

Making Street Food Healthier in Singapore: A Case Study

CHALLENGE: RISING OBESITY IN A FOOD-LOVING COUNTRY

“Over the years we have been educating Singaporeans to eat healthily, but when they go to the hawker centre, there are very few stalls selling healthy food”.

Ang Hak Seng, CEO (2011-2013), Health Promotion Board, Singapore

The prevalence of obesity in Singapore has risen almost 1% per year to 11% over the past few years¹. This mirrors the global trend of rising obesity rates in higher- and lower-income countries. Singapore’s concern is that if obesity is not addressed urgently its rate will hit a tipping point that will precipitate an exponential growth that would be difficult to reverse. This has been witnessed in the United States of America, where nearly one third of the population is obese. Such statistics underscore the urgency to address the issue of obesity.

The problem of obesity is not caused by a lack of knowledge among individuals. A recent American International Assurance (AIA) Healthy Living Index Survey of the Western Pacific Region showed that 66% of Singaporeans would like to lose weight and 62% acknowledged the importance of regular exercise². Yet knowing that one should eat a balanced diet and exercise regularly is not the same as actually doing it. Many individuals who have vowed to lose weight have found it challenging to modify their existing lifestyles. Those who have lost weight have found it difficult to maintain the weight loss.

While personal responsibility is important, the social context and environment around the individual play a critical role in supporting lifestyle modification. The challenge has been for public health practitioners to identify interventions that are impactful, scalable at the population level and sustainable.

Tackling obesity requires a two-pronged approach of addressing energy input (diet) and energy output (exercise). This case study focuses on how Singapore has chosen to tackle unhealthy diets. Increasing physical activity is also part of the overall strategy employed. The strategies tackling the social context around dietary practices can be applicable to any health promotion initiative. Addressing unhealthy diets requires an understanding that food preference and taste are often rooted deeply in the culture of a society. Changing diets thus goes beyond education about food groups and nutrient requirements. Changing the food culture requires a social movement towards healthier diets.

Key Lesson:

Changing diets goes beyond education. Changing the food culture requires a social movement towards healthier diets.

¹Ministry of Health (MOH) Singapore. National Health Survey 2010 (unpublished data)

² AIA Media Release 25 October 2011. Despite low Healthy Living Index score, Singaporeans’ desire remains strong for a better quality of life for themselves and their families

CONTEXT

"Singapore's my fried rice paradise ...".

Singapore Artist Dick Lee in his 1991 musical satire about Singapore society

Singapore is a city-state with a population of 5 million living on a land mass of just over 700 square kilometres. It is multicultural, consisting primarily of Chinese, Malay and Indian ethnic groups and a growing number of nationalities from various parts of the world. Yet despite the broadening of the tastes and preferences of the Singaporean, the core of the diet remains the traditional Chinese, Malay or Indian fare.

The Food Centre

There is no better place to view and taste this local blend of flavours than the street food centre (or hawker centre). The food centre is an integral part of Singapore culture and life³. The centre caters to a large spectrum of society; 80% of Singaporeans eat at these food centres more than once a week. One third of Singaporeans eat out more than seven times a week⁴. Each food centre has a Hawker Association comprising representatives of food vendors. The Association represents the interests of the vendors and works closely with local leaders to serve the needs of the local community.

A Singapore Food Centre



Originally set up along the streets without any licenses or regulation, food vendors were moved in the 1970s into centralized structures to ensure greater control over their hygiene practises. There are more than 100 food centres throughout Singapore, which usually are paired with a fresh food market.

The regulation of food vendors and the development of food centres are under the purview of the National Environment Agency (NEA). The NEA licenses each food vendor to ensure that the

³ http://infopedia.nl.sg/articles/SIP_1637_2010-01-31.html

⁴ Health Promotion Board (HPB) Singapore. National Nutrition Survey 2010 (unpublished data)

food sold are safe for consumption. Each stall has to display a hygiene certificate which spells out the hygiene grade A,B,C or D (see Figure 6 and Annex A) of the stall. The grading system takes into account the overall food and personal hygiene of the food vendor and the cleanliness and housekeeping standards of the stall. Food vendor who fail to comply with the hygiene standards would have their licenses suspended.

Food sold in these food centres are premised on good taste at affordable prices. It is a highly competitive market. While the vendors compete on the taste of the dishes as a way to differentiate themselves from their competitors, many of these evolved from traditions that are not informed by knowledge of healthy nutrition. A substantial number of the dishes are heavily dependent on the use of oil, seasonings and, thus, are high in fat, salt and calories. Vegetables and fibre content are usually low. Locally, those who regularly eat out consume 15% more calories and 25% more saturated fat⁴.

While each vendor prides itself on its own style and preparation technique, the ingredients used in the various dishes are largely similar. Food vendors buy most of their ingredients from the retail market or from food suppliers.

