CASE STUDY

Conceptualizing mega-event flagships—A case study of China Pavilion of Expo 2010 Shanghai China

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Abstract
Mega-event flagship (MEF) is a dual instrument for staging a mega-event and catalyzing regional urban renewal. Despite its unfailing popularity and controversial nature, many initiators seem to equate MEF development with signature architecture, resulting in a persistent issue of underuse among MEFs in the post-event era. Although research findings indicate that the early stages hold the key to the future of MEFs, insufficient research on this crucial matter has been done to provide useful analyses as to how to achieve this. To rectify this, this paper presents a case study of China Pavilion (CP) as the most spotlighted MEF initiated by Expo 2010 Shanghai China. Through participant observation, archival records, and documentation, the case of CP was extensively explored to learn how the client organization has addressed the issues of form, function, and future positioning at the early stages. By linking the pre-Expo conceptualization with its post-Expo performance, the case brings a renewed attention to the early stages of MEF development. Although it is a single-case study, this research yields results that indicate the possibility of having beneficial spillover impact on broader-scale urban renewal by balancing an MEF’s dual mandate.

1. Introduction

1.1. Mega-event flagships

The term “flagship” has come out of its naval realm and into the common parlance in order to define the best or most prominent product, building, service, etc., among a group, series, network, or chain (Cambridge Advanced Learner’s Dictionary and Thesaurus, 2011; Macmillan...
1.2. Aim and significance

In principle, an MEF aims to provide a global platform on which the vision of place branding can build and offer a unique selling point for attracting sustained resources. This makes it a perfect candidate for signature architecture. However, because of too much attention given to short-term image building, the development often ends up as a loser in playing its long-term flagship role. Given this inherent controversy, a challenging question is raised: Is it possible to have an MEF that can fulfill its dual mandate? This leads to the need for exploring the early stages of an MEF where decisions on its form, function, and future position are framed. To date, MEF development is not well researched in terms of this crucial dimension.

Amid the global boom of national branding and city marketing, many mega-event organizers in emerging markets tend to exhibit more enthusiasm than their counterparts in developed countries in building spectacular showpieces. Nevertheless, there is nothing necessarily wrong with that: creating landmarks is an ongoing tradition that has existed for centuries in the course of urban development worldwide. The sticking point is an overwhelming emphasis on short-term formal expression over long-term functional performance. To define a framework for future improvement, both methodological issues and contextual complexities in decision-making process should be taken into careful consideration. However, the literature is especially scarce in an era where MEF development is exploring new territories such as East Asia, Middle East, and South America.

To highlight the unequivocal obligation to endure MEF development in general and to open up research on MEFs in emerging economies in particular, this paper presents a case study of China Pavilion (CP) initiated by Expo 2010 Shanghai China. The focus is placed on the challenges encountered during its early decision-making process and the solutions explored to endure this most spotlighted flagship of Expo 2010. It is concluded that CP constitutes an indispensable part of a holistic urban strategy: the “Big Four” (Big4) MEF cluster, the Expo site redevelopment, and the ongoing citywide cross-river renewal. By linking the pre-Expo conceptualization with its post-Expo performance, the case brings a renewed attention to the early stages of MEF development. Although it is a single-case study, the present research yields results that indicate the possibility of having beneficial spillover impact on broader-scale urban renewal by balancing an MEF’s dual mandate. Such a holistic approach to enduring MEF development is therefore recommended for realizing the bigger objective of place-branding-oriented renewal for future practices.

1.3. Approach

The early stages fall into the research area of planning, organization, and management where extensive local issues must be drawn upon through the case study approach (Davies, 2001; Easterby-Smith et al., 1991; Yin, 2009). Moreover, the case study approach is suitable for in-depth investigation of explorative nature and is flexible to accommodate multiple data sources (Baxter and Jack, 2008; Flyvbjerg, 2006). In particular, participant observation was used because the author has worked as a key project coordinator for the Expo 2010 organizer, Bureau of Shanghai World Expo Coordination (SEB), from 2004 to 2007. Since the author was detached from any of the project clients of the Big4, the impact of potential bias (Easterby-Smith et al., 1991) was minimized.

The rest of this paper is structured into three parts. To set the international scene for MEF development and highlight its post-event difficulty, the first part briefly introduces the national pavilion as a special building type and reviews two previous reutilization attempts. To explore the complexities and challenges of enduring MEF development, the second part presents an in-depth analysis of its urban connectivity as well as its planning, programming, and design competition stages. The last part offers insight into MEF development based on the findings of the case study.

