

Root Causes of New Hotel Opening Delays in Greater China

Gert Noordzy, MBA & Richard Whitfield, PhD

01 December 2014.

Abstract

China has already begun the largest program of new hotel construction the world has ever seen. This paper reviews the future growth plans of major international hotel management companies for China. The whole industry sees China as a key growth market for hotels and the available development pipeline data indicate that at least 3 new 150+ room hotels will be opened in China every day for the next 25 years.^{1 2} This rate of hotel growth has never been seen before and has strong implications for the methods used to open these new hotels.

At the same time, many of these new hotel openings are being delayed. To understand the nature and causes of these delays, in 2009 we interviewed over 80 professionals in the field. Using Causal Chain Analysis we clearly identify the lack of understanding and adaptation of project management concepts and techniques as major problem areas.³ We strongly recommend that major hotel management companies strengthen their project management capabilities if they hope to meet their ambitious China growth targets.

1. Introduction

Globally, hotels and tourism are a major and growing industry, which generated US\$6.6 trillion or 9.3% of global GDP and over 261 million jobs or 8.7% of total world employment in 2012. It is expected to have attracted US\$765 billion in capital investment or 4.7% of total global investment in 2012.^{3 4} In this paper we review China's growth projections and the plans of major international hotel management companies for China. We then report on the delays experienced when opening new hotels in the region and consider the implications of this hotel growth and offer

¹ Yang, Y. (2011). Number of hotel rooms set to soar. *China Daily*
www.chinadaily.com.cn/cndy/201111/08/content_14053498.htm.

² Lodging Econometrics. (2013). Asia-Pacific Lodging Real Estate Trends – Executive Summary. www.lodgingeconometrics.com/4q2012-asia-pacific-executive-summary/.³ Thomas, J., Delisle, C. & Jugdev, K. (2001). Exploring the “Knowing-Doing” Gap in Project Management. [www.mba.athabascau.ca/titan/aucimwebsite.nsf/AllDoc/5978B1742FEFA54987256CDE006766A3/\\$File/KNOWINGDOINGGAP.PDF?OpenElement](http://www.mba.athabascau.ca/titan/aucimwebsite.nsf/AllDoc/5978B1742FEFA54987256CDE006766A3/$File/KNOWINGDOINGGAP.PDF?OpenElement).

³ World Travel & Tourism Council (WTTC). (2013). Travel & Tourism Economic Impact 2013 World. www.wttc.org/site_media/uploads/downloads/world2013.pdf.

⁴ Oxford Economics. (2013). Methodology for producing the 2013 WTTC / Oxford Economics Travel & Tourism Economic Impact Research. www.wttc.org/site_media/uploads/downloads/2013_Methodology.pdf.

recommendations for hotel management companies to better prepare themselves to meet the challenges of opening new hotels on such a large scale.

Recent years have seen increasing attention in the international and regional press regarding the focus of major global and regional hotel management companies on the importance of China as a growth market.⁵ The numbers of expected hotel openings are unlike anything the industry has experienced before, which requires international hotel management companies to completely re-think the way that they open new properties in China. A key difference between the US and China is that the US growth was less steep and took place over a longer period of time. Moreover, several major hotel management companies achieved their current US size through acquisition, as well as from organic growth. While there will be growth through acquisition, the bulk of the openings in China will be achieved through new built projects. In this article we argue that well proven project management approaches that are widely used in many other industries,⁶ are the best way forward to improve the efficiency and effectiveness of opening hotels in China. However, this requires significant culture, organization and education changes.⁷

In China one option is for locally based developers to decide to build new hotels and enter into agreements with international hotel chains for the pre-opening and operational management of the facilities. Recent data indicate that 21.6% of region's inventory is branded, against 66% in North America.⁸ Moreover, in these situations, one common approach of international hotel management companies is to draw a team of personnel from existing properties to assist the hotel pre-opening team to set-up the hotel, recruit and train the operating staff, open the hotel and then return to their original posts. At the same time, the hotel pre-opening teams are often supported by a corporate logistics team. We believe that this approach is not workable for the scale of upcoming new international hotel openings planned for China - there are simply not enough people in the existing hotels to do the work.⁹

Based on the survey data we present later, it is apparent that new hotel opening delays are commonplace in China. For example, one of the longest new international hotel opening delays in China was probably the Hyatt Regency in Hangzhou. The

⁵ USA Today Travel. (2010). Starwood, Hilton, Marriott, other hotels flock to China. http://travel.usatoday.com/hotels/2010-1026-chinahotels26_CV_N.htm.

⁶ PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management. www.pwc.com/en_US/us/publicsector/assets/pwc-global-project-management-report-2012.pdf.

⁷ Noordzy, G. (2012). Project Management of New Hotel Opening Processes in Greater China. www.4hoteliars.com/features/article/7642.

⁸ STR Global. (2012). STR Global Census Database at 13.4m rooms.. <http://gulfnews.com/business/tourism/global-hotelinventory-reaches-13-4m-rooms-1.1010963>.

⁹ Noordzy, G. & Whitfield, R. (2011). Hotel Opening Processes in Greater China, an Analysis of Problems and Issues. www.4hoteliars.com/4hots_fshw.php?mwi=6491.¹¹ Personal communication. (2009).

entire pre-opening phase from on-boarding the hotel general manager to the opening of the hotel took 6 years.¹¹ In the direct experience of the authors, who have worked with 3 major international hotel companies in over 30 new hotel openings in the region, new international hotel openings in China are typically delayed for 1 to 12 months. These delays have very substantial financial consequences because of incremental pre-opening expenses, revenue disruptions and opportunity costs. At the same time they tie up corporate resources and seriously damage the reputation and credibility of international hotel chains.

This report is an exploratory study, in which we are endeavoring to establish the hotel industry status quo. To gain meaningful insights into the situation, telephone and email interviews were conducted in 2009 with hospitality professionals with relevant experience of new hotel openings in Greater China (mainland China, Taiwan, Hong Kong and Macau).¹⁰ The objective was to get a better understanding of how international hotel management companies operating in Greater China approach new hotel openings and to capture the collective memories of the delays which they have experienced. The results are reported and analyzed here, and we believe that the situation remains largely unchanged since our data was collected.

2. The Outlook for China

Travel & Tourism

China's tourism and hotel industries are booming. The State Council included tourism as a pillar industry in its 12th Five-Year Plan for 2011-2015.^{11 12} Research by the World Travel & Tourism Council and Oxford Economics shows that in 2012 Travel & Tourism generated directly and indirectly ¥4.783 trillion (± US\$ 717 billion) and contributed 9.3% of China's GDP. The average growth of the direct contribution of Travel & Tourism to China's GDP is projected to be 8.7 % over the next ten years.¹³ Please refer to **Table 1**.

The research further shows that in 2012 Travel & Tourism generated close to 64 million direct, indirect and induced jobs in China, or 8.3% of national employment.¹⁴ Over the next decade China is expected to add 10 million jobs in the direct travel

¹⁰ Noordzy, G. (2009). Survey. "Which issues cause hotel openings to be delayed?"

¹¹ British Chamber of Commerce in China (BritCham). (2011). China's Twelfth Five Year Plan (2011-2015) – the full English version. www.britishchamber.cn/content/chinas-twelfth-five-year-plan-2011-2015-full-english-version.

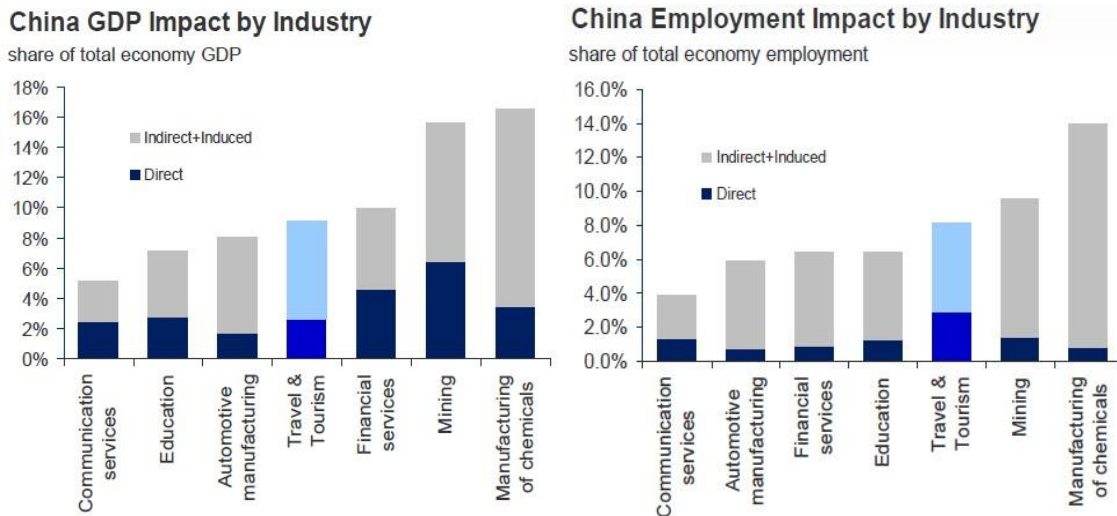
¹² World Economic Forum. (2013). The Travel & Tourism Competitiveness Report 2013. www3.weforum.org/docs/WEF_TT_Competitiveness_Report_2013.pdf.

¹³ World Travel & Tourism Council (WTTC). (2013). Travel & Tourism Economic Impact 2013 China. www.wttc.org/site_media/uploads/downloads/china2013.pdf

¹⁴ World Travel & Tourism Council (WTTC). (2012). Travel & Tourism Economic Impact 2012 China.

and tourism industries, boosting total employment to more than 27 million.¹⁵ Similarly, China's consumer market is expected to triple over the current decade and amount to US\$10 trillion by 2020.

Table 1: The Economic Impact of Different Industries in China



Source: WTTC.

Investment in Travel & Tourism in China attracted ¥655 billion (± US\$ 98 billion) or 2.8% of total investment in 2012. This figure is forecast to rise by 9.2% per annum over the next 10 years to ¥1.68 trillion (± US\$ 252 billion) in 2023.¹⁶

The travel market in China represented US\$232 billion in 2011, with 1.9 billion domestic trips, down from 2.1 billion in 2010.¹⁷ According to the China Tourism Academy, China's tourism revenues are expected to reach US\$412.7 billion in 2012, up 16.6% from 2011. In the first three quarters of 2012, there were 2.35 billion tourist trips across the country, generating about US\$301.5 billion of tourism revenues, up 15.3% from 2011. Predictions are that the total number of domestic trips will reach 3.13 billion by year end 2012, a 12.8% increase from 2011.¹⁸

China's domestic business travel spending is expected to grow by 17% to US\$202 billion in 2012 and increase another 21% to US\$245 billion by 2013. According to the

¹⁵ Clark, C. (2011). Tourism Outlook: China. <http://corporate.visa.com/media/visa-tourism-outlook-china-english.pdf>. ¹⁸ Boston Consulting Group (BCG). (2012). The \$10 Trillion Prize – Captivating the Newly Affluent in China and India. www.bcgperspectives.com/content/articles/captivating_newly_affluent_in_china_and_india/.