It has been a challenge to get the major food suppliers and multinationals to work on healthier ingredients and products specific to the Singapore market. The commonly cited reason for the challenge is the small size of the Singapore market, which makes catering products for the local population difficult. There is also a group of small and medium-sized enterprises (SMEs) that supply the local food industry. Business viability remains a concern for this group.

STRATEGY

“Health promotion is a key strategy underpinning the success of our health care system. But to be successful in getting our people to adopt a healthier lifestyle, we need to go beyond telling people to be healthy; we need a ground-up approach that all Singaporeans can own”.

Permanent Secretary for Health, Yong Ying-I

Established in 2001, Singapore’s Health Promotion Board (HPB) is a public agency with a mandate to prevent diseases through promoting healthy lifestyles. With a vision of a “Nation of Healthy People”, the HPB for many years has been educating and encouraging Singaporeans to adopt healthy lifestyles, including healthy eating. For example, the HPB carried out campaigns promoting fruit and vegetable intake and wholegrain consumption. It also ran an “Ask for ...” scheme in which participating food stalls display labels that act as point-of-decision prompts to remind consumers to request less oil, more vegetables, to have the skin of poultry removed or less gravy in the dishes. Despite the HPB’s efforts, the obesity rates continue to rise in Singapore. Part of the reason for this has been the changing social context such as the shift of the workforce towards more sedentary occupations and a busy lifestyle leading to people and families eating out more often⁴.

The 3P (People, Private, Public Sectors) Strategy

In 2010, the global strategy firm, McKinsey & Company, together with the International Association for the Study of Obesity (IASO) studied the multiple drivers and complex interactions that underpin obesity trends and evaluated best practices in an international study of obesity interventions. Their report concluded that “governments must lay the foundation so that locally led social movements can shift cultural norms toward healthy behaviours”⁵.

This resonates with ecological models of public health, epitomized by established theoretical health promotion frameworks such as Green’s PRECEDE-PROCEED. Reflecting on the challenges of bringing about a sustained healthy behaviour change, a new bottom-up approach was initiated in 2011 in the food scene in Singapore. The approach represents a fundamental shift away from education-centric programming. It sought to empower Singaporeans to take charge of their health through a social movement towards better health.

Central to the bottom-up approach was a 3P Strategy (people, private and public sectors). The 3P Strategy sought to harness resources from within the community, realigning them into integrated and sustainable health promotion solutions that would support healthy lifestyles (Annex B).

⁵ Algazy J, Gipstein S, Riahi F, & Tryon K. Why governments must lead the fight against obesity. *McKinsey Quarterly* October 2010

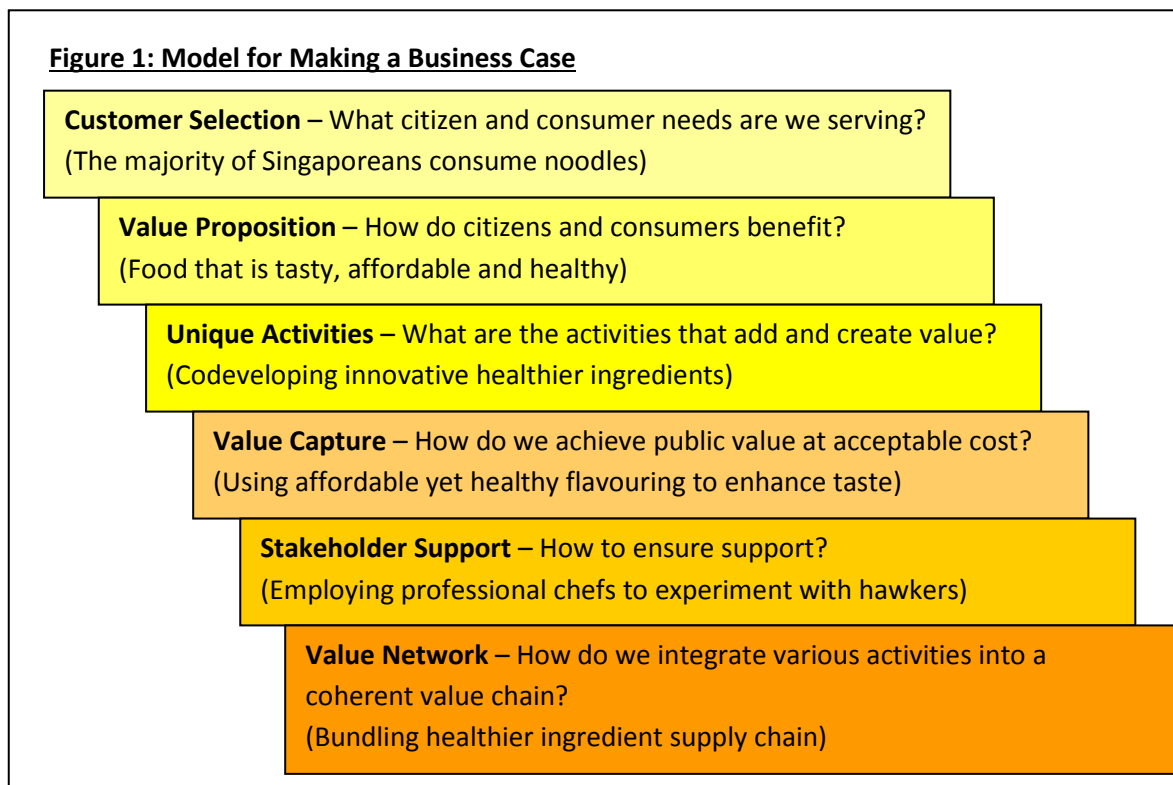
Several prototypes were created using this approach to achieve the speed of response in keeping with the urgency of the health challenges faced. One of these prototypes is the Healthier Food Centre Programme, which aims to improve the nutritional profile of the population. A pilot programme was begun in one township in April 2011 to introduce healthier ingredients into local fare such as brown rice, wholegrain noodles and cooking oil with less saturated fat.