Case data were acquired through participant and non-participant observations, as well as documentation and archival records from key stakeholders involved in the Big4 development from 2004 to 2010. They are the SEB, which is the Expo organizer and the coordinator of the Big4 development, and Shanghai World Expo (Group) Co. Ltd. (Expo Group), which is the initial developer of CP. The data collected mainly range from official publications, factual records, and technical documents (e.g., master site plans, detailed regulatory plans, urban design reports, feasibility study reports, and client’s programs).

2. National pavilions and Expos

National pavilions, a type of exhibition facility dedicated for a World Expo, originated from Expo 1867 Philadelphia USA where 11 countries built their national pavilions for the first time in history (Gross and Snyder, 2005). As a lasting attraction on the
exhibition grounds, each national pavilion constitutes a branding platform for the country it represents. According to the regulations of the Expo’s sanctioning body, national pavilions are usually constructed on a temporary basis (Bureau International des Expositions, 2010). In case the Expo organizer wants to keep them permanent, there are very few examples to follow. Thus far, Expo 1992 Seville Spain and Expo 2000 Hanover Germany are two large adaptation efforts with a special focus on national pavilions. For Expo 1992, a comprehensive legacy plan was prepared to rebrand the site into a technology and science park. One-third of the pavilions totaling 650,000 m² were converted into office facilities. The site was in part reserved for a cultural center and a fairground, and in part turned into a theme park and a research center. However, the park was eventually semi-abandoned due to discontinued uses (Lentz, 2007).

In the case of Expo 2000, half of all exhibition facilities were rented from the site owner and converted into joint national pavilions. The remaining half were newly built stand-alone national pavilions whose reuse plan did not work well as anticipated. As of March 2004, about 17% of these new structures were reused, 50% planned to be reused, while there was no plan for the remaining 33% (Shanghai Municipal Government Delegation, 2004). As of 2009, 500,000 m² of exhibition spaces had been left unused (Expo Projects Department of Shanghai Expo (Group) Ltd., 2009). In both cases, there existed a big mismatch between the supply of these “leftovers” and the actual post-Expo market demand, indicating the difficulties and uncertainties in making national pavilions function beyond an Expo.

3. China Pavilion

3.1. Urban connectivity

Analyzing the early stages of CP leads to the need for understanding a three-tier relationship among the Big4 MEFS of Expo 2010, the Expo 2010-led riverfront development, and Shanghai’s comprehensive renewal. The Big4 refers to an MEF cluster that comprises CP, Theme Pavilion, Expo Center, and Performing Arts Center. The four flagships were conceived as key legacies to pave the way for the cross-river renewal on the Expo site and its vicinity—a signature part of a citywide cross-river renewal. The interdependency of these three developments is analyzed below.

As the structural spine of Shanghai, the Huangpu River divides the city into the west bank (Puxi) and the east bank (Pudong). Fig. 1 illustrates three prominent milestones along the riverfronts over three centuries. They are the 19th century Bund as the historical heart in Puxi, the 20th century Lujiazui as the contemporary financial center in Pudong, and the 21st century riverfronts renewal, which was launched in January 2002. With a planning area of 74 km², this ongoing riverfront renewal is entitled “a century project to enhance the competitive edges of Shanghai” (Shanghai Municipal Government, 2002) by redressing visible imbalances between the two banks.

Fig. 1 The Huangpu Riverfronts Trilogy.
Background Source: Shanghai Urban Planning Administration Bureau and Bureau of Shanghai World Expo Coordination, 2007.

Fig. 2 A pre-construction aerial photograph of the cross-river Expo Site and its vicinity (2004).
Source: Bureau of Shanghai World Expo Coordination.
The Expo 2010 development was at the heart of the unprecedented urban intervention. As shown in Fig. 2, the 5.28 km² Expo site was situated in an industrialized belt across the river. The magnitude of the site and the massive development volume led to the need for forging a legacy plan to guide future redevelopment. In response to the booming event and tourism economy in Shanghai, a clear vision of shaping a service-oriented subcenter was articulated in the framework plan for the post-Expo site redevelopment (Fig. 3) (Deng, Bureau of Shanghai World Expo Coordination, 2006).

To extend Shanghai’s downtown region further down the southeast of the river, four post-Expo functions were identified: (1) convention and exhibition; (2) cultural exchange; (3) retail, trade, and office; and (4) hospitality and entertainment. Among all on-site permanent legacies, the Big4 cluster (Fig. 4) was envisioned as a keynote of regional redevelopment. Aside from providing multipurpose spaces for millions of visitors, they were to play a flagship part in shaping a mixed-use subcenter. Self-evidently, determining how to make the Big4 function well beyond...
the Expo becomes the key first step towards the Expo site redevelopment and the citywide upgrading.

