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Communications of the Association for Information Systems



The Hong Kong Jockey Club: Transforming Customer Experience Through Information Technology

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Abstract:

For over 125 years, the Hong Kong Jockey Club ("the Club") had been Hong Kong's sole organizer of horseraces. Although it had made horserace betting a popular game in Hong Kong, its customers were aging. To change this, the Club launched a project to make the game more enjoyable for its customers of the technology-savvy generation. Based on market research and the latest technological developments, the project team set out to transform the customers' journey from studying horses to placing a bet. It wanted to develop large multi-touch tables with an integrated smartcard payment system. But this meant major technical and organizational hurdles along the way. After two years the Club launched the world's largest betting entertainment tables. This teaching case describes the Club's project from defining the problem to evaluating its innovation, emphasizing the importance and difficulties of customer-oriented design.

Keywords: information technology, customer experience, innovation, entertainment industry, Hong Kong, teaching case

Editor's Note: A teaching note for this case can be obtained from spzwanenburg@gmail.com. Only active faculty who are currently listed in the AIS Faculty Directory are eligible to receive the teaching note.

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I. INTRODUCTION

On a race evening in Spring of 2013, Scarlett Leung, Director of Corporate Business Planning and Programme Management at the Hong Kong Jockey Club ("the Club"), saw old and new customers entering Adrenaline, the Club's bar and lounge. Adrenaline offered them a place to oversee the Happy Valley racetrack in a relaxed atmosphere and to learn about horserace betting using the *ibu* tables, the world's largest betting entertainment tables.¹ Leung saw how the Club's racing ambassadors explained to customers how to use these large multi-touch devices for studying race contestants and placing bets.

One year earlier, Leung had celebrated the launch of these tables in Adrenaline's *ibu* Experience Zone. It was the culmination of years of work involving international partners and eighty of the Club's staff members. With the innovation, the Club aimed to make horseracing easier to learn for its technology-savvy customers who were new to the game. Winfried Engelbrecht-Bresges, CEO of the Club, saw addressing their needs and expectations as essential to the long-term sustainability of horseracing in Hong Kong amid intensifying competition.

Leung knew that the Club had to keep innovating to sustain its strategic position. Illegal bookmakers were offering attractive betting odds online, and the casino industry in Macau, not far from Hong Kong, was growing fast. The industry's revenue had grown more than twelvefold in the last ten years, thanks in part to more and more visitors from Hong Kong [Yu, 2013].

To improve the outlook of the Club's core business, Leung wondered what other innovations would help the Club maintain its competitive advantage.

II. THE HONG KONG JOCKEY CLUB

Today we are the world's leading horseracing operator, and the biggest football-betting bookmaker [Winfried Engelbrecht-Bresges, CEO of the Hong Kong Jockey Club].

For over 125 years, the Club had been an integral part of the territories' public life. It made horseracing Hong Kong's most favorite spectator sport. Twice a week the Club drew crowds to its horse races at its urban racetrack in Happy Valley (see Figure 1) or its spacious track in Sha Tin. In fiscal 2012, its on-course customer base had grown to 2 million visitors [Hong Kong Jockey Club, 2012a]. Of these, 23,000 were members of the Club and enjoyed special privileges at the racecourses and in the Clubhouses.



Figure 1. The Club's Racecourse at Happy Valley
Source: Hong Kong Jockey Club, 2012b

¹ The term *ibu* stood for "Interactive Best for You."

During the eighty-three race meetings that year, the Club's customers bet in total HK\$86 billion on horses, to win back in total HK\$72 billion.² They also tried their luck with the Club's newer offerings, football betting and lotteries, wagering HK\$47 billion and HK\$8 billion respectively [Hong Kong Jockey Club, 2012b]. With the money earned, the Club paid the salaries of its 26,000 full-time and part-time staff. The surplus of the Club flowed back to the larger public through tax and charities. In 2012 it paid HK\$16 billion in tax, equivalent to 7 percent of Hong Kong's total, making it the largest single taxpayer. Its donations to charities of HK\$2 billion made it one of the world's fifteen most charitable organizations. See Appendix A for a five-year financial summary.