¹⁶ World Travel & Tourism Council (WTTC). (2013). Travel & Tourism Economic Impact 2013 China.

¹⁷ China Travel Trends. (2012). Essential China Travel Trends - Dragon Edition. www.chinatraveltrendsbook.com/downloads/Essential_China_Travel_Trends_Dragon_Edition.pdf.

¹⁸ China Daily. (2012). China's 2012 tourism revenues to reach \$413b. www.chinadaily.com.cn/china/201210/12/content_15814388.htm.

Global Business Travel Association, China spending on business travel will likely surpass the US as early as 2015.¹⁹

As an international tourist destination China continues to rank third in the world with 58 million international arrivals in 2011, and fourth in receipts with US\$48 billion in 2011.^{20 21} Interestingly, in 2003, the WTO predicted that China would receive 61.8 million tourists by 2010 and 130 million by 2020²² so that actual growth has tracked the predictions reasonably well until now. China is projected to overtake Japan as the region's largest travel market^{23 24} and the world's second largest tourist market by 2013 with an 8% share of global tourists.²⁵ Similarly China's domestic tourism and travel market is projected to grow by 16% annually to reach US\$620 billion in 2020, whilst its outbound travel market is expected to grow to triple the size of Japan's by 2020.^{26 27} The World Travel and Tourism Council (WTTTC) estimate that by 2023, China will overtake the US as the largest country in terms of Tourism & Travel's direct contribution to GDP, as well as the size of the outbound market.^{28 29}

Transport Infrastructure

The Federal Aid Highway Act of 1956 authorized the construction of the U.S. Interstate Highway System. The American franchise chains, including hotels and motels followed this infrastructure growth.³⁰ In similar fashion, the Chinese Central

¹⁹ Johansen, M. (2012). China to top US as No. 1 business travel destination: report. *International Business Times*. www.ibtimes.com/china-top-us-no-1-business-travel-destination-report-699723.

²⁰ The Independent. (2011). China world's third most visited country: UN. www.independent.co.uk/travel/news-and-advice/china-worlds-third-most-visited-country-un-2195263.html.

²¹ United Nations World Tourism Organization (UNWTO). (2012). UNWTO Tourism Highlights 2012 Edition. http://mkt.unwto.org/sites/all/files/docpdf/unwtohighlights12enlr_1.pdf.

²² United Nations World Tourism Organization (UNWTO). (2003). Chinese Outbound Tourism. www.etccorporation.org/resources/uploads/chinastudy.pdf.

²³ Quinby, D. (2012). Asia Unleashed: Regional Travel Market in the Throes of Transformation. www.phocuswright.com/research_updates/asia-unleashed-regional-travel-market-in-the-throes-oftransformation?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+PhoCusWrightFYI+%28PhoCusWright%27s+FYI%29.

²⁴ China Travel Trends. (2012). China to surpass Japan as the second-largest travel & tourism market in the world by 2013. <http://chinatraveltrends.com/china-to-surpass-japan-as-the-second%E2%80%91largest-travel-tourism-market-in-the-world-by2013/>.

²⁵ Boston Consulting Group (BCG). (2011). Taking Off – Travel and Tourism in China and Beyond. www.bcg.com.cn/export/sites/default/en/files/publications/reports_pdf/BCG_Taking_Off_Mar_2011_ENG.pdf

²⁶ Boston Consulting Group (BCG). (2011). Taking Off – Travel and Tourism in China and Beyond. www.bcg.com.cn/export/sites/default/en/files/publications/reports_pdf/BCG_Taking_Off_Mar_2011_ENG.pdf

²⁷ ITB. (2012). ITB World Travel Trends Report 2011/2012. www.itbkongress.de/media/itbk/itbk_media/itbk_pdf/WTTR_Report_komplett_web.pdf.

²⁸ Chiang, MH. (2011). China's booming tourism industry. www.eai.nus.edu.sg/BB676.pdf.

²⁹ World Travel & Tourism Council (WTTTC). (2013). Travel & Tourism Economic Impact 2013 World.

³⁰ Weingroff, R.F. (1996). Federal-Aid Highway Act of 1956: Creating the Interstate System. *Public Roads, Summer 1996, Vol. 60 – No. 1*. www.fhwa.dot.gov/publications/publicroads/96summer/p96su10.cfm.

Government is connecting the country with an Express Way System, which is expected to reach a total length of 3 million kilometers by 2020.³¹

In addition, the phenomenal expansion of the high speed railway network and the growing number of airports added to the mix will further catalyze the hotel boom. The first high speed line opened between Beijing and Tianjin in 2008. By the end of this decade the high speed rail system is planned to connect over 250 Chinese cities, with a total track length of 30,000 kilometers.³²

In 2008 China had a total of 147 civil airports in operation.³³ By 2010 the number had grown to 195.³⁴ Plans are to build 97 new airports before 2020.³⁵³⁶ According to ACI Asia-Pacific, Beijing handled 7.5 million passengers in August 2012 and remained the airport with the highest passenger throughput in the region, followed by Hong Kong with 5.1 million passengers.

Hotels

With the start of the Open Door policy, the first international hotel in China was the Holiday Inn Lido Beijing which opened in 1984, followed by The Great Wall Sheraton Hotel Beijing in 1985.³⁷ Since then most major international hotel chains have commenced operations in China, normally by entering into hotel management and franchise agreements with the local developers of new hotels.

Now there are approximately 2.3 million hotel rooms in China. As summarized in **Figure 1**, China's National Bureau of Statistics predict that the number of hotel rooms in China will more than double to 6.1 million by 2025, equaling the expected US number by that time. Then by 2039 China is expected to reach 9.1 million hotel rooms, four times the current number, where most of these will be new built.³⁸

³¹ Thomas White Global Investing. (2011). BRIC Spotlight Report - Toll Roads in China: Speeding Up Growth. www.thomaswhite.com/pdf/bric-spotlight-report-china-toll-roads-expressways-june-11.pdf.

³² U.S. Global Investors. (2011). Railway Revolution Builds China's Consumer Culture. www.usfunds.com/investorresources/frank-talk/China-India-Asia/Railway-Revolution-Builds-Chinas-Consumer-Culture5773?CFID=5183350&CFTOKEN=86391326.

³³ China Airports. (2008). China airports, major airports in China. www.airports-china.com.

³⁴ Deloitte. (2010). Hospitality 2015 – Game changers or spectators? www.deloitte.com/assets/DcomTanzania/Local%20Assets/Documents/Deloitte%20Reports%20-%20Hospitality%202015.pdf.

³⁵ Xin, Dingding. (2008). China to add 97 airports in 12 years. *China Daily*. www.chinadaily.com.cn/bizchina/200803/25/content_6563240.htm.

³⁶ Hoteliers. (2012). Asia-Pacific airports record solid growth. www.4hoteliers.com/4hots_nshw.php?mwi=10547.

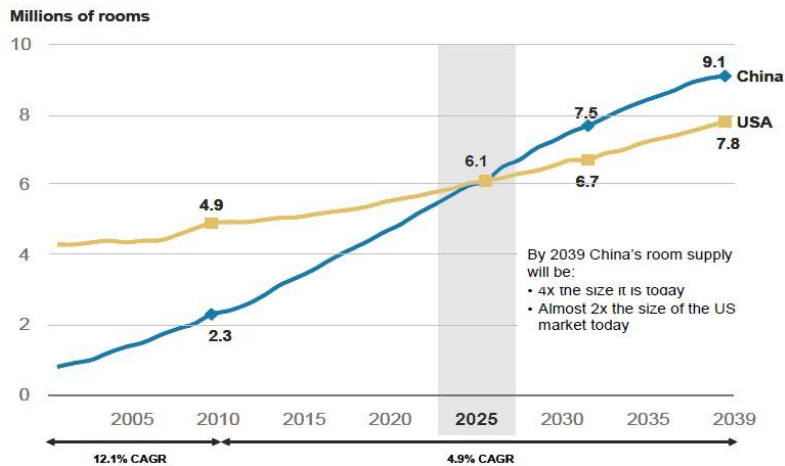
³⁷ Moody, A. (2011). Building Boom in Hotel Industry, *China Daily European Weekly*. http://usa.chinadaily.com.cn/business/2011-05/27/content_12594939.htm.

³⁸ The Washington Post. (2011). Number of hotel rooms set to soar. *China Watch*. <http://chinawatch.washingtonpost.com/2011/11/number-of-hotel-rooms-set-to-soar.php>.

Others have reached comparable conclusions, e.g. the China Hotel Market Outlook for 2012 and beyond reflects a growth trend which ranges from 17% to 181% for 15 key cities.³⁹ Similarly, researchers from Jones Lang Lasalle Hotels discovered that the international hotel chains operating in China had provided nearly 160,000 rooms in 30 major cities at the end of 2010, an increase of 60% since 2005. One international brand hotel is expected to open in China every four days during the next 18 months and as many as 84,000 rooms will be provided by international hotel chains in China between the end of 2010 and 2013, bringing the number of guest rooms in international hotels to 240,000 by 2013.⁴⁰ ⁴¹ According to Jones Lang Lasalle

Hotels, “the number of internationally branded hotel rooms is expected to surge 52% by 2013 after rising 62% in the past five years”.

Figure 1: Hotel Room Growth Projections - USA versus China



Source: Morgan Stanley, 2009.

46

Similarly, a tourist industry expert with the Shanghai Academy of Social Sciences expects China to add more than 1,500 new hotels each year from 2010 to 2015 with a total investment of US\$62.5 billion.⁴⁷ Furthermore, according to the September 2012 STR Global Construction Pipeline Report, the Asia Pacific hotel supply outlook was for 1,671 additional hotels with a total of over 337,397 rooms. China reported a

³⁹ Dai, J. & Little, D. (2011). China Hotel Market Outlook. *Horwath, hotel, tourism & leisure*. www.chinahotelseminar.com.cn/files/path/1333000020.pdf.

⁴⁰ Wang, W. (2011). China set for massive rise in hotel numbers. *China Daily*. www.chinadaily.com.cn/bizchina/201108/11/content_13093129.htm. ⁴⁵ Cao, B. (2011). China's Low Occupancy Threatens International Hotels' Boom, *Bloomberg News*. www.businessweek.com/news/2011-11-25/china-s-low-occupancy-threatens-international-hotels-boom.html#p3.

