities fit into the space features. Although some of the activities are done according to the characteristics of public space, others are spontaneous. They happen on "found spaces", places intended for other uses (Rivlin 2007). Different from spontaneous "found spaces", some "fixed-site" made by sponsors, Community Council and shop owners absorb more professional dancers and coaches. These "fixed-site" are formed by regular fitness activities of specific group or person who know others well. As "found spaces" always course troubles like traffic jam, noisy near school or resident area, "fixed-site" are more friendly for others.

Health: "Health" has rich meanings, it is referred to as physical, mental, and social well-being. "Participation" which can improve both mental health and social well-being is in turn understood as a multifaceted array of activities by older persons in social, economic, cultural, spiritual, and civic affairs in addition to their participation in the labor force. Elders can improve their social adaptation through attending fitness. We also see that multifaceted array of fitness can build up different types of social relations which can bring people a life full of variety.

Through analyzing insight above, we find that the main problem is management, one of the solution is to invite companies nearby to manage it, but it brings cost to residents.

5 Strategy Solutions

To deal with the challenges, we set up several strategies as below.

5.1 Fitness People as Asset

According to the theory "People as asset" raised by Ezio Manzini, people and their activities can be used as asset for racial social innovation. We can see the value of the fitness activities as asset are various: it not only bring physical and mental health to fitness people through group activities, it brings social vitality and business opportunities as well. Both social and economic benefit can be achieved through wide participation of social members.

In order to fully use the asset including fitness activities, sponsors and policy, what we should do is "to recognize people's capabilities and help people use those to solve the problems they face (Sidorenko and Zaidi 2013)."

5.2 Open Information Platform for All Residents

An adjustable fitness system which can be adjusted according to the attitude of other people can reduce the negative impact of fitness activities. A social friendly life style

need fully communication with local residents in order to change flexibly according to their feedback. The platform—both online and offline—is needed for fitness people to know the comments of other residents.

5.3 Coach-Driven

Coaches can be seen as "Lead Users"[2] in public fitness system. They are pioneers of experiencing new fitness activities. They fully use the public and private fitness resources, improve it then create their personal fitness lifestyles. Others learn from them and then join their groups.

Coaches are influenced by other stakeholders, especially the Style Council. Because coaches benefit from the training supported by government, they have the mission to follow the instructions of Style Council.

As we see the coaches are trained from volunteers to specialist, it is easy to understand that coaches are the people with passion and connect deeply with other residents. So the coaches can organize fitness team effectively and become a "bridge" between government department and fitness people, then a reliable cooperation can be made by coaches. Based on the effort of coaches, two kinds of reliable cooperation can be improved: one is between sponsors and dancing teams while another is an internal cooperation among dancers.

5.4 Space Meet the Affection Need

Elders need more warmth and behavioral confirmation, especially for the migrant elders who lost their former social network. So the space should not only offer equipment but also emotional service, friendship and communication program.

5.5 Fitness Lifestyle with Multi-experience Activities

Monotonous fitness program cannot absorb people for a long time. A healthy and sustainable lifestyle should involve cultural activities, social activities with broad participation. A multi-experience fitness lifestyle can bring new meaning and value to people.

6 Service

After the field research and interview, we got the final concept solutions: "FANG" which is a service system includes three separate parts. Each phases is improved from existing solutions.

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[2] Customers who adapt, modify, or transform a proprietary offering (Berthon et al. 2007) http://en.wikipedia.org/wiki/Lead_user.

6.1   Start-up: Coach Training

Coaches are not only users of this service but also organizers. They get salary from Style Council and prize from sponsors. Their work are various: from training the fitness people, advertising for sponsors to managing the temporary space.

If someone hope to work as a coach, they should apply through Community Council, if approved, be trained at local Culture Palace[3] and Senior-Citizen University[4]. CSSI[5] and Sports Administration will send instructors to train these applicants.

After the training program, qualified applicants will get coach license ranking from 3rd to top. Local Style Council will employee these coaches to manage this service system.

6.2   Phase One: Street Fun

Style Council send coaches to tutor dancers in regular place and post the timetable and content of the fitness program on the newspaper reading board[6]. When the coaches working on the street, they will encourage core team members to express themselves or even tell their personal stories. Coaches record their words and images and then upload these information on the website. On the other hand, local residents and also comment on the website.

The sponsors will choose dancing team to cooperate with according to the data of group member, coach, place or the comment of other people on the website. After they find the right team, they submit their application with the information about their identity, amount of financial support and advertisement content on the website. Style Council will check the application under the help of local government then give coaches suggestions.

Coaches will make the decision for the cooperation according to the feedback of core team members and suggestions from Style Council.

Dancers can benefit from the uniform and equipment given by sponsors, their income depend on the performance of their advertisement activities (Fig. 3).

6.3   Phase Two: The Playground with Children's Wishes

According to the Xishan Fitness Plan in 2015, 33 primary school playgrounds will be opened to the local fitness people in the night. After analyzing the feedback of questionnaires and interview, we find that people prefer to do recreational activities like watching film or walking along the street in the night. This means some leisure and entertainment activities can bring a better multi-experience to fitness people.

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[3] A place of cultural entertainment, people can learn dance, sports skills there.