The not-for-profit organization had to compete like a company. Although the Club held Hong Kong's only licenses to provide betting and lottery entertainment, its market had increasingly become competitive in recent years. Its biggest competitors were illegal and offshore bookmakers. Various bookmakers, for example, offered attractive betting odds online as they operated with low cost and paid no tax. The Club collaborated with the government to clamp down on these bookies, but realized it needed to compete against them as well. Another challenge facing the Club was the casino industry in Macau, located just a one-hour ferry ride away.³ As its gambling revenues had grown rapidly to MOP\$304 billion in 2012, Macau had become the world's largest casino industry, attracting many gaming dollars from the younger adults from Hong Kong [Wan, 2012; Yu, 2013].⁴

Strategy and Investments

Aware of the ever-growing competition, the Club had devised a strategy to meet the expectations of its customers and other stakeholders. It strived to become more innovative, more agile, and more customer-centric.

The Club tried to cultivate innovation by dedicating various professionals to keeping an eye on what was happening in the world of technology, and matching what they learned to the goals of the Club. It also encouraged people to develop ideas in workshops and through wikis, and test them with early prototypes.

Building prototypes early also helped the Club become more agile. According to Leung, quickly progressing good ideas to product launches was crucial for the Club to stay ahead or at least not fall behind the competition. The Club also reduced time-to-market by setting up centers in mainland China, where local talent easily could be hired on a project basis.

Most important, the Club strived to become more customer-centric. The Club believed it could address the needs and expectations of its customers better by segmenting the market. It invested strategically to improve the horserace betting experiences of its different groups of customers. Engelbrecht-Bresges said:

It is very clear for us that investment is the key—that we have to invest in the future of the industry and safeguard the future of our contributions to the Hong Kong community [Hong Kong Jockey Club, 2012a].

Better serving its various customer segments constituted a major part of the Club's racecourse master plan. The plan aimed to improve its racecourses to "set world-leading standards and attract new generations to the incomparable thrill of horse racing" [Hong Kong Jockey Club, 2012b]. After investing HK\$700 million in restyling various venues from 2008 to 2011, it was investing HK\$3.6 billion from 2011 to 2014 to address the specific needs of customer segments.

For its growing number of visitors from mainland China, for example, the Club created zones with live commentary in Mandarin Chinese. For its regular patrons with an interest in technology, it opened The Gallery, a sophisticated racing-themed restaurant at its Happy Valley racecourse. The Gallery invited guests not just to eat and see the horses sprint, but also to experience the horseracing game digitally, using several apps on one of its hundreds of iPads on loan.

The Club's most striking investment, however, was aimed at improving the experience of a different segment: the younger technology-savvy customers. The quickly evolving digital age had changed their lifestyles, which no longer matched the traditional horseracing experience. The Club wanted to achieve a breakthrough by redesigning the experience of leisure customers from scratch using the latest technology. It developed the "ibu Experience Zone," which housed the world's largest betting entertainment tables.

² The Hong Kong dollar was pegged to the U.S. dollar, floating between 7.75 and 7.85 per U.S. dollar.

³ Hong Kong's Highway Department expected traveling time between Hong Kong and Macau would be reduced to forty minutes by the end of 2016, with the completion of the Hong Kong–Zhuhai–Macau Bridge.

⁴ The Macanese pataca was pegged to the Hong Kong dollar at about 1 to 1.

III. PROBLEM

In 2009, the Club identified a problem that eventually led to building the *ibu* Experience Zone. After some decline in the Club's horserace betting revenue, the Club realized that its racing customers were aging. The younger fans said that the sport had not kept up to date with their modern technology-savvy lifestyle. In Hong Kong, adults under forty were the least likely to bet on horses compared to older residents (see Appendix B). Something needed to be done.