Strategy 1: Private Sector—Making a Business Case

A key success factor for changing dietary habits is to understand that healthier food must be desirable. Healthier food is often perceived as bland and expensive and not suitable for the mass market.

Key Lesson:
Diets are culture-specific; healthier food must also be tasty and affordable.

One approach is to present the facts of obesity and health trends and to lobby businesses to provide healthier meals as a corporate social responsibility (CSR). Another approach is to make a business case for the business owners, e.g. the food vendors to provide healthier dishes while catering to market preferences and taste.



Moving beyond the traditional view of CSR, the HPB pitched a business case for healthier products to the food suppliers. The HPB worked with a local firm (Jia Jia Wang Trading) to create healthier ingredients for the local market. Noodles were identified as a gap area in which no healthier alternative was available. It has a potential high impact on the national diet as Singaporeans eat an average of one serving of noodles daily⁴. By incorporating wholegrain into noodles (10% by weight), an average portion of such noodles (200g) would fulfil half the daily requirements of whole grains intake.

Initial experiments using wholegrain flour were unsuccessful, e.g. a noodle that broke up easily on cooking and the inability to replicate the texture of the traditional noodles. After several rounds of experiments with the company, a healthier wholegrain version that retained the texture and taste of normal noodles was created. This was one of several examples of healthier ingredients that were co-developed with the industry. Another example was the development of blended oil that would reduce the mean population saturated fat intake from 30g to 26g per day. This translates to about a 20% lower risk of cardiovascular disease.

Figure 2: Some of the Healthier Ingredients

(From left: Blended oil lower in saturated fat, brown rice, wholegrain noodles, low-sugar canned drinks)



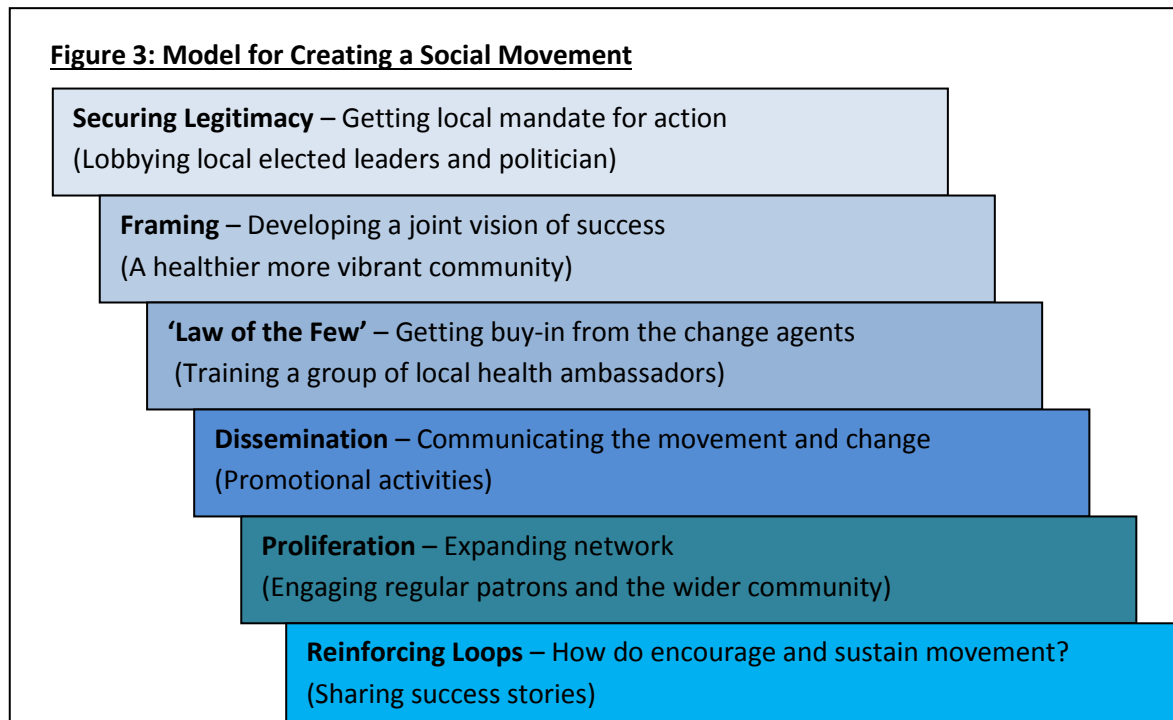
Affordability of the healthier ingredients and the taste of the resultant product were also crucial. By experimenting with different product formulations, a balance was struck among health considerations, taste and manufacturing costs. The cost of ingredients was kept low through economies of scale. Through negotiations with suppliers, food vendors were able to purchase healthier ingredients at almost the same price (e.g. the cost of brown rice was about the same as that for white rice) or even at a lower price (e.g. low-sugar drinks cost less than the normal variants).