⁴¹ Morgan Stanley. (2011). China High-Speed Rail on the Economic Fast Track. *Morgan Stanley Blue Paper, Morgan Stanley Research Global*. www.morganstanley.com/views/perspectives/China_HighSpeed_Rail.pdf. ⁴⁷ ARC China. (2011). Moody's Reviews China's Credit Rating, Overseas Investment, Domestic Market News and more. www.arcchina.cn/news/china-economic-news/moodys-reviews-chinas-credit-rating-overseas-investment-domestic-market.

+14.5% growth with the planned addition of more than 14,971 rooms.^{42 43} Another information source, Ernst & Young reported that a combined total of more than 850 branded hotels with more than 225,000 rooms were under construction as of May 2012 in China and India alone.⁴⁴

Lodging Econometrics reported in the spring of 2013 that the Asia Pacific Pipeline stands at 2,401 new hotel projects with a total of 557,505 rooms as of Q4 2012. Their total active pipeline data includes projects in the In Construction, Final Planning and Planning stages, but does not include projects in the Pre-Planning stage. The number of projects already under construction represents 71% of the total pipeline. In 2010, China opened 966 hotels with 136,812 rooms.⁴⁵ Currently, China has the largest pipeline in the world by room count with 1,622 projects, totaling 407,721 rooms, according to Lodging Econometrics.^{46 47} Please refer to **Table 2**. It is interesting to observe that China is by far outranking all other countries in the region, which underlines the scale of the growth.

Table 2: Hotel Construction Pipeline Estimates

Asia Pacific Construction Pipeline					Asia Pacific Top Markets by Project				
Region	Q4 2012		Variance from Q4 2011		Markets	Q4 2012		Variance from Q4 2011	
	Projs	Rms	Projs	Rms		Projs	Rms	Projs	Rms
China	1,622	407,721	19%	2%	Shanghai, China	86	17,025	0%	-14%
India	350	60,777	-10%	-15%	Beijing, China	64	10,581	60%	12%
Indonesia	181	28,268	118%	101%	Chengdu, China	58	17,144	61%	57%
All Other Countries	248	60,739	-2%	1%	Jakarta, Indonesia	58	9,777	107%	78%
Total Pipeline	2,401	557,505	15%	2%	Guangzhou, China	50	11,892	43%	12%
					Suzhou, China	43	8,099	-12%	-26%
					Sanya, China	42	14,497	17%	-22%
					Hong Kong, China	42	9,651	-43%	-40%

Source: Lodging Econometrics.

⁴² Hotel News Now (HNN). (2012). STR Global: Asia/Pac pipeline for September. www.hotelnewsnow.com/articles.aspx/9148/STR-Global-Asia-Pac-pipeline-for-September.

⁴³ Hoteliers. (2012). Global hotel construction pipeline report. www.4hoteliers.com/4hots_nshw.php?mwi=10549&awsb_c=4hdm&awsb_k=dnws.

⁴⁴ Ernst & Young. (2013). Global Hospitality Insights: top thoughts for 2013. [http://www.ey.com/Publication/vwLUAssets/Top_thoughts_for_2013/\\$FILE/Top_thoughts_for_2013.pdf](http://www.ey.com/Publication/vwLUAssets/Top_thoughts_for_2013/$FILE/Top_thoughts_for_2013.pdf).

⁴⁵ Hotel Online. (2012). Lodging Econometrics Reports Asia Pacific Pipeline Stands at 2,317 Projects with 1,646 Under Construction Accounting for 44% of All Rooms in Global Pipeline. www.hotelonline.com/News/PR2012_4th/Oct12_AsiaPacificPipeline.html.

⁴⁶ Lodging Econometrics. (2013). Asia-Pacific Lodging Real Estate Trends – Executive Summary. www.lodgingeconometrics.com/4q2012-asia-pacific-executive-summary/.

⁴⁷ Lodging Econometrics. (2013). Asia-Pacific Lodging Real Estate Trends – Executive Summary.

Most recently, a major international building consultancy predicted that the outlook for the hotel sector in China is expected to remain strong as the tourism industry will grow rapidly in the next few years, despite the gloomy global economic outlook. According to their latest report, robust economic development and growing numbers of tourists will ensure that the mainland remains an attractive hotel market in need of more rooms. The head of research mentioned that “international hotel operators, such as Club Méditerranée and Starwood Hotels & Resorts are expected to further pursue their aggressive expansion plans in China.”⁴⁸

3. The China Plans of Major Industry Players

The Wall Street Journal published an article in October 2012 noting how despite just about every hotel company admitting concern that China is being overbuilt with hotels, none of them seem to be slowing their expansion plans. The consensus seems to be that demand is a short term issue which will eventually catch up with supply growth, whilst the bigger concern is finding enough people to build and manage these hotels.^{49 50} Confirming this view, recent pipeline reports seem to suggest that previous growth forecasts hold true.⁵¹

It is of interest to note the increase in hotel development in second and third tier cities, as well as a growing number of smaller, mid-scale projects.^{52 53} The McKinsey Global Institute’s report on the economic power of cities “suggests that some 400 largely unknown midsize cities in emerging markets will generate 40% of global economic growth over the next decade and beyond. Most of these cities will be in China and India.”⁵⁴ Jones Lang Lasalle reported that the supply of internationally-branded hotels in the main 50 cities in China grew by 19% between 2010 and 2011 (compared with 10% in Tier 1 cities). The company commented that in many third-tier cities, the “existing hotel product is outdated, owners’ management

⁴⁸ Sito, P. (2012). Hotel sector outlook in China remains strong *South China Morning Post*. www.scmp.com/property/hongkong-china/article/1057091/hotel-sector-outlook-china-remains-strong.

⁴⁹ Chow, J. (2012). Hoteliers Brave Room Glut in China. *The Wall Street Journal*. <http://online.wsj.com/article/SB1000087239639044362420457805633221116400.html>.

⁵⁰ Deloitte. (2010). Hospitality 2015 – Game changers or spectators? www.deloitte.com/assets/DcomTanzania/Local%20Assets/Documents/Deloitte%20Reports%20-%20Hospitality%202015.pdf.

⁵¹ Ricca, S. (2012). Hotel brands make good on their pipeline promises in China. *Hotel Management.net*. www.hotelmanagement.net/asia-pacific/hotel-brands-make-good-on-their-pipeline-promises-in-china.

⁵² Hotel Management.net. (2011). China, other developing countries bank on positive future for hotels. www.hotelmanagement.net/china-other-developing-countries-bank-on-positive-future-for-hotels.

⁵³ Lodging Econometrics. (2013). Asia-Pacific Lodging Real Estate Trends – Executive Summary. www.lodgingeconometrics.com/4q2012-asia-pacific-executive-summary/.

⁵⁴ (2011). Urban World: Mapping the economic power of cities. www.mckinsey.com/insights/urbanization/urban_world.⁶¹
Koh, J. & Lo, J. (2012). Built for Success. *China Daily Asia Pacific*. www.chinadailyapac.com/article/built-success.

capabilities are limited, overall room rates are low, and a high share of demand for both lodging and entertainment derives from local governments.”⁵⁵

Based on the annual reports (see **Appendix A**) and other publicly available information, the authors have analyzed the China development plans of major international hotel groups. Ordered by world ranking order,⁵⁶ **Table 3** shows the number of hotels in the portfolio of the top 10 groups in 2013, along with the number of hotels they have in China, and are planning to open in China. As you can see, only one of these groups seems to have little interest or plans for China. The others have major plans for China, as synopsized below **Table 3**.

Most international hotel management companies have ambitious global growth strategies and some have incorporated expansion in China into their key strategic objectives. For example, one of Wyndham’s two strategic objectives is “Increasing our system size and strengthening our customer value proposition, by deploying various tactics to add new rooms: target new construction and conversion opportunities in China.”,⁵⁷ whilst Accor’s strategic vision is “A development strategy that aims to consolidate the Group’s current leadership in Europe and Latin America and position it among the leaders in Asia-Pacific, especially China.”^{58 59 60}

Table 3: Hotel Group World Rankings

Top 10 of worldwide hotel groups as of 01 January 2013					
Rank	Groups	Global		China	
		Hotels	Rooms	Hotels	Pipeline
1	InterContinental Hotels Group	4,602	675,982	200	169
2	Hilton Worldwide	3,992	652,738	35	120
3	Marriott International	2,672	638,793	70	70
4	Wyndham Hotel Group	7,342	627,437	573	105
5	Choice Hotels International	6,198	497,023	3	n.a.
6	Accor	3,515	450,199	133	85
7	Starwood Hotels & Resorts	1,121	328,055	120	100
8	Best Western International	4,024	311,611	37	41
9	Home Inns & Hotels Management Inc.	1,772	214,070	1,900	1,000
10	Carlson Rezidor Hotel Group	1,077	166,245	12	24

Sources: MKG Hospitality database (Global) and Annual Reports (China)

⁵⁵ Ng, Lily. (2012). Hotels – Opportunities for International Brands. *Jones Lang Lasalle Hotels*. www.joneslanglasalle.com/China50/en-gb/Pages/China50-Hotels.aspx.

⁵⁶ MKG Group. (2013). MKG Hospitality database – March 2013. www.mkg-group.com/.

⁵⁷ Wyndham Worldwide. (2011). Form 10-K. Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2011. <http://sec.gov/Archives/edgar/data/1361658/000119312512067329/d296281d10k.htm>.

⁵⁸ Accor. (2011). Accor’s strategic vision. www.accor.com/en/finance/accors-strategic-vision.html.

⁵⁹ MKG Group. (2013). MKG Hospitality database – March 2013. www.mkg-group.com/.

⁶⁰ China Development Pipeline. Please refer to the relevant Annual Reports in Appendix A.

Synopsis of the China plans

IHG announced in February 2011 that the next 20 years would see almost an eightfold increase in IHG's rooms in Greater China.⁶¹ Hilton announced in September 2011 its plans to quadruple the number of its hotels in China before 2014.⁶² In June 2012, the Marriott International Chief Development Officer announced plans to invest US\$2 billion over the next three years to open new hotels globally, where 14% of Marriott's planned openings will be in China. The Wyndham Chairman said in July 2011: "Our long-term vision is to have a footprint in China that rivals our presence in the US."⁶³ At the Hotel Investment Conference Asia Pacific in October 2012, the company's Chief Executive pointed out that 28% of the company's global pipeline is in mainland China.⁶⁴ The Accor Asia Pacific Chairman and COO explained in a recent interview with Reuter that Accor aims to open 100 hotels in China in the next 2-3 years,^{65 66} whilst the Group targets to quadruple the size of its network in China with a network of 400 hotels by 2015."^{67 68} The Starwood President and CEO said during the Fortune Global Forum in Chengdu in April 2013 that the company will open twenty new hotels in 2013 or one new hotel every 20 days in China.⁶⁹ In a recent interview, the Chief Executive of Home Inns told Bloomberg that the company "Plans to add 330 to 360 hotels annually in the coming three years. I'm confident about the market growth potential, especially in the next three to five years."⁷⁰

⁶¹ Finance Director Europe (FDE). (2012). Building long-term success in high-growth markets – Tom Singer, IHG. www.thefinancedirector.com/features/featurefde-may-2012-breakfast-briefing-tom-singer-ihg-rel-genpact/.