### 3.2. Project overview

Known as "the Oriental Crown", the 63 m high CP is a mega-structure enclosing a floor area of 153,000 m². It includes two clearly defined components: the red rooftop of the China National Pavilion and the ivory podium of provincial pavilions. As illustrated in Fig. 5, the featured roof is supported by four gigantic columns serving as structural and transportation cores. It occupied a floor area of 53,000 m² and was divided into an exhibition zone, an experience zone, and a converging zone during the Expo. The ivory podium encloses a modularized exhibition space of 100,000 m² (China Pavilion design consortium, 2010), housing 31 Chinese provincial pavilions. Between May 1, 2010 and September 29, 2010, CP accumulatively received 21 million visits (CNR, 2010), accounting for a significant 37% of the total 57 million visits to the Expo site (Expo2010.cn, 2010).

### 3.3. Post-Expo performance

Due to its overwhelming popularity, CP has been reopened twice with the original Expo-themed exhibition after the Expo. The first reopening lasted six months starting from December 1, 2010, and the second instance continued for another three months in late 2011 (www.expo2010.cn, 2010, 2011). In line with the overall positioning of the post-Expo region and the capacity shortage of Shanghai’s cultural infrastructure, the reconfiguration of CP was planned concurrently amid the two exhibitions and remodeling work carried out immediately afterwards. Since October 1, 2012, CP has reopened as China Fine Arts Palace to the public, providing 10 times the exhibit space of the original Shanghai Art Museum. To differentiate the new and established museums, China Fine Arts Palace is positioned to showcase Chinese contemporary arts, while Shanghai Art Museum remains to be focused on ancient Chinese arts (Hao and Cao, 2012).

As for the rest of the Big4, Expo Center and Theme Pavilion are functioning complementarily to define Shanghai’s first integrated convention and exhibition district, whereas Performing Arts Center is transformed into Mercedes-Benz Arena, a mega-capacity cultural and lifestyle destination. Within the national pavilions zone, Italy Pavilion is converted into a cultural platform for Italian arts, design, cuisine, and innovation, France Pavilion becomes the center for the 21st century Chinese arts, and Russia Pavilion houses the center for youth education. In less than two years, the post-Expo redevelopment is taking shape and progressing systematically towards the three-tier renewal framework in more than one dimension.

### 3.4. Top-down organization

Unlike an ephemeral mega-event, its affiliated renewal initiative should reflect standing urban imperatives and usually demands steady and extensive inputs over decades. This necessitates the creation of a for-purpose authority to play a stewardship role in steering the activities of all stakeholders and to maintain the integrity of the whole development (Hall, 1992; Lynch and Hack, 1984). To link the national and local stakeholders, a top-down organizational framework was jointly put in place by the Chinese Central Government and the Shanghai Municipal Government in October 2003. As displayed in Fig. 6, this framework featured SEB as the Expo organizer supervising and coordinating all on-site projects. In late 2005, Expo Group was designated as the developer of CP. The group was a large state-owned enterprise in the local event industry and is one of the major developers of the Expo 2010 site. Due to construction and operation needs, Expo Group handed over the development to SEB in 2008.

### 3.5. Programming duality

As an integrated mega-project, the Big4 MEFs were programmatically interdependent of each other in two time frames. During the Expo, a public event zone was defined by the two flagships near the river—Expo Center and Performing Arts Center; meanwhile, Theme Pavilion and CP formed a central exhibition zone. In accordance with the estimated space shortage in Shanghai, Expo Center, Theme Pavilion, and Performing Arts Center can be converted into an international convention center, exhibition center, and performing arts center, respectively (Shanghai Urban Planning Administration Bureau, 2006). More importantly, extensive research by the Expo organizer and the developers suggested that the post-Expo demand for these three MEFs would be larger and more diversified than their Expo demand, respectively (Preparation Office for the Performing Arts Center of Expo, 2010 Shanghai China, 2006; Shanghai Expo (Group) Ltd., 2006b)). Given that there would be less chance for the three to encounter the problems of over-capacity and underuse afterwards, the nature of the three developments was defined as permanent.