Key Lesson:

Rapid prototyping can bring about quick wins that will support the proliferation of the programme

Strategy 2: People Sector—Creating a Social Movement

The food centre was chosen as a high leverage point given its reach to a wide spectrum of society. However, buy-in from the local community and businesses were required to ensure sustainability and ownership. To do so, a bottom-up approach was used to co-develop and co-implement the programme with the target population.



The choice of township was important. The bottom-up strategy took a rapid prototyping approach rather than a national approach that may take many years to plan and implement.

To do this, a local community that was receptive and supportive of the programme was identified. The local elected politician was engaged and lobbied to secure buy-in. This involved demonstrating the potential value of a healthy lifestyle programme for the residents in the community. With the mandate provided by the local politician, the HPB was able to work with the Hawkers Association to paint a vision of building a healthy community by promoting healthy eating among the local residents. With the buy-in of the community leaders and the Hawkers Association, the HPB consulted with the community and co-developed a solution for implementing the Healthier Food Centre Programme.

The key was getting the vendors' buy-in. Many were concerned that changing the ingredients and preparation of their fare would turn their customers away. To allay their concerns, professional chefs were brought in to demonstrate and train them in the use of healthier ingredients without compromising the taste. Some of the healthier ingredients required special preparation techniques (e.g. cooking time) while other dishes were enhanced using affordable natural herbs and spices as opposed to the traditional use of salt. All of these modifications, while having a significant impact on the dietary profile of the population, minimized changes in the look and taste of the dishes.

The programme also involved HPB officers making regular trips to meet individual food vendors to garner buy-in, and this is where the support of local grassroots leaders and the Hawkers Association proved invaluable. Their support helped to lend weight to the efforts.

HPB Staff Meeting with a Food Vendor



At the same time, the HPB worked with grassroots volunteers (Health Promotion Ambassadors) to co-plan and co-create a healthy eating programme focused on the local food centre. Local community leaders organized educational food tours to the food centre where local residents were educated about healthy eating practices. These tours also included the supermarkets where they could put into practice the dietary habits they learnt when purchasing groceries. Existing patrons who frequent the food centre were informed about the healthier options available through modified menu boards that contained caloric information of the different dishes and other educational materials placed throughout the food centre. Concurrently, publicity was generated through advertorials in the local newspaper and through media coverage. This was to help create a demand for healthier food centres and channel local residents to the centre to experience healthy living at their doorstep.

Figure 4: Sample Signboards with Caloric Information and Point-of-Decision HCS* Prompts

* The HCS, or Healthier Choice Symbol, is represented by a miniature dietary pyramid and is well recognized among Singaporeans.



The engagement process and the relationship with the local community and food vendors do not end with the launch of the programme. The programme is constantly being reviewed and refined through sharing success stories to maintain and gather support for the programme. This in turn helped to garner support from other communities and politicians who are now keen to be part of the next phase of the project. With the community taking increased ownership of the scheme, the HPB's role shifts from an implementer to one of a catalyst and cheerleader.

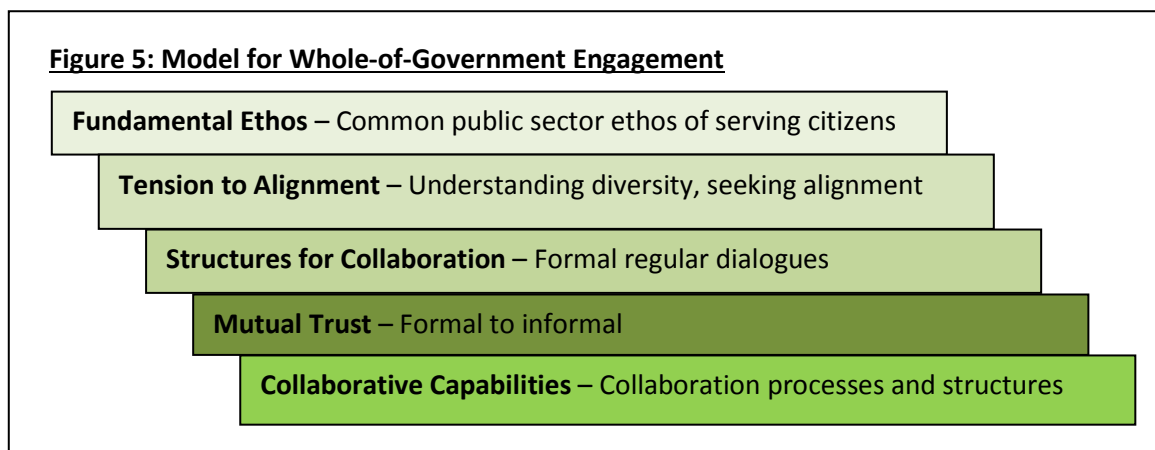
Key Lesson:

Finding win-win partnerships can expand the toolkit, and lead to more sophisticated and effective solutions

Strategy 3: Public Sector—Developing Win-Win Partnerships

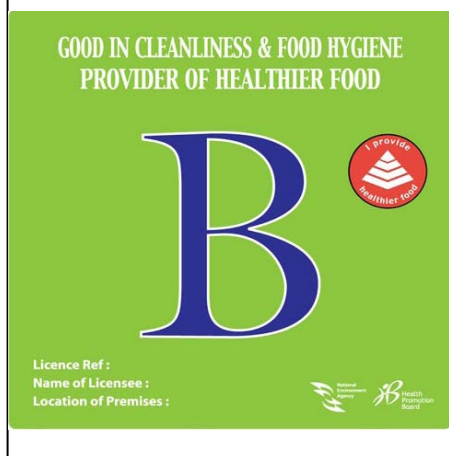
Modern policy challenges are complex and individual agencies working in isolation will find it difficult to deliver meaningful public value. Thus, win-win partnerships have to be forged. This allows the design of more sophisticated solutions that tap capabilities not found within the health sector.

In Singapore, the whole-of-government public sector ethos is well entrenched and supports interagency collaboration. Starting at the apex of the civil service where top public servants are regularly cross-posted to agencies in different sectors (e.g. health, trade) to regular dialogue opportunities across agencies, Singapore has been deliberate in developing its whole-of-government capability and ethos⁶.



⁶ Neo BS, & Chen G. *Dynamic governance: embedding culture, capabilities and change in Singapore*. 2007 Singapore: World Scientific Publishing

Figure 6: Joint Certification by NEA and HPB



In this case, a key leverage over the hawkers and the hawker association was the regulator, the NEA. Recognizing this, the HPB engaged the NEA in a dialogue to explore a common agenda. For the NEA, the proposal to work with the hawkers to improve the nutritional standard of the hawker fare resonated with its objective of food hygiene and safety. Further, the HPB's plans would help to rejuvenate and enhance the hawker centres, which supported the NEA's efforts.

By leveraging on NEA's legislative influence to issue stall license and hygiene labels based on the hygiene practices of each hawker, HPB in collaboration with NEA included HPB's Healthier Choice Symbol (Figure 6) on NEA's hygiene labels to recognise and distinct hawkers who took part in the healthier

The HPB as a government agency further acted as the convener and facilitator to find win-win partnerships, working with food manufacturers to formulate healthier ingredients, organizing culinary training for food vendors on the use of healthier ingredients and engaging with the local community to market the programme.

Partners coming together at the Healthier Food Centre launch in April 2011



Strategy 4: Integrating the Value Chain

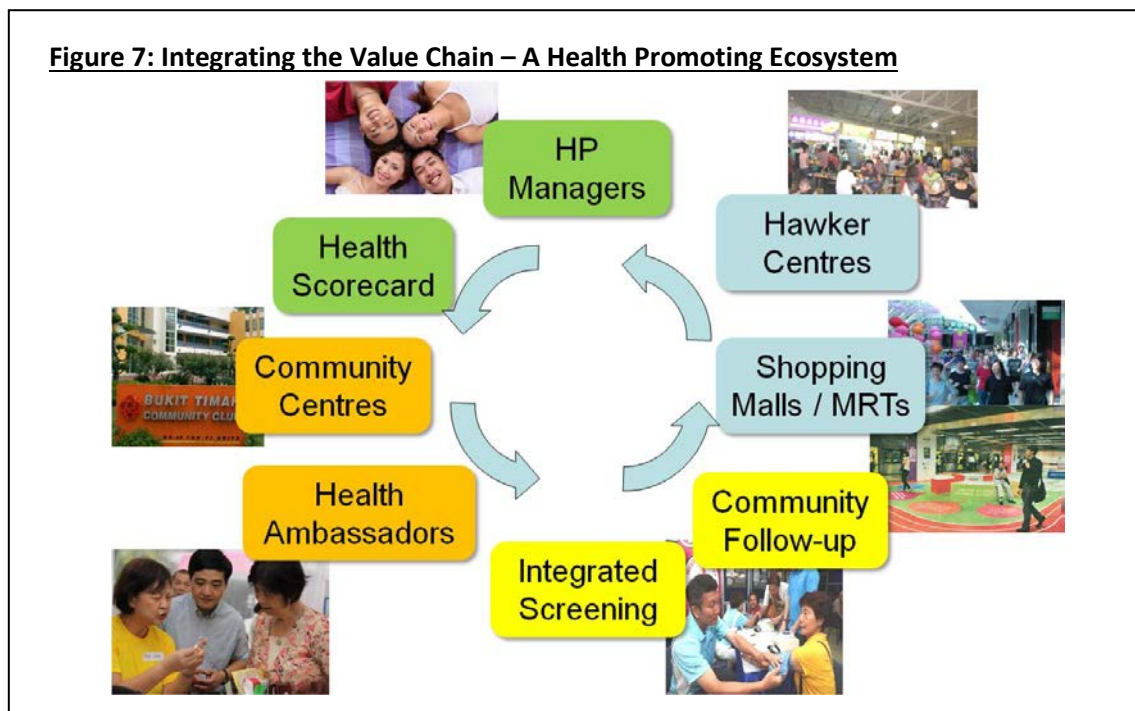
A key consideration for the Healthier Food Centre Programme was to create a sustainable model that could be replicated nationally. It requires the synergistic integration of the three sectors—people, public and private—to unlock the value in the programme. Thus, stand-alone health education talks or only working with the industry to develop healthier products would not have been sufficient.