⁶² Cao, B. (2011). Hilton China Hotels to Rise Fourfold by 2014. *Bloomberg News*. www.bloomberg.com/news/2011-0908/hilton-china-hotels-to-rise-fourfold-by-2014.html.

⁶³ Seeking Alpha. (2011). Wyndham Worldwide's CEO Discusses Q2 2011 Results – Earnings Call Transcript. <http://seekingalpha.com/article/282309-wyndham-worldwide-s-ceo-discusses-q2-2011-results-earnings-call-transcript>.

⁶⁴ Sito, P & Leung, P. (2012). China's Hotel Business is Booming. www.scmp.com/property/hong-kongchina/article/1062538/chinas-hotel-business-booming.

⁶⁵ Tourism & Aviation (T&A). (2012). France's Accor to open 100 hotels in China and 23 new hotels in Middle East. www.tourismandaviation.com/17315-frances-accor-to-open-100-hotels-in-china-and-23-new-hotels-in-middle-east.html.

⁶⁶ Lee, M. (2012). France's Accor aims to open 100 hotels in China in 2-3 years. *Reuters*. www.reuters.com/article/2012/02/28/uk-accor-china-idUSLNE81R01220120228.

⁶⁷ Accor. (2012). An ambitious development strategy. www.accor.com/en/finance/accors-strategic-vision.html.

⁶⁸ Accor. (2012). Three high-potential flagship markets. *Press Kit October 2012*. www.accor.com/fileadmin/user_upload/Contenus_Accor/Presse/Dossiers_Presse/EN/accor_press_kit_october_2012.pdf.⁷⁶

Ma, ZH. (2012). Accor stresses Chineseness in its hotels. *China Daily*. www.chinadaily.com.cn/business/201203/26/content_14911643.htm.

⁶⁹ Starwood Hotels & Resorts. (2013). News. Starwood Continues to Expand Its Lead in China. <http://development.starwoodhotels.com/news/1/584-starwood-hotels-resorts-continues-to-expand-its-lead-in-china>.

⁷⁰ Cao, B. (2012). Home Inns Keeps Growth Goal in Slowing Economy: China Overnight. *Bloomberg News*. www.bloomberg.com/news/2012-06-28/home-inns-keeps-growth-goal-in-slowing-economy-china-overnight.html.

4. The Implications

Clearly, the hotel growth prospects for China are very strong. This rate of new hotel construction and openings is unprecedented and raises the question: how can hotel operators open new properties (under executed management and franchise agreements) on this scale effectively and efficiently, and in a consistent and predictable manner?

Traditionally, hotel opening efforts have been driven by corporate operations. The normal industry practice is to recruit a permanent hotel pre-opening team, who will stay on and manage the hotel operations post opening. This core team is invariably supported by a task force drawn from existing hotels, seconded to the pre-opening hotel team to assist in the opening. This specific approach only works on small scale and has several limitations.

A major drawback of this system is that the timing of task force requirements versus task force availability frequently does not match. Another downside is that deployment is subject to approval by the owning company of the sending hotel. Additionally, there are many logistical challenges for the receiving hotels, while increased workload burdens are placed on the sending hotels. Finally, the challenge of individual projects running simultaneously instead of sequentially (which invariably happens) prohibits the concept of “permanent” task forces.

This method is clearly not workable when hotel companies are doubling the number of hotels that they have each year – there are simply not enough people in the existing hotels to assist with new hotel openings. This is being recognized as some international hotel companies have established dedicated new hotel opening departments (some of which are using elements of project management) in Asia in recent years to support hotel management teams.

However, this approach alone cannot meet the challenges and dynamics of new hotel development on large scale. It will contribute to causing delays in the technical, operational and commercial readiness of hotel projects. The consequences of delays hurt hotel owners and operators alike: increased pre-opening expenses, delayed cash flow generation, delayed business ramp up, delayed GOP and ROI, delayed owner and operator income, missed business opportunities and negative impact on (non-financial) key metrics. At the same time, they tie up corporate resources and damage the reputation of international hotel management companies. A different approach is needed and other options must be considered.

Also, managing a project to open a new hotel is very different from managing an operating hotel. It is well recognized in many industries that the skill-sets and concerns in managing projects are very different to those for managing ongoing operations.⁷¹ For the most part, traditional hotelier training focuses on hotel operations, with little emphasis on how to open new hotels. In most places around the world this balance makes sense, but this is not the case for the current situation in China. Therefore, much stronger project management skills are needed if the very ambitious and demanding new hotel opening schedules are to be met.

5. Project Management as a Strategic Competence

A key question is: “How can international hotel management companies execute on their aggressive growth plans?” They must successfully execute new hotel projects, and nowadays, successful organizations more and more utilize project management to drive development and achieve their business objectives.⁷²

During the 20th century ideas about projects and how they should be managed dramatically evolved. It is clearly recognized that managing projects is fundamentally different from managing on-going organizational operations and involves very different skill sets.⁷³

Project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements.⁷⁴ Nowadays there is an extensive body of knowledge about project management, and relevant concepts and techniques are widely used in information technology, engineering and several other industries. There are several major international professional associations in the field, such as the Project Management Institute, and many training courses, degrees and professional certifications are offered around the world.⁷⁵

As an example, since 1996 more than 10,000 IBM employees have received Project Management Professional (PMP[®]) accreditation.⁷⁶ This was when the company

⁷¹ Project Management Institute (PMI[®]). (2007). Project Manager Competency Development (PMCD) Framework – Second Edition. *Library of PMI Global Standards – Practice Standards and Frameworks*. www.pmi.org/PMBOK-Guide-andStandards/Standards-Library-of-PMI-Global-Standards.aspx.

⁷² PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

⁷³ Project Management Institute (PMI[®]). (2007). Project Manager Competency Development (PMCD) Framework – Second Edition. *Library of PMI Global Standards – Practice Standards and Frameworks*. www.pmi.org/PMBOK-Guide-andStandards/Standards-Library-of-PMI-Global-Standards.aspx.

⁷⁴ Project Management Institute (PMI[®]). (2013). A guide to the Project Management Body of Knowledge (PMBOK[®]) – Fifth Edition. *Library of PMI Global Standards – Foundational Standards*.

⁷⁵ Project Management Institute. (PMI[®]). www.pmi.org.

⁷⁶ Project Management Institute. (PMI[®]). (2012). PMI Continuing Certification Requirements (CCR) Program. *Maintaining Your PMI Credentials*. <http://pdu.pmi.org>.

launched an initiative to ensure a consistent enterprise-wide approach to project management to better meet customer needs. The effort to become more project focused included the development of the IBM Project Management Center of Excellence. IBM has also created its own worldwide project management method, based on key concepts from the *PMBOK® Guide*.⁷⁷

It is well understood that projects inherently involve risk and have high failure rates.^{78 79 80 81} PMI® defines project risk as “an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives, such as scope, schedule, cost and quantity,”⁸² New hotel opening project objectives include technical, operational and commercial readiness. Considerable research about the factors affecting project success has been conducted for various industries, and several consistent themes have emerged, including having a suitable organization structure and an established project management office, employing certified practitioners and engaged and experienced key staff, conducting training and staff development, adopting a well proven project management methodology and using dedicated project management software.⁸³

A recent study found that “project management is now used in more than 85 occupations across a wide swath of functions and industries”.⁸⁴ Whereas project management concepts have been embraced and methodologies successfully implemented across a multitude of industries, they have not yet been embraced by the hotel industry. At the same time, there seems to have been relatively little research done to understand the problems in managing new hotel opening projects, even though it is a very large industry internationally. It is also interesting to note that there is no conventional literature on hotel opening processes. Very few independent articles and reviews on the subject are up to speed.⁸⁵

⁷⁷ Peng, J. (2003). IBM Project Management Competency. *IBM Global Service*. www.ss.pku.edu.cn/project/ppt/21-1-IBMJanePeng-PM_Compency.pdf.

⁷⁸ McKinsey & Company. (2010). Perspectives on merger integration. www.mckinsey.com/client_service/organization/latest_thinking/~/_media/1002A11EEA4045899124B917EAC7404C.ashx.

⁷⁹ The Standish Group. (2011). IT Project Performance – Standish Chaos Report: 1994-2010. www.standishgroup.com.

⁸⁰ PM Solutions. (2011). Strategies for Project Recovery. www.pmsolutions.com/collateral/research/Strategies%20for%20Project%20Recovery%202011.pdf.

⁸¹ Project Management Institute. (PMI®). (2012). PMI's Pulse of the Profession, Driving Success in Challenging Times. www.pmi.org/~/_media/PDF/Research/2012_Pulse_of_the_profession.ashx.

⁸² Project Management Institute (PMI®). (2013). A guide to the Project Management Body of Knowledge (PMBOK®) – Fifth Edition. *Library of PMI Global Standards – Foundational Standards*.

⁸³ PricewaterhouseCoopers. (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

⁸⁴ Project Management Institute (PMI®). (2010). The Power of Project Management Education. *The Power of Project Management*. www.pmiteach.org/UploadedDocuments/Why_Teach_Project_Management/Power_of_Project_Management_WhitePaper.pdf.

⁸⁵ Noordzy, G. (2012). Project Management of New Hotel Opening Processes in Greater China. www.4hoteliers.com/features/article/7642.

Nonetheless, project management is a discipline which can be applied to any type of industry, regardless of the nature of its business. While limited research has been conducted regarding the importance of project management as it would apply to opening new hotels in international markets, various international studies have been conducted across a wide range of different industries and these clearly demonstrate that project management nowadays is indispensable for business results for companies in general.