[4] In China, mainly to help elders to learn new skills like using computer, mobile phone. There are also fitness curriculum.

[5] Chinese Administration of Social Sports Instructor are in charge of training coaches, especially part time coaches.

[6] A kind of board or wall where people can read newspaper or other timely posted information.
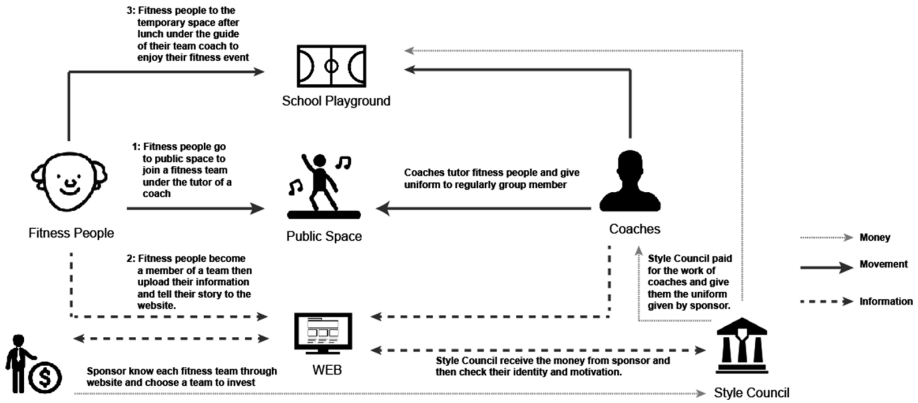
Fig. 3. The system map of service

In our concept, not only the playground, but also some classrooms will be opened to the local people, which means they can watch film and TV programs in the classroom after dinner.

Coaches will manage this temperature space and charge for the service in these schools. School will not only be an entertainment space, it can bring more love and greeting to visitors through interaction between students and visiting fitness people. For example, students will write down their wishes for visitors on blackboard in festival while fitness people can write down their feedback on the board, too (Fig. 4).

7   Value Offered

For the sponsor companies. Their advertisement can be more effective because they find the right person who can performance the culture and images of their companies/products. They can also estimate the cost and social influence through the comments posted on the website. Furtherer more, they can title the fitness match team to advertise on fitness event and then build up a new relationship with residents.

Fig. 4. School be used as temporary fitness space

For the government. Their cost on citizen fitness can be effectively used by the effort of sponsors and coaches. The role of government have been changed from organizer to investor. The benefit from fitness life style can help government reduce the cost on medical investment and fitness equipment.

For the coaches. Their work will be paid by sponsors and their power will be enhanced in the fitness teams. Their passion can be inspired because they deserve more respect and have more decision-making power in the fitness team.

For the fitness elders. They get a way to express themselves online through website and find their fitness friends through the mention product like handbags and uniform on the street. Aloneness will be reduced by self-express and group activities.

8   Touchpoint

The service system consists of 2 parts: online platform and offline fitness system. The online digital platform will be managed by Style Council while the offline fitness system is organized by coaches who are send by local enterprises and community councils.

The offline touchpoints are designed according to the regular interaction and behavior of elders, while the online system is based on the attitude of working people, especially youth.

Website. Website is the main part of online platform. It can help the sponsors find the right team which is compatible with their project culture and corporate image. The fitness group members can tell their stories and post their photos on the website and the residents can comment on the website, too. The account of the sponsorship including payment of site management, employee coaches and uniforms will be showed on the website, too. Residents can give stars to these fitness teams according to their feelings and relationship with these fitness people. So the potential sponsors can get a brief account of the social influence of fitness teams.

Uniform and handbag. Uniform and handbags are not only the advertisements of sponsor companies, but also the logo of the fitness team which can improve the sense of belonging. The dancing atmosphere can be improved by wearing the same uniforms while the dance sensibility and the expressive force will be enhanced by the uniform, too. Handbag is another kind of advertising tools to show the identity of fitness group member. The other people can ask for the information about the fitness event from the people wearing handbags.

Banners and roadblock. As many sponsors use banners and roadblock to advertise, the shape and images posted on will be redesigned which can meet the requirement of both sponsor and fitness people.

Brochure. The advertise brochures show the timetable, place the coaches which help the fitness elders to find their right fitness activities. For elders, a carry-on brochure is needed to know the information of fitness activities (Fig. 5).

Event. According to the Roles for Building China National Civilized City, each district should have at least 15 fitness group and held more than 8 fitness activates every year. In Wuxi, QunFang is the biggest fitness match. In this service, QunFang Contest will not be reported on TV but also broadcast on the website and people can

Fig. 5. Brochure made to get the feedback of stakeholders

comment on it. On the contest, fitness team will wear the uniform designed by the sponsor to perform on the event.

9   Conclusions

In this social innovation process, we try to transfer a top-down public fitness system to a multicomponent service system. As grass root innovation can reflect the social needs in a wider range, we focused on marginal people and then experienced an iterative design process with stakeholders and modify the service plan according to their attitudes.

The outcome of this proposal is a service include three phases and we hope to scale it in the future.

In the service design process, we learned that it is designers' duty to rethink and refocus the resource in our daily life and then integrate social resources to bring new value and meanings to people.

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