Key Lesson:

Education programming is ineffective; an integrated solution is required to bring about sustainability outcomes

By working with the community to educate and inform residents about the new product, the HPB was able to generate a lead demand for healthier food. Initial investments by the HPB were made in food-tasting sessions, discount vouchers and publicity to help to raise awareness and to pique the interest of residents. This was further extended to nearby workplaces to increase the traffic to the food centre. Media coverage further generated publicity, which further helped to enhance the demand. The aggregate demand in turn helped to keep prices down as the suppliers could enjoy the benefits of economy of scale. This linking of the supply with demand was important in ensuring the programme's viability and sustainability.

Figure 7: Integrating the Value Chain – A Health Promoting Ecosystem



Integrating the value chain goes beyond the food centre. The Healthier Food Centre Programme is a self-contained ecosystem. It is also part of larger health-promoting ecosystem where citizens live, work and play, which the HPB is currently building. For example, within the community, the “health value chain” covers:

- Health promotion managers, who are assigned to work with the community to act as a catalyst for the community to cocreate solutions that meet local needs.
- A health scorecard to help communities diagnose and monitor their local health needs.
- Health-promoting community centres that convert existing community gathering places into focal points to sponsor healthy living.
- A health ambassadors (or volunteers) scheme that equips local advocates to be change agents in their communities.
- Integrated screening and community follow-up solutions that help to promote early detection and management of chronic conditions.
- Health-promoting shopping malls and rail stations (MRTs) that have been converted into giant exercise machines, encouraging physical activity anytime and anyplace.
- Healthier food centre that provide opportunities for healthy eating.

RESULTS



“(Through this programme) food vendors can give their businesses a boost, customers can also have a healthier diet”.

Mdm Karney Ngai, Chairman, Yuhua Hawkers Association

About US\$ 80 000 was spent on the healthier food centre prototype, which worked out to about US\$.04 per dish or plate served at the prototype food centre over a year (Annex C). Based on purchase data collected as part of the partnership with the food industry, the HPB was able to monitor the sales of food ingredients as a proxy of the programme impact. Up to 50% of the rice sold by the centre after six months was brown rice or mixed (brown and white) rice. This is remarkable considering that more than 80% of the population does not consume brown rice⁴ and that, before this programme, brown rice never was used in traditional food fare. Oil used at the food centre was replaced by the healthier version and 70% of noodle stalls offer wholegrain noodles by default.

The business of participating food vendors was not adversely affected. Instead, overall business has improved by up to 25%. This reassured other food vendors in the centre (who were initially reluctant to change their business practices for fear of losing customers). All stalls in the food centre are participating in the programme.

Figure 8: Comparing Regular and Healthier Dishes

	Regular Char Kway Teow	‘Skinny’ Char Kway Teow
		
Taste	Similar	Similar
Calories	750 kcal	500 kcal
Wholegrain Content	0g	20g (1 bowl = ½ of daily wholegrain requirements)
Type of Oil	50% Saturated Fat	37% Saturated Fat

Feedback from hawkers and consumers is also continually assessed by project officers to provide a more responsive model of public health delivery. One such feedback led to process improvements to ensure that healthier ingredients could be supplied on demand. For example, it was difficult for hawkers to meet surges in demand because they lack storage space. Arrangements were made to ensure that the nearby retail market carried the wholegrain noodles so that hawkers could conveniently and quickly meet day-to-day changes in demand.