Leung, as leader of various departments and being responsible for corporate business planning, initiated a special cross-functional project. She said:

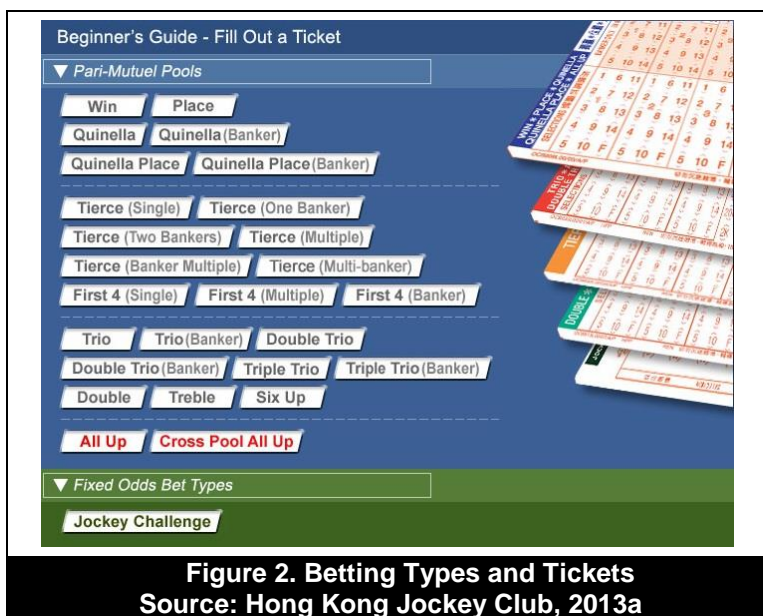
When we look at the racing as a product, we have a great product, but how can we make it more interesting and relevant to the lifestyle of today's technically savvy customers? We started with that question. Then we went into a series of market research projects to understand the key variables of racing as an entertainment for the technically savvy generation.

Together with the director of IT, Leung kicked off the project by approaching current and potential leisure customers. Asking what would make them more interested in the horseracing sport, the Club obtained valuable insights. The Club learned that respondents perceived racing as an entertainment for the mature and seasoned bettors. The Club was eager to change this perception.

It also found that respondents could not easily understand horse racing. An important reason, they explained, was the complexity of the racing information. At its racecourses, the Club presented a vast array of such information to all its visitors, using fact sheets, journals, and electronic screens. With at least eight races per meeting, up to fourteen contestants per race, around twenty betting parameters per contestant, and thirteen bet types, the amount of information overwhelmed many newcomers (see Figure 2). They found it hard to learn and enjoy even when more experienced friends brought them to the racetrack. Asking staff members for help was not seen as a friendly or intuitive option: at the public stands, most staff members were busy answering queries and placing bets from the larger, more experienced crowd. Leung pointed out:

Horse racing is a game of mental challenge and traditionally has been very difficult to understand. It's difficult for people to navigate through information about horses to come to an educated guess, a betting strategy, to bet on the right horse. They feel overwhelmed. It's difficult to understand and find ways to bet, and lacking insight, therefore, difficult to win. Often people feel they need to study hard before making a betting decision. So horse racing is not leisure entertainment: it's a serious activity.

This problem did not affect horse racing only in Hong Kong. Across the world, racing operators struggled with an image of horse racing as an entertainment for the older generation; initial interest from younger adults often faded after facing the complexity of the game. Racing organizations attempted to turn the tide with different approaches. The Jockey Club, an American horse registry, set up a multimedia branding platform, called "America's Best Racing," and organized a bus tour with young racing ambassadors [The Jockey Club, 2012]. Its British counterpart, also called The Jockey Club, asked the public for help by establishing a contest. Designers were invited to think about improving the understanding and enjoyment of spectators through the use of digital technologies, and some of their ideas would be implemented in prototypes [Technology Strategy Board, 2013]. In Hong Kong, the Club had identified the problem and decided to study the target segment to find clues about how to best solve it.