Nevertheless, deciding on whether to develop CP as a permanent MEF remained a focal debate. Although CP constituted an indispensable part of the Expo site, its future position was difficult to define due to its proposed size.
China is known for its vast territory and massive population. Apart from a national pavilion symbolizing the country’s economic emergence, the organizer also intended to allocate sufficient spaces to over 30 provinces and regions to display cultural diversities. The dilemma was self-evident: it would be difficult to justify an investment of this scale for merely six months, while it would be wasteful to keep such a large space without sufficient future uses to fill it in.

Amid the development of site planning in 2005, some suggested that the national pavilion part should be kept as a permanent museum, whereas the provincial pavilions part may be dismantled afterwards to reduce the facility’s size (Shanghai Urban Planning Administration Bureau, and Bureau of Shanghai World Expo Coordination, 2005). However, such a compromise would inevitably pose a series of aesthetic, structural, and operational difficulties in the designing process.

3.6. Unique emphasis

At the end of the protracted debate since the early 2004, a two-stage international design competition was mooted in April 2007. The first stage was an idea competition launched on April 25, 2007. The client looked for something symbolic and national. The second stage was aimed at securing a winning proposal through an invited competition among candidates short-listed from the first stage. The format of this international competition was highly unusual compared to those high-profile counterparts in the recent two decades. Instead of attracting signature architects overseas and multinational design corporations, the competition organizer called for contributions from ethnic Chinese architects around the world. This unconventional eligibility criterion was out of an industry paradox. In the course of the modernization craze over the decades, domestic architects have yet to make a successful transformation from the country’s enriched architectural heritage to a readily identified modern architectural language (Perkins, 2008). As vigorously contended by many insiders, China has virtually turned into a testing ground for adventurous architecture by foreign architects who do not always link their work to local features (Architecture Weekly, 2008; Ma, 2007).

To redress the industry imbalance and to avoid the negative impacts of maintaining a “white-elephant” legacy, the rules of the first-stage idea competition emphasized a careful integration of traditional culture and architecture, as well as a viable plan for post-Expo uses. Key functional requirements were laid out. The three programmatic components in the Expo duration included China National Pavilion, joint provincial pavilions, and three temporary pavilions for Hong Kong, Macau, and Taiwan, respectively. Afterwards, China National Pavilion and joint provincial pavilions would be converted into a theme museum and a commercial exhibition center, respectively Shanghai Expo (Group) Ltd., 2006a).

3.7. Design rationalization

The competition attracted hundreds of submissions from around the world. By June 2007, a wealth of ideas was collected, mostly echoing the organizer’s advocacy on traditional Chinese architectural vocabularies. The two-stage design
review eventually narrowed the number of entries from the initial 344 to 8 shortlisted design agencies. However, the organizer found in most proposals a clear dichotomy between the encouraging enthusiasm in search of an old-meets-new style and the insufficient consideration given to CP’s long-term functional feasibility. As such, a revised competition program (Shanghai Expo (Group) Ltd., 2006a) was issued in early July 2007 to the eight shortlisted candidates. The concept of “a large exhibition cluster” was raised to forge a strong link between CP and other MEFs of the Big4. In light of the new selection criteria of “exclusivity, symbolism, localism, and modernism”, another round of design review was held in August 2007. This further narrowed down the competition to three finalists.

Interestingly, the top two proposals intensified the inherent controversy between form and function in MEF development. The top entry entitled “Chinese ware” took its cue from the shape of the ancient Chinese sacrificial wares. Although visually remarkable, it could cause big problems in coping with visitor peaks during the Expo due to its tampering shape, thereby substantially limiting future adaptability. On the other hand, the second-place entry entitled “Stacked seal characters” took a different route.

As the only one among the eight shortlisted candidates that could accommodate the 31 joint provincial pavilions, this proposal adopted a modular design strategy to suit a more general demand for commercial exhibitions in the future.

In view of the merits and drawbacks of the top three entries, the Expo organizer and the professional panel suggested a teamwork among the three competitors. In September 2007, a design consortium from Guangdong, Beijing, and Shanghai was put in place. The form of the first-place entry further drew inspiration from the interlocking wooden bracket named “Douong”, which is one of the oldest structural elements in traditional Chinese architecture. The modular design approach of the “Stacked seal characters” proposal was incorporated into the design to increase the entire facility’s functional efficiency and flexibility. The optimization gave birth to a new “Douong” scheme, which not only echoed the competition theme to pay homage to traditional Chinese architecture, but also made CP a multipurpose venue by adding a large modular block at the bottom of the “Douong”. This rooftop part was planned to become an incubator for cultural exchange, while the podium part can also be used as a commercial exhibition center afterwards. By setting the tone for key

Fig. 7 A retrospective of China Pavilions 1876–2010.
design issues, the teamwork marked the closure of the early stages of CP and ushered in the beginning of the design development stage in October 2007.