In 2008 the Project Management Institute presented the results of a 3-year, US\$2.5 million study, confirming that project management delivers value. The elements that create value were described as: satisfaction; project and organizational alignment; consistent use of good practices; better results of processes and projects; better business outcomes; and realization of tangible and intangible benefits.⁸⁶ Consecutive global surveys on project management practices have been conducted by others and the results are very similar.^{87 88} For example, in the most recent survey of 1,500 respondents from 38 countries within 34 industries shows that “97% agreed that project management is critical to business performance and organizational success, and 94% agreed that project management enables business growth.” Its key findings conclude that that a.) project management maturity levels are on the rise, b.) higher maturity yields higher performance and c.) organization maturity is directly correlated with organizational success.⁸⁹

6. A Survey to Understand New Hotel Opening Delays in Greater China

For this study we tapped into our extensive professional network, drawing on a convenience sample of hotel executives with relevant experience. This targeted sample of over 100 hospitality professionals and peers working in Greater China were invited to participate in structured, open-ended telephone and email interviews during December 2009. Besides collecting demographic details, each participant was asked two questions about their Greater China activities:

⁸⁶ Thomas, J. & Mullaly, M. (2008). Researching the Value of Project Management. www.pmi.org/Knowledge-Center/ResearchCompleted-Research/~media/Members/Research/Researching%20the%20Value%20of%20PM.ashx.

⁸⁷ PricewaterhouseCoopers (PwC). (2004). www.pwc.com/us/en/operations-management/assets/pwc-global-projectmanagement-survey-first-survey-2004.pdf.

⁸⁸ PricewaterhouseCoopers (PwC). (2007). Insights and Trends: Current Programme and Project Management Practices – The second global survey on the current state of project management maturity in organizations across the world. www.pwc.com/us/en/operations-management/assets/pwc-global-project-management-survey-second-survey-2007.pdf.⁹⁷

PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

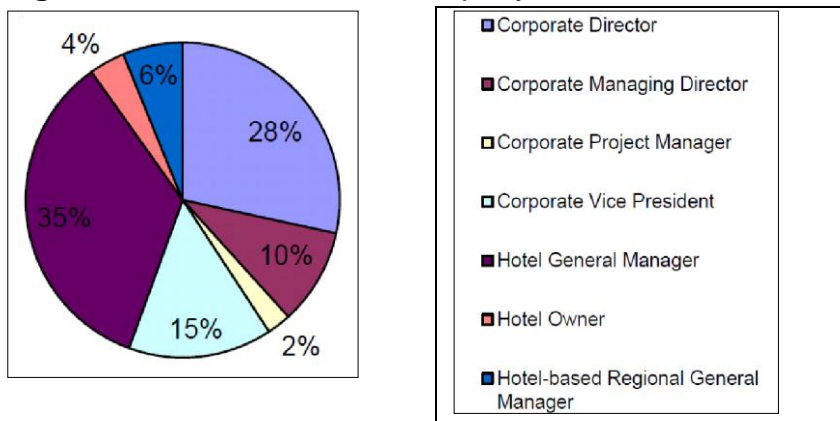
⁸⁹ PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

- “How does your company approach new hotel opening processes?”
- “In your view, which issues cause new hotel openings to be delayed?”

A total of 81 responses were obtained. Most respondents worked for one of 15 international and regional hotel (brand) management companies, and all had been involved in new hotel openings in Greater China.

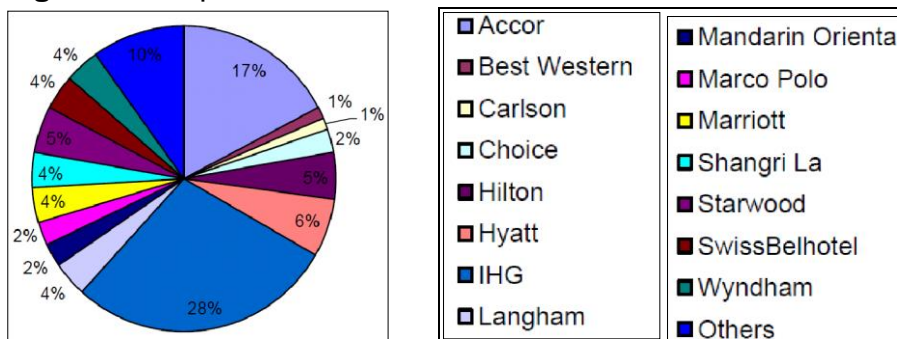
Figures 2 and 3 summarize the demographic profile of the study participants. As can be seen, all the respondents held positions that were directly or indirectly involved in new hotel openings, and the full spectrum of such roles and positions were represented. Moreover, collectively, the respondents have very considerable experience of new hotel openings in Greater China. Also, note that the sample included several staff from most of the international hotel management companies operating in Greater China so that internal practices and problems could be corroborated through several interviews in most cases.

Figure 2: Functional role in company



Source: Noordzy, 2009.

Figure 3: Corporate affiliation



Source: Noordzy, 2009.

After verifying the professional experience and credibility of the participants, the main part of the study was to analyze their responses to the key questions about how their organizations manage new hotel openings and the kinds of delays (if any) they have experienced.

“How does your company approach new hotel opening processes?”

The respondents provided insights as to how hotel management companies approach new hotel openings in Greater China. At the time of the survey, only 2 of the 15 international hotel management companies represented in the study had a dedicated hotel opening function. (In early 2010, an additional 2 international hotel management companies were in the process of setting up a similar function.) In most cases, new hotel openings were managed by corporate operations, supported to varying degrees by functional specialists. For example, one of the international hotel management companies would occasionally second a dedicated corporate project manager to assist both the new hotel owner and new hotel general manager throughout the process. Also, in one case, new hotel openings are driven entirely by the newly appointed hotel general managers who, while they may be very experienced in operating hotels, often have little knowledge or understanding of what is involved in opening a new hotel. And further, due to the nature of franchised hotel business, new hotel openings are largely driven by the hotel owners for 3 hotel companies. This clearly seems to be a poor practice because in Greater China most owners only have 1-2 properties and so they are typically quite inexperienced in setting up new hotels and subsequently operating them (which is one reason why they favor outsourcing these activities to hotel management companies).

As a result of the interviews the following observations could be made regarding the respondents:

- None of the respondents were expert in the field of project management and its methodology.
- None of the respondents had received any formal project management training.
- None of the respondents (*property based*) had experienced a new hotel project which opened by the target opening date, either as projected at the execution of the contract or as projected at the starting date of the hotel general manager.
- None of the respondents held any type of project management certification.
- Only 1 respondent (*with an engineering background*) had held PMI® certification in the past.

- About 95% of the respondents (77) had never heard of the Project Management Institute.

Similarly, as a result of the interviews the following observations could be made regarding the hotel management companies:

- Only 2 out of 15 hotel management companies had a dedicated hotel opening support function.
- None of the hotel management companies employed certified project managers.
- None of the hotel management companies had a project management department.

This confirms that the international hotel management companies operating in China all follow the traditional approach to open new hotels, whereby staff hired for the new hotel are the ones to open the hotel, supported by staff from existing hotels and corporate functions. Moreover, this system is not working properly, because nearly all new hotels openings in China are delayed. Finally, this confirms project management ideas and concepts are not well known in the hotel industry (at least in Greater China). All this confirms our initial hypothesis.

“In your view, which issues cause new hotel openings to be delayed?”

In this exploratory study our primary objective was to identify the kinds of issues and problems experienced when opening new hotels in Greater China. The points raised identify the spectrum of problems but, strictly, they do not identify the relative frequency at which the different kinds of problem actually occur. Nonetheless, it is reasonable to assume that problems identified by more respondents are more commonly occurring so that there should be a correlation between the frequency with which a problem is raised by the respondents and the frequency at which the problem occurs. We plan to confirm this in a later study.

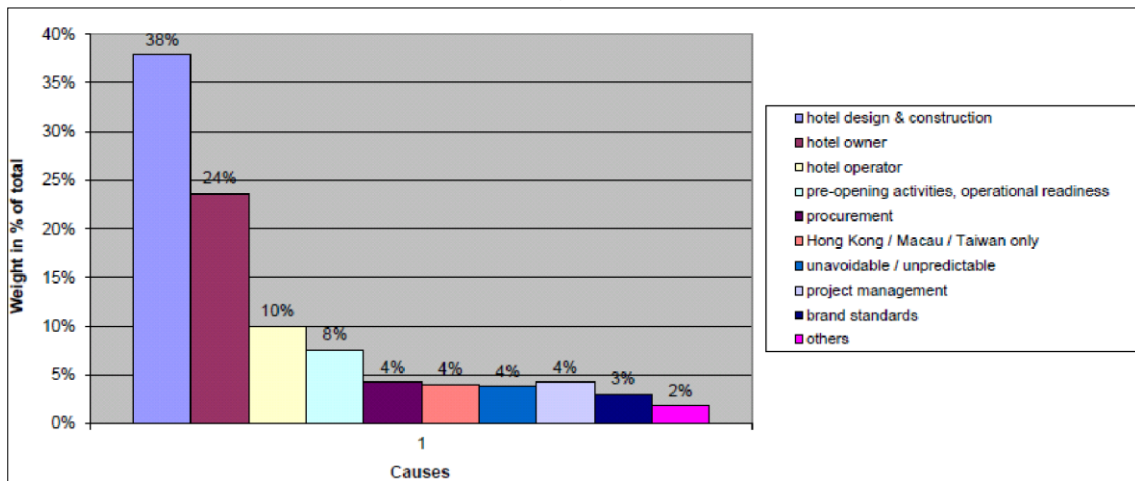
As to be expected, this question caused many issues to be identified, and in fact the 81 respondents raised 825 different points in answering it. The consensus amongst the interviewees appears to be that new hotel opening delays really are common in Greater China, thus confirming the anecdotal evidence.

The authors sorted the points raised by the respondents based on similarity. As shown in full detail in **Appendix B**, a total of 51 sub-categories were thus identified. Based on their lengthy experience with the processes of opening new hotels and using their professional knowledge, the authors then amalgamated and grouped the

sub-categories by similarity and / or interdependency until 10 coherent categories were identified and agreed upon. For example, the points “last-minute design changes” and “delays in appointment of contractor” are both technical issues concerned with the design and construction of a hotel and so they were both grouped into this category.

Pareto Analysis⁹⁰ was then used to organize the 10 main categories and their frequency as a percentage in order of decreasing importance, as shown in **Figure 4**.

Figure 4: Pareto Analysis of main categories of issues



Source: Noordzy, 2009.

As can be seen, 38% of the points raised are grouped into the category “hotel design & construction”, which includes the concept, design, construction, engineering, licenses and fire life safety sub-categories. Generally, this category is concerned with technical issues relating to the design and construction of the hotel and obtaining the required occupancy licenses and permits needed for it to open.

Similarly, issues related to the hotel owner account for around 24% of the reported causes. As noted earlier, many hotel owners in Greater China only have a few properties and so their inexperience can be expected to lead to opening delays.