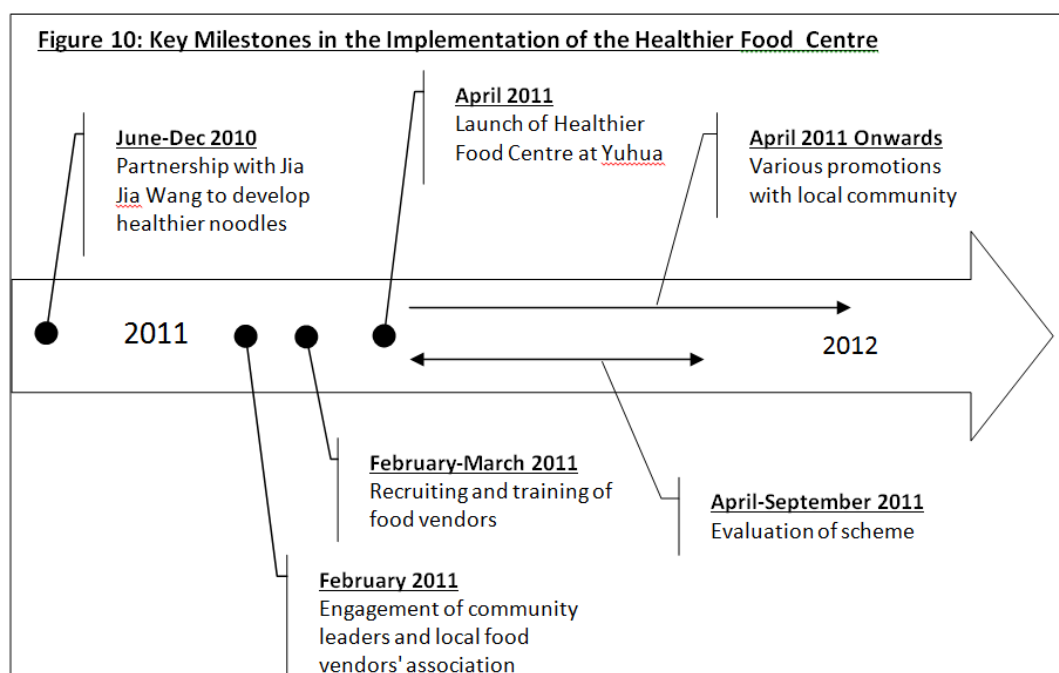
Future Directions

The HPB aims to extend the programme over three years to the remaining 100 food centres in the country. The approach is in keeping the strategies of engaging the people and the private and public sectors, and presenting a win-win business case to all stakeholders. A new unit has been set up within the HPB to build community partnerships as part of the broader aim of developing the health ecosystem. The unit has been working with individual constituencies to assess local needs and to co-develop local solutions such as the Healthier Food Centre Programme based on these needs.

In addition, the HPB formed a Centre of Excellence for Nutrition to drive public-private partnerships in food innovation. Working with SPRING Singapore (a public agency responsible for developing local enterprises), an innovation fund has been set up to promote the growth and diversification of healthier ingredients by the food industry. This includes products such as lower sodium salt and sauces. More food industry partners are being sourced to increase diversity and boost competition for affordable healthier ingredients.



The HPB also looked at strengthening the food supply chain from research to supply logistics to bring about greater cost efficiency and value. Working with the Singapore Food Manufacturers' Association, the HPB is bringing together different companies in the food supply chain. For example, an innovative healthier ingredient developed by a smaller enterprise could be bundled with other products and marketed and distributed by a logistics firm, with the costs shared among companies, as a total food solution for hawkers.



DISCUSSION

“Thanks to its low cost and convenience, street food is consumed each day by an estimated 2.5 billion people worldwide⁷”.

Food and Agriculture Organization of the United Nations (FAO)

Eating out is common in most countries, especially where economic development has been accompanied by more time spent away from home. Often the local food culture evolves at the same time to cater to meals outside of the home. These meals often are not necessarily healthy.

Given that local food is part of local culture, ingredient modification offers high leverage for modifying the diet of the population. The principles of modifying existing local cuisine while maintaining palatability and affordability can be transferred to other communities. The ingredients developed for this programme include wholegrain noodles, reduced saturated fat oil and reduced salt, which are culturally relevant in this region. For example, the wholegrain noodles that have been created are the first of their kind and are very similar to the standard noodles consumed in many Asian diets.

The innovation of this intervention is in the interdisciplinary approach used. The programme integrated science (nutrition, public health) and food technology (innovations in healthier ingredients) with economics (demand and supply analysis, pricing) and logistics (supply chain and systems design). This was applied within the context of the local culture and needs. At the same time, health promotion principles strongly underpin the strategies taken, specifically, the principles in the Ottawa Charter of

- Going beyond the health sector to build healthy public policy (whole-of-government and multisectorial action).
- Changing patterns of life, work and leisure to create supportive environments (changing the environmental context for healthy eating).
- Empowering communities to strengthen community action (involving the community to co-create and co-implement solutions).
- Enabling people to take charge of their health by building personal skills (providing health information strategically to assist in point-of-decision behavioural choices).
- Moving away from a care-centric model of health and reorientating health services towards health promotion (community as the setting for change).