3.8. Longitudinal comparison

From a longitudinal perspective, Fig. 7 provides a retrospective of CPs at eight historic events from Expo 1876 Philadelphia USA to Expo 2010 Shanghai China (Deng, 2011; Expo, 2005 Aichi Japan, 2005; St. Louis Public Library, 2010; XinhuaNet, 2010a, 2010b, 2010c, 2010d, 2010e). The shifting images over 134 years reveal two major commonalities: traditional vocabulary and color choice. Each drew certain inspirations from traditional China architectural vocabularies. The color choice reflected a standing preference for red among ethnic Chinese. With the use of structurally expressive element and glamorous Chinese red, the implemented “Dougong” scheme clearly matched the two standing attributes. As an innovative combination, the case sets a good example of incorporating traditional vocabulary into modern architecture.

Unlike the previous CPs, which were only built on a temporary basis, CP was to function beyond Expo 2010 as part of the three-tier grand renewal process. This necessitated synthesizing the scheme of “Dougong” and “Stacked seal character” to strike a balance between form and function. Programmatically, one-third of the total floor area was dedicated for a museum, while the remaining two-thirds of the area reserved for an exhibition center. Although its inverse trapezoid “top” and stacked layout may bring certain inconveniences in arranging large exhibitions, its flat and modularized “bottom” will help counterbalance this. From a long-term perspective, the logistics pressure for perennials or permanent shows is usually much less than itinerant exhibitions. Such impacts can also be reduced by the provincial pavilions part designed to meet the requirements of standard exhibitions. As a whole, CP can benefit from this hybrid shape and configuration.

4. Conclusions

CP has been widely considered as another building extravaganza amid a growing concern over the proliferation of spectacular architecture in China. What is lacking is an understanding of the challenge underneath its magnificent exterior—how issues of its form, function, and future were conceived and connected to the parallel effort of urban renewal as Shanghai is shifting away from Expo 2010. With a panoramic and focused review of the unique challenges and solutions in conceptualizing CP, this paper adds a few fresh insights into how to endure MEF development from both the building and the urban dimensions.

4.1. Significance of the early stages

A retrospective review from a simple replica in 1876 to a fascinating mix of tradition and modernity in 2010 reflects not only an upgrading of design innovation but also the fundamental difference between spectacular architecture and MEF development. Due largely to the temporary nature of CPs between 1876 and 2005, the previous emphasis was placed more on symbolism over utilitarianism. However, CP was conceived as an integral part of a big MEF cluster in the post-Expo redevelopment process. Given its dual mandate, a single-purpose space even with an attractive shell is still susceptible to post-Expo underuse, while a combination of a for-purpose and all-purpose space will offer greater flexibility.

4.2. Clustering strategy

When it comes to achieving the greater objective of urban renewal, this case also exemplifies the unparalleled advantage of a holistic approach to making a cluster of MEFs over a single MEF. As is the case in introducing a single flagship product to a new market, such a concentration is equal to the concept of “putting all your eggs in a single basket”. Developing a series of products with different emphases can spread such risks among different market sectors and build up from those existing market shares and channels. By shifting to a mixed-use emphasis and forging a close connectivity among a number of MEFs, the Big4 development was well rooted in Shanghai’s globalization policy and conformed to the guiding principle of the riverfronts renewal and the planning framework of Expo 2010. As shown in the initial two-year redevelopment of the Expo site, the overarching merit of adopting such a clustering strategy lies in its ability to lower the risk of a single-use MEF and increase the beneficial spillover impact on broader-scale urban renewal.

4.3. Making MEFs endure

Globally, large flagship development projects are seen as a powerful jumpstart towards economic and urban globalization. However, the rationale for simplifying MEF development to a piece of spectacular architecture is flawed from the outset. When the issue of long-term utility is placed secondary to the primary objective of event staging, an MEF will become a barrier rather than a driver to the urban renewal it is affiliated to. Hence, a viable strategy should be formulated at the early stages to reduce the reliance on a specific use and to increase the possibility for more mixed uses. All those involved in MEF development, from the new ones to the more experienced, should clearly understand their obligation of fulfilling the MEF development’s dual mandate. Critical to this would be a perceptual reform to organizers, a reevaluation of risks and rewards, as well as an enhancement of managerial capabilities.
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