⁹⁰ Haughey, D. (2010). Pareto Analysis Step by Step. *ProjectSmart*. www.projectsmart.co.uk/pdf/pareto-analysis-step-by-step.pdf.

7. Root Cause Analysis & Causal Chain for New Hotel Opening Delays

Once the data had been collected and sorted, the authors used the root cause analysis methodology to determine the basic underlying reasons that cause the problems.⁹¹ This analysis method is further explained in **Appendix C**, which lists relevant terminology from A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Fifth Edition.⁹²

The first step in the root cause analysis was to review each sub-category and category, and determine which are direct causes and which are intermediate causes. The immediate consequence of a direct cause is that it delays the hotel opening. For this reason, direct causes have also been called “show stoppers”. For example, the absence of an operating license will absolutely prevent a hotel from opening. Intermediate causes will not produce a delay directly, but instead trigger other causes, which eventually will lead to a delay. For example, late on-boarding of the hotel management will not directly cause a delay, but the subsequent delay in the start of pre-opening activities, such as associate recruitment and training, may directly result in a hotel opening delay.

Working through the sets of problem categories and sub-categories identified from the survey responses, the authors identified four groups that directly lead to hotel opening delays, as shown in **Figure 5**. For example, delays in the procurement process result in late delivery of Fixtures, Furniture & Equipment (FF&E) and / or Hotel Operating Equipment & Supplies (HOES), which may result in the hotel not being operationally ready to welcome paying guests. Similarly, in case the hotel does not comply with contractual brand standards, hotel management companies possess the power to withhold authorization to open and operate a hotel under its brand. It is of interest to note that delays in fire life safety process and delays in concept, design, construction & hand-over are both direct causes, as well as intermediate causes, which can lead to delays in licenses & permits application process. For this reason, these have been grouped together.

⁹¹ Six Sigma. (2012). Determine the Root Cause: 5 Whys. www.isixsigma.com/tools-templates/cause-effect/determine-rootcause-5-whys/.

⁹² Project Management Institute (PMI®). (2013). A guide to the Project Management Body of Knowledge (PMBOK®) – Fifth Edition. *Library of PMI Global Standards – Foundational Standards*. www.pmi.org/PMBOK-Guide-and-Standards/StandardsLibrary-of-PMI-Global-Standards.aspx.

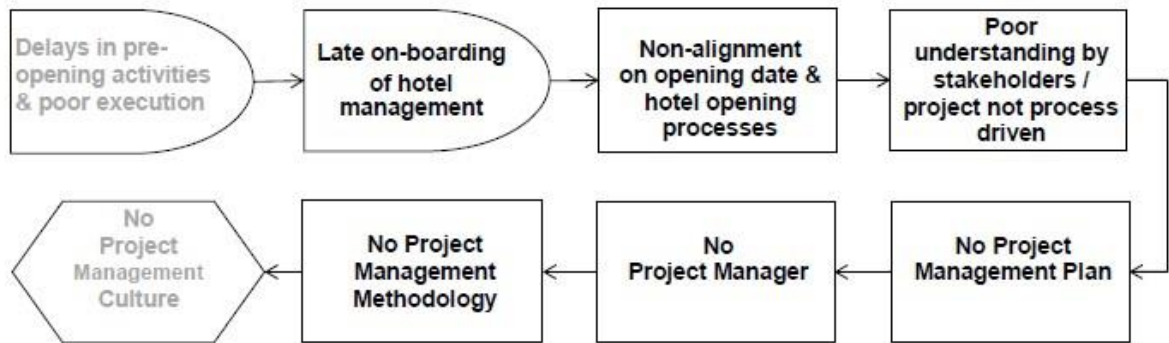
Figure 5: Direct Causes

Delays in procurement process.	Non-compliance with brand standards.	Delays in pre-opening activities & poor execution.	Delays in licenses & permits application process.
			Delays in fire life safety process.
			Delays in concept, design, construction & hand-over.

The second step in the root cause analysis was to scrutinize each direct and intermediate cause and examine why they would occur. For this purpose, the authors applied the 5 Whys technique to drill down and get to the root of the problem in each case. The question “why?” would be applied to a cause and this would result in another cause. Again, the question “why?” would be applied and the process would be repeated several times until the underlying reason was exposed. For example, the question “why do delays in preopening activities occur?” would lead to “late on-boarding of the hotel management”. Similarly, the question “why did the hotel management on-board late?” would lead to “non-alignment on opening date and hotel opening processes?” and so on.

The 5 Whys technique reveals 6 levels of intermediate causes and there are potentially multiple vectors, which connect the direct causes with the root causes. At the same time, there are numerous variations, as new hotel opening delays can result from either a single cause or multiple causes. Tracing back through the sequence of intermediate causes leads us to a set of root causes that underpin all the symptomatic problems the survey respondents have experienced as delays in hotel openings. For example, late onboarding of the management may lead to delays in preopening activities, as well as delays in procurement process. To illustrate the levels of intermediate causes, **Figure 6** provides one example of a potential vector, whereby “delays in pre-opening activities” is the direct cause and “no project management culture” is the root cause.

Figure 6: Intermediate Causes



Source: Noordzy, 2009.

The third step in the root cause analysis was to deduce the underlying reasons and formulate the root causes from the final set of intermediate causes. For example, “no project management methodology” and “inexperienced hotel management preopening teams” led us to conclude that these stem from “no project management culture”. Thus, the root cause analysis allowed the authors to deduce that there seem to be three root causes eventually leading to delays in new hotel openings in Greater China, as shown in **Figure 7**.

Figure 7: Root Causes

A. Project Investment Motivation	B. No Project Management Culture	C. Management Company Modus Operandi

The final step of the root cause analysis was to map out the sequence of events and vectors, as well as the relationships between the various direct, intermediate and root causes. The entire analysis has been consolidated into a Root Cause Analysis & Causal Chain for New Hotel Opening Delays.⁹³ The process also facilitates the determination as to which causes are physical, human or organizational causes.⁹⁴ The Root Cause Analysis & Causal Chain for New Hotel Opening Delays Diagram is complicated and difficult to read in printed format. An easily readable large scale version is available from the authors via this online [link](#).

The Root Cause Analysis & Causal Chain for New Hotel Opening Delays explains the vectors leading to the problem. At the top of the diagram we have the three main root causes found from the analysis. They are A. Project Investment Motivation, B. No Project Management Culture and C. Management Company Modus Operandi.

⁹³ Root Cause Analysis & Causal Chain for New Hotel Opening Delays (2009). Hotel Opening Processes. www.hotelopeningprocesses.com/articles_root_cause_analysis.html.

⁹⁴ Mind Tools. (2012). Root Cause Analysis, Tracing a problem to its origins. www.mindtools.com/pages/article/newTMC_80.htm.

According to our analysis, these three root causes are condensed from six levels of inter-related intermediate causes, as shown in the middle of the diagram.

These ultimately lead to four sets of direct (perceived) causes, which result in negative impact on the technical, operational and commercial readiness of the new hotel, and potentially hotel opening delays.

Based on the preceding analysis, which summarizes the Root Cause Analysis & Causal Chain Diagram for New Hotel Opening Delays, leads us to suggest the following:

- Four sets of perceived causes of new hotel opening delays, representing over 50% of the points raised, are actually direct causes and not root causes. These include:
 - Delays in concept, design, construction and hand-over.
 - Delays in pre-opening activities and poor execution.
 - Delays in procurement process.
 - Non-compliance with brand standards.
- The remaining 6 sets of perceived causes are actually intermediate causes and not root causes.
- The actual root causes of new hotel opening delays are:
 - Project investment motivation.
 - No project management culture.
 - Management company modus operandi.
- None of our identified root causes were mentioned by any of the respondents.
- Hotel opening delays can occur because of a single cause or multiple causes. The main vector would appear to start at “no project management culture”.

Ultimately, the root cause analysis will help determine whether or not the problem can be prevented and what can be done to mitigate the impact resulting from the problem in case it does occur.

We acknowledge that our root cause analysis is inherently subjective. There are many ways of breaking it down and some of the finer details of our analysis may be open to interpretation. Nonetheless, any particular way of analyzing can yield meaningful insights and we believe that it is very clear that one can trace many new hotel opening delays in Greater China back to poor project management. We are further convinced that a lack of understanding and adoption of project management concepts and approaches is a major stumbling block for the effective and efficient opening of new hotels in Greater China.

8. In Conclusion

The global development pipeline of the above mentioned leading international hotel management companies represents a combined total value of US\$86 billion worth of fixed asset projects, assuming an average budget of US\$15 million per new hotel opening.⁹⁵

Given the huge sums of capital involved in new hotel projects, the hotel industry has a vested interest to consider and act on the insights provided by the above analysis. The essential point to recognize is that what the hospitality industry *perceives* to be the causes of new hotel opening delays are really only symptoms of more deep seated systemic problems. The causal chain analysis clearly demonstrates that the origins of the problem lay in the absence of project management culture in the hospitality industry and the way hotel management companies operate. Again, either root cause was not identified by any of the respondents of the survey.

Therefore senior leadership has strategic, financial, ethical and fiduciary obligations to rethink the way it opens new hotels on large scale in Greater China. It must consider the negative impact and cost of not employing project management, and make strong efforts to catch up with other industries. While it might take several years to convert the hotel industry, project management would still have major positive impact, as large scale growth is forecast to continue at least until 2039. This article provides general information on a strategic level. Further research is needed to bring it down to an operational level.

Finally, a recent survey of over 1,500 respondents from 38 countries within 34 industries shows that *“97% agreed that project management is critical to business performance and organizational success, and 94% agreed that project management enables business growth.”*⁹⁶ Moving forward, senior leadership should prepare their organizations better for new hotel opening processes on large scale and effectively and efficiently implement project management in hotel management companies.

9. Our Recommendation

First of all, we need to understand that the opening of a hotel is in fact a project. A guide to the Project Management Body of Knowledge⁹⁷ defines a project as “a temporary endeavor undertaken to create a unique product, service, or result. The

⁹⁵ Global Development Pipeline. Please refer to the relevant Annual Reports in Appendix A.

⁹⁶ PricewaterhouseCoopers. (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

⁹⁷ Project Management Institute (PMI®). (2013). A guide to the Project Management Body of Knowledge (PMBOK®) – Fifth Edition. *Library of PMI Global Standards – Foundational Standards*.

temporary nature of projects indicates a definite beginning and end.” Projects are usually undertaken to bring about beneficial change or added value. The temporary nature of projects stands in sharp contrast to operations, which is repetitive, permanent or semi-permanent functional work to produce products or services. Like we do not ask a pilot to design an airplane, nor ask the engineer to fly it, we should not automatically assume that a hotel general manager is qualified to manage a new hotel opening project.