⁷ Food and Agriculture Organization of the United Nations. School kids and street food. *Spotlight* February 2007

Three strategies were especially key to the healthier food centre project:

- **Sophistication:** This means targeting the key levers for change. Often it is not that data is unavailable. Rather, the challenge has been to extract insights from available information. The 80:20 rule is a useful rule of thumb: Where can we gain 80% of the success with 20% of our effort? Sophistication is also in how public health professionals can leverage the different partners and collaborate better. Much has been said about the need for whole-of-government solutions. This requires public health officials who can inspire the people sector, create a business case for the private sector and negotiate win-win solutions with the public sector. Another result of sophistication is the creation of a comprehensive and extensive toolkit that will allow differentiated solutions to be rolled out to effectively address the diverse and complex health needs on the ground.
- **Aggressiveness:** This means that public health professionals need to be proactive in their interventions. Health always has been a social and political issue and there is increasing citizen expectations and demand for quick solutions to their concerns. In this climate, comprehensive planning with a long-term view (at the expense of short-term gains) is often not acceptable. Rapid prototyping of solutions, and extracting best practices for phased roll-out are needed. This “Do-to-Plan” mindset also enables professionals to address issues with a stronger sense of urgency. Such a mindset needs to be embraced more extensively, but to do this, a new set of skills needs to be acquired to allow public health professionals to become more adept and strategic in seizing opportunities. Being aggressive also allows us to reap low-hanging fruit and celebrate early successes. These then can be used to convince other stakeholders to take the leap of faith and embrace similar prototypes.
- **Sustainability:** This means integrating solutions into an ecosystem. Modern problems have complex drivers and are better envisaged as system flows rather than simple causes and effects. Isolated solutions thus will not succeed. As seen in the healthier food centre project, officers had to match the people, private and public sectors to find the synergy with a view of long-term scalability. The project is constantly reviewed and adjusted during implementation. This is also why local buy-in and joint planning with the community are important to create sustainability and ownership of the challenge and solution. In the healthier food centre project, the Hawkers’ Associations took ownership of the initiative and championed it while the HPB played a catalytic and consultant role to support them in their efforts. Public officers need to walk closely alongside the community to embrace a truly bottom-up approach to health promotion.

Annex A: Joint Certification of Food Vendors

Cooked food stalls in food centres are subject to grading under a structured grading scheme introduced in 1997. The Grading System for Eating Establishments and Food Stalls, which is administered by the National Environment Agency (NEA), is meant to motivate licensees to improve and maintain good personal and food hygiene, and housekeeping of their premises. All food retail outlets are required to display the grade indicating their grade, enabling the public to make a more informed choice when patronizing food outlets.

Stalls that meet basic hygiene requirements are graded 'A', 'B', 'C' or 'D' according to their standard of cleanliness, housekeeping and hygiene.

- A - a score of 85% or higher
- B - a score of 70% to 84%
- C - a score of 50% to 69%
- D - a score of 40% to 49%

New stalls are freshly assessed while those in operation will be re-assessed on a yearly basis. During grading assessments, NEA officers are aided by a checklist to determine objectively the overall score based on critical areas such as cleanliness and housekeeping, food and personal hygiene etc. The latest stall grades will be made known to the stallholders. In addition, NEA officers point out areas of improvement or irregularities, which enable stallholders to work towards a better standard.

Since 2006, Health Promotion Board (HPB) worked with NEA to introduce a co-certification of hawkers that were able to show they served healthier fare. These include:

- Replacing major ingredients in signature dishes with healthier ingredients. For example, replace the regular cooking oil with reduced-saturated fat cooking oil. Other healthier ingredients are fibre-enriched vermicelli, reduced-salt soy sauce and low fat milk. Healthier ingredients have this logo on their packaging.
- Reducing the use of oil, salt and sauces in dishes.
- Increasing the amount of vegetables added to dishes.

Training is also offered to hawkers that are keen to join the scheme on how they can modify their dishes to make them healthier.

For more details, visit:

http://app2.nea.gov.sg/topics_food_hygiene.aspx

<http://www.hpb.gov.sg/foodforhealth/article.aspx?id=2784>

Annex B: Stakeholder Analysis

Key Stakeholder	Key Interest
Public / Consumers	Food that is tasty, and affordable
Food Industry	Products that are marketable
Hawkers / Hawker Association	Maintaining or expanding customer base through authentic tasting dishes
Member of Parliament / Community Leaders	Improved health and wellbeing of local residents
National Environment Agency	Improving standards of food hygiene and safety among hawkers
Health Promotion Board	Improved nutrition profile of the community

Annex C: Major heads of expenditure

Item	Cost (USD)	Cost (%)
Food vendor engagement <ul style="list-style-type: none">• Training and education• Setup costs (e.g. experimenting with healthier ingredients)	\$40,000	50
Public education <ul style="list-style-type: none">• Point-of-sale prompts (e.g. replacing menu boards with calorie information)• On ground publicity (e.g. discount coupons, organized tours)	\$40,000	50
TOTAL	\$80,000	