Standard project management methodology is very well suited to apply to hotel opening projects on a large scale. The processes involved in each hotel opening are virtually identical, which allows for project management plans and schedules to be standardized. And even if the levels of complexity and the length of the critical path increase for larger, higher tier new hotel projects, the processes involved remain fundamentally the same.

To open new hotels on a large scale effectively, the hotel industry needs to significantly upgrade its understanding of project management, methodology and techniques. The Project Management Institute, one of the world’s leading organizations for the project management profession, notes: “Project Management is a strategic competence: the ability to consistently predictably deliver projects for strategic goals.”⁹⁸

Furthermore, PricewaterhouseCoopers¹⁰⁸ states: “The ability to successfully execute these projects is what drives the realization of intended benefits and the achievement of business strategies. Organizations that execute projects successfully employ effective project management practices as a tool to drive change and achieve business objectives. Given the strategic impact that projects have on a business, organizations must follow effective project management processes that measure progress and risks and ensure the right projects can be delivered in alignment with organizational priorities.”

10. Hotel Industry Challenges

The hotel industry faces several major challenges in adopting project management methodologies for new hotel openings.

⁹⁸ Project Management Institute (PMI®). (2011). The world needs you to teach project management. www.pmiteach.org.¹⁰⁸
¹⁰⁸ PricewaterhouseCoopers (PwC). (2007). Insights and Trends: Current Programme and Project Management Practices – The second global survey on the current state of project management maturity in organizations across the world.

Firstly, general senior leadership has limited understanding of project management as a strategic competence.⁹⁹ One senior corporate hospitality executive when asked about project management stated: “We don’t do construction management...” But, just as general project management has learned from construction management, the hotel industry can learn to improve the execution of its hotel opening projects without becoming construction managers.

Secondly, the hotel industry has few project management champions. While various hotel management companies employ a specialized hotel opening function or utilize components of project management, none have embraced and institutionalized project management as a corporate culture. Currently virtually none of the international hospitality management companies in China employ certified project management professionals, let alone certified project management professionals with a hospitality background. This stands in sharp contrast to companies like IBM, which employs more than 10,000 certified project management professionals worldwide,¹⁰⁰ and Huawei (a major China-based international telecommunications company), which has over 2,000 certified project managers in China.¹⁰¹

Not surprisingly, the majority of executive search agencies specializing in hospitality placements generally do not know about the Project Management Institute, and very little about project management. By contrast, head hunters specializing in recruitment for engineering, construction, information technology, pharmaceuticals, oil drilling, etc. are commonly better informed about how project management contributes to the success of projects.

Thirdly, hotel management companies are traditionally conservative. The hotel industry has a track record of reluctance when it comes to embracing new technology and disciplines. In standard innovation adoption life cycle models they would be considered late majority adopters, or even laggards. One can draw this conclusion from the speed at which Revenue Management and Total Quality Management concepts were taken up by hotels - only well after these ideas had already been embraced in other industries.

⁹⁹ Thomas, J., Delisle, C. & Jugdev, K. (2001). Exploring the “Knowing-Doing” Gap in Project Management. [http://www.mba.athabasca.ca/titan/au cimwebsite.nsf/AllDoc/5978B1742FEFA54987256CDE006766A3/\\$File/KNOWINGDOINGGAP.PDF?OpenElement](http://www.mba.athabasca.ca/titan/au cimwebsite.nsf/AllDoc/5978B1742FEFA54987256CDE006766A3/$File/KNOWINGDOINGGAP.PDF?OpenElement).

¹⁰⁰ Peng, J. (2003). IBM Project Management Competency. *IBM Global Service*. www.ss.pku.edu.cn/project/ppt/21-1-IBMJanePeng-PM_Compency.pdf.

¹⁰¹ Huawei. (2007). Annual Report 2007. www.huawei.com/ucmf/groups/public/documents/annual_report/092582.pdf.

A fourth point is that most hotel management companies are set up as functional rather than matrix organizations. This often prevents effective project integration management, which is the implementation of processes required to ensure that all project components are coordinated. Consequently, opportunities for synergistic improvements to hotel opening projects are missed, and one functional area is often surprised by delays in other functional areas because they are unaware of them until a deadline is missed.

Fifthly, there is a general misunderstanding in the industry as to what causes new hotel opening project delays. As illustrated by the above recent survey, the vast majority of senior hotel executives seem to be convinced that delays are caused by problems in design and construction, fire life safety and licensing issues, delays in pre-opening activities and poor execution, delays in procurement and noncompliance with brand standards. However, the root cause analysis strongly suggests that “no project management culture” and “management company modus operandi” are the key causes.¹⁰² This hints that unsuccessful projects are more often linked to internal, rather than external, factors.

11. The Way Forward

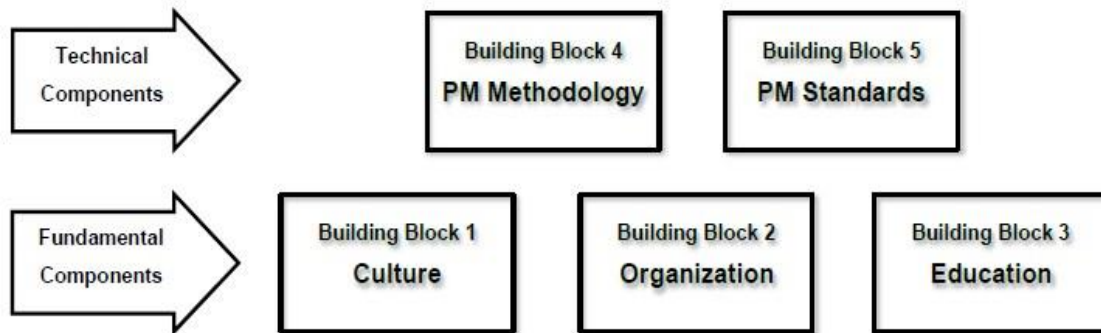
The hotel industry seems to not link project delays to the absence of a project management culture and the lack of an all-encompassing project management methodology. But the point is that the application of project management could, and would, often bring potential problems to light early enough to change the outcome. Further, the project management emphasis on planning would result in better understanding of the risks associated with the problems cited by the hotel management executives above and allow project managers to deal with these problems before they become acute.

Project management is a key tool for companies to achieve strategic objectives and is closely linked to project performance. Today’s organizations have been moving from operations and business as usual to project management as part of their competitive advantage strategy.¹⁰³ To be able to effectively and efficiently utilize project management, hotel management companies will need to make fundamental changes. To this purpose, we offer the following five building blocks to improve project performance.

¹⁰² Noordzy, G. (2009). Root Cause Analysis & Causal Chain for Hotel Opening Delays.

¹⁰³ PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

Figure 8: Five Building Blocks to effectively improve project performance.



Source: Noordzy, 2012.

These fundamental components outline how hotel management companies can prepare their organizations to effectively utilize project management (methodology and standards) to run new hotel opening projects. They reflect the commitments and fundamental changes senior management has to make to build a foundation for success before project management can be implemented in a hotel management company. The technical components outline how project management can be implemented in a hotel management company.

1. **Culture**

First of all, project management needs to be made part of the company culture and embedded in the corporate DNA. To do so successfully it will need to be driven from the very top down. It will take significant effort, resources, time, effective change management and extreme commitment to become a basic way of working. Companies like IBM, Nokia and Cisco did not achieve their current project management excellence overnight either.

The 2008 study conducted by the Project Management Institute among 60 companies underlines that project management delivers most value when supported by top leadership, and is reinforced by continuous training.¹⁰⁴ It also stresses that only commitment from the top can deliver project management aligned with organizational strategy.

2. **Organization**

The second one is for hotel management companies to review the structural aspects of project management. These include best practices such as involvement of senior

¹⁰⁴ Thomas, J. & Mullaly, M. (2008). Researching the Value of Project Management. www.pmi.org/KnowledgeCenter/Research-Completed-Research/~media/Members/Research/Researching%20the%20Value%20of%20PM.ashx.
 PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

and top management, having a project management office, certification of project managers and key personnel, resource ownership, and clearly defined roles and responsibilities. The most recent survey by PricewaterhouseCoopers reiterates that the way an organization is structured is fundamental to the outcome of their project management performance. If organizational alignment is underestimated or completely ignored by management, it can lead to lower project performance.

3. **Education**

Third is training and continuous development. Hotel management companies must go beyond perceived “solutions” such as critical paths and project management software, and upgrade the knowledge and skills of the dedicated hotel opening (support) teams. Another step in the right direction would be to train, to a lesser extent, pre-opening hotel general managers.¹⁰⁵ According to a 2007 study by PricewaterhouseCoopers “The existence of staff development programmes positively impacts performance” and “Staff development programmes have the greatest impact on project performance when they are used on a regular basis.”

4. **Project Management Methodology**

Fourth is implementation of standard project management methodologies. *The use of established project management methodologies increases success in the key performance indicators of quality, scope, budget, schedule and business benefits.*¹⁰⁶ There is no need to reinvent the wheel as there are various internationally accredited organizations supporting the project management profession, such as the Project Management Institute¹¹⁸ and the International Project Management Association.¹⁰⁷ These provide practitioners and organizations with standards, credentials that verify knowledge and experience, resources for professional development, networking and community. The most recent PricewaterhouseCoopers¹⁰⁸ study re-emphasizes that “the existence of well-defined repeatable PM processes – often grouped into a PM methodology – differentiates those companies that are able to consistently deliver high project results from those that do not”.

¹⁰⁵ Cornell University’s School of Civil & Environmental Engineering (eCornell). (2011). Project Leadership. www.ecornell.com/assets/PDFs/Enterprise/ProjectLeadership.pdf.

¹⁰⁶ PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management. ¹¹⁸ Project Management Institute (PMI®). (2012). www.pmi.org.

¹⁰⁷ International Project Management Association (IPMA®). (2011). www.ipma.ch.

¹⁰⁸ PricewaterhouseCoopers (PwC). (2012). Insights and Trends: Current Portfolio, Programme, and Project Management Practices – The third global survey on the current state of project management.

5. **Project Management Standards**

Fifth, well-defined project management standards will enable companies to consistently deliver superior project results. There are clearly defined Project Management Processes ¹⁰⁹ and competent company staff can successfully implement a project using the processes associated with initiating, planning, executing and closing a project while monitoring and controlling it by constantly checking the actions from a current group of processes with those of the preceding or forthcoming processes, to make a positive impact on the organization.

To take these steps and others will bring about the ability to consistently and predictably open new hotels to support company growth and expansion goals. The financial rewards of doing it correctly will be huge and the ability to do so will further help accelerate growth.

In terms of success, the earlier mentioned PricewaterhouseCoopers study ¹¹⁰ reports that 80% of higher-performing projects use a Certified Project Manager, whilst 50% of project failure can be traced to poor or no project management, including bad estimates and deadlines, scope changes and poor resource planning.

For these reasons alone it is a necessity to make project management a strategic competence, indispensable for business results.

As mentioned in the introduction, this is an exploratory study, in which we surface a range of issues. A second phase is planned to further investigate the frequency of opening delays and the frequency of issues, and potentially investigate whether the delays are optimal or an equilibrium phenomenon in Greater China.

The causal chain and root cause analyses served as foundation for the dissertation titled “Project Management of Hotel Opening Processes in Greater China”. ¹¹¹ It examines modern project management concepts to determine the feasibility of reorganizing a hotel management company and developing a new hotel opening “how to” guide.

¹⁰⁹ Project Management Institute (PMI®). (2013). A guide to the Project Management Body of Knowledge (PMBOK®) – Fifth Edition. *Library of PMI Global Standards – Foundational Standards*.

¹¹⁰ PricewaterhouseCoopers (PwC). (2007). Insights and Trends: Current Programme and Project Management Practices – The second global survey on the current state of project management maturity in organizations across the world.

¹¹¹ Noordzy, G. (2012). Project Management of Hotel Opening Processes in Greater China. *Dissertation in partial fulfillment of the requirements for the degree of Master of Business Administration in the School of Management, Leadership and Government, University of Saint Joseph, Macau S.A.R.* www.4hoteliers.com/features/article/7642.

About the Authors

Gert Noordzy is an international hotelier and PhD student. Gert graduated from Hanze College Hotel Management School, Zwolle, The Netherlands, and holds an M.B.A. from the University of Saint Joseph, Macau. He has over 20 years professional experience in Greater China and South East Asia and has been involved in opening over 30 new hotels.

Richard Whitfield is president of the East-West Institute for Advanced Studies. He has been a professor at several universities in South East Asia and Macau. Richard's undergraduate and doctoral degrees are in manufacturing from the University of Melbourne, Australia. One of the MBA classes he teaches is Process and Technology Management.

Gert and Richard first started researching hotel opening processes in 2008.



Copy rights: © 2012 Gert Noordzy. All rights reserved. Redistribution without prior written permission prohibited.

Disclaimer: The views, opinions, positions or strategies expressed by the authors are theirs alone and do not necessarily reflect the views, opinions, positions or strategies of other parties. They do not in any way constitute a list of referrals and / or recommendations nor shall the authors be legally liable in any way.

Appendix A: Annual Reports

- **Accor S.A.** (2010). 2009 Annual Report.
- **Accor S.A.** (2010). Investor Day Presentation 2010.
- **Best Western International, Inc.** (2010). 2008 Annual Report.
- **Best Western International, Inc.** (2008b.)
<http://ga.bestwestern.com/about-us/pressmedia/press-release-details.asp?NewsID=623>.
- **Carlson Hotels Worldwide (*The Rezidor Group*).** (2010). Annual Report 2009.
- **Carlson.** (2012). Carlson Rezidor Hotel Group signs three new hotels in China. <http://www.carlson.com/news-and-media/news-releases.do?article=5215252>.
- **Choice Hotels International.** (2010). Annual Review 2009.
- **Hilton Hotels Corporation.** (2007). Ian Carter: Hilton Projects 1'000 more hotels opened or signed in international markets by 2017. http://ehotelier.com/hospitalitynews/item.php?id=A10579_0_11_0_M.
- **Hilton Worldwide.** (2011). Hilton Worldwide at-a-glance. http://news.hiltonworldwide.com/assets/HWW/docs/brandFactSheets/BrandFacts1_HW.pdf.
- **Hyatt Hotels Corporation.** (2010). 2009 Annual Report.
- **InterContinental Hotels Group.** (2010). Annual Report and Financial Statements 2009.
- **IHG PLC.** (2012). Our strategy. www.ihgplc.com/index.asp?pageid=43.
- **Marriott International, Inc.** (2010). Annual Report on Form 10-K for the fiscal year ended December 31, 2009.
- **Marriott.** (2011). 2011 Annual Report. <http://investor.shareholder.com/mar/marriottAR11/pdf/MarriottVision2012.pdf>.
- **Starwood Hotels & Resorts.** (2010). 2010 Proxy Statement & 2009 Annual Report.
- **Wyndham Worldwide Corporation.** (2010). Annual Report on Form 10-K for the fiscal year ended December 31, 2009.

Appendix B: Full Survey Results

Construction, design & engineering related			
Delays in construction & hand-over / unrealistic timeframe	59	19%	7%
Delays in fire life safety process	33	11%	4%
Delays in designs & concepts / lack of specifications	29	9%	4%
Delays in / complexity of license application process	26	8%	3%
Poor quality construction / finishing / decoration & technical defects	22	7%	3%
(Last-minute) design changes	15	5%	2%
Weather conditions	14	4%	2%
Construction process of fire alarm system	14	4%	2%
Indecision over concepts	13	4%	2%
Delays in appointment of contractor	13	4%	2%
Delays of construction & installation of signage	13	4%	2%
Construction changes without license	13	4%	2%
Contractors making false promises	11	4%	1%
Kitchen working flow does not meet local regulations	11	4%	1%
Fit-out proceeds without approval of mock-up room	11	4%	1%
Lack of detailed specifications	8	3%	1%
Non-imposing of penalty in contractor contracts	7	2%	1%
Total	312	100%	38%

Owning company related			
Poor financial planning, funding & budgeting / poor cash flow management / cost overruns	38	19%	5%
Aggressive / unrealistic opening target	36	18%	4%
Owner interference	22	11%	3%
Owner late / non-payment of contractors & vendors	19	10%	2%
Lack of qualified consultants / experts, quantity / quality surveyor	15	8%	2%
Owner lack of understanding of construction	15	8%	2%
Lack of good relationship with local government & bureaucracy	13	7%	2%
Multi ownership / conflict of interest	12	6%	1%
Traditional structure of Chinese companies / first time hotel owner	6	3%	1%
Owner awarding contracts to friends	6	3%	1%
Indecision over use of land / clearing land & demolition	5	3%	1%
Underestimation of project complexity & expenses	4	2%	0%
Delays due to feng shui / holidays	4	2%	0%
Total	195	100%	24%

Hotel management company related			
Lack of communication / understanding / trust between management & owning company.	29	35%	4%
MC signed too late in the construction process / last minute projects	22	27%	3%
Corporate developer unclear to owner on brand standards	11	13%	2%
Lack of pre-opening resources / poor corporate support	16	20%	1%
Personality mismatch of GM (operations or opening type)	4	5%	0%
Total	82	100%	10%

Pre-opening activities, operational readiness related			
Delays in pre-opening activity / operational readiness	46	74%	6%
Poor execution of pre-opening activities	16	26%	2%
Total	62	100%	8%

Procurement process related			
Delays in procurement process	35	100	4%
Total	35	100%	4%

Project management related			
Lack of project management / project manager / poor planning	25	71%	3%
Lack of efficiency & effectiveness	5	14%	1%
Lack of communication & coordination	3	9%	0%
Management company lack of process management understanding	2	6%	0%
Total	35	100%	4%

Hong Kong, Macau, Taiwan only			
Labor / employee supply shortage	13	39%	2%
Customs / import issues	13	39%	2%
Work permits / visas for imported labor	7	21%	1%
Total	33	100%	4%

Unavoidable / unpredictable			
Force majeure: natural disasters / economic downturn	16	52%	2%
No project feasibility study	15	48%	2%
Total	31	100%	4%

Brand standards related			
Misinterpretation / non-compliance with brand standards	25	100%	3%
Total	25	100%	3%

Others			
Different opinion between key stakeholders / conflicts of interest	6	40%	1%
Community / environmental concerns	5	33%	1%
Corruption	4	27%	0%
Total	15	100%	2%

TOTAL	825		100%
--------------	------------	--	-------------

Source: Noordzy, 2009

Appendix C: Terminology

- **Causal chain.** The sequence of events leading up to some final effect, where each member of the sequence causes its succeeding member to come out.
- **Direct cause.** Action, event, flaw or force that is the immediate, initiating, or primary agent which leads to, or allows to happen, an action, event or state. *Effects have causes. The causes may be natural or man-made, active or passive, initiating or permitting, obvious or hidden. Causes that lead immediately to the effect are often called direct, proximate or surface causes.*
- **Impact.** Consequences of project activities which are directly related to project goals. *These can be far downstream from the project activities.*
- **Input [Process Input].** Any item, whether internal or external to the project that is required by a process before that process proceeds. May be an output from a predecessor process.
- **Intermediate cause.** The direct causes often result from another set of causes, which would be called intermediate causes, and these may be the result of still other causes.
- **Multiple causes philosophy.** The multiple causes philosophy is based on the belief that a root cause can exist for each of the contributing factors that were necessary for a resulting outcome. By preventing any of those necessary causes, an undesired outcome can be prevented. *The result of this philosophy is a branching model that attempts to incorporate all the identified ways that the outcome could be prevented. The inclusive model provides a variety of corrective actions that can potentially break the causal chain.*
- **Root cause.** Agent, failure or fault, from which a chain of effects of failures originates. *A root cause is an initiating cause of a causal chain, which leads to an outcome or effect of interest. Commonly, root cause is used to describe the depth of the causal chain, where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome. There are differences in viewpoint regarding the possibility of an outcome having more than one root cause.*
- **Root cause analysis (RCA).** A procedure for ascertaining and “analyzing” the causes of (operations) problems in an effort to determine what can be done to solve or prevent them. When a chain of cause and effect is followed from a known end-state back to an origin or starting point, root causes are found. *The usual purpose of attempting to find root causes is to solve a problem that has actually occurred, or to prevent a less serious problem from escalating to an unacceptable level. The basic concept is that solving a problem by addressing the root cause(s) is ultimately more effective than merely addressing symptoms or direct causes.*
- **Single cause philosophy.** The single cause philosophy is based on the belief that there is a single cause for any outcome that, if prevented, would prevent the outcome itself. In this context, the root cause is the cause which dominates over all other contributing factors. *This viewpoint results in the identification of a single root cause that provides a clear direction for preventing an undesired outcome. (The subject criteria used for selection of the root cause from among the contributing factors has been criticized as being arbitrary and inconsistent.)*
- **Outcome.** A first level of consequences, which flow from products and services which are outputs of the project. May depend on inputs, actions and decisions which are not directly under the control of the project team.
- **Output [Process Output].** A product, result, or service generated by a process. May be an input to a successor process.