The Segment

Through a series of research projects, the Club identified the size of the segment and learned about various aspects of the lifestyle of the technology-savvy generation. This generation was found to especially appreciate the fun and social aspect of entertainment. Their prime example of entertainment was gathering with friends and enjoying dinner. This was consistent with patterns in attendance at the Club's Beer Garden, an open area at the public stand at the Happy Valley racecourse. When themed parties were organized, people under forty made up 60 percent of total visitors, up from the usual 40 percent, indicating that many young adults came to the racecourse for a fun and social time [Hong Kong Jockey Club, 2012b].

The Club learned another thing about the lifestyle of these young adults: how they used technology and information was different from the Club's more mature and seasoned customers. They used technology for a wider range of activities, including socializing and shopping. They also interacted with content in a different way. For example, they wanted information on demand rather than having it pushed to them and preferred quantitative information in visuals rather than text and tables. Learning these differences across customer groups would later prove helpful in addressing their needs.

Engelbrecht-Bresges summed up the philosophy of the project [Hong Kong Jockey Club, 2012c]:

We have taken the challenge of horse racing being wrongly perceived as only for mature customers. We listened closely to our customers, and researched extensively into their needs and wants. We found that younger customers face significant hurdles when taking the first steps into the analysis needed to play this intriguing mind game. They prefer something intuitive and interactive which suits their technology savvy lifestyle. They also enjoy more sociable environments in which to connect with each other.

IV. PRODUCT

An understanding of the problem and the target segment was useful for developing a wide range of design decisions about the table, the customer journey, and the system architecture.

The Table

The project team led by Leung formulated a strategy to revolutionize the horserace betting experience of its leisure customers. It wanted to use the latest digital technology to transform their experience into an intuitive and entertaining engagement. Part of this plan was to use a large multi-touch table for horserace betting.

By 2009, multi-touch technology had been mostly applied to relatively small screens in smartphones or PDAs. Apple had not yet released the iPad, and using multi-touch tables was in its infancy, with only small tables for two users available on the market. The idea of a larger multi-touch table for up to six or eight users would imply more technical hurdles and a more complex project. This gave rise to many discussions about the form, as not everyone was easily convinced that going for a large multi-touch table was the right direction.

Ultimately a large multi-touch table was deemed to be the type of technology that lent itself best to the project. The Club wanted the system to serve the socially interested customers, ideally creating a crowd effect similar to a bar island where people gather in groups to socialize and have fun. Using common electronic devices, such as PCs, mobile phones, and portable computers, was not an option because customers could then engage in the game only by themselves. Small multi-touch tables would not easily serve groups of more than two guests. But a large table would let guests in such groups easily gather around the table to chat, play the game, and have fun. The team envisioned the table as a centerpiece in an area for an engaging and interactive betting experience. In this area, TV screens surrounding the table could provide customers with betting information before turning to the live race, and racing ambassadors could help the new customers learn the game. In the right context, the tables could contribute to an ambiance of social entertainment. Ideally, customers would gather in the area and easily play the game while casually enjoying a drink and the company of their friends.

With the target customer experience in mind, developing a large multi-touch table was thought to be worth the extra effort. Furthermore, the team expected that a design of a large multi-touch table could later be reused in other products aimed at the leisure customer, as part of the strategy. The table later became known as the *ibu* table, and its area as the *ibu* Experience Zone.

The Customer Journey

The key innovation is in the customer experience enabled by creating brand new interface concepts supported by the cutting-edge user interface design: an end-to-end journey from studying a race, picking a

horse, to choosing a bet and making the transaction [Sunny Lee, Executive Director of IT at the Hong Kong Jockey Club].

One of the most important goals throughout the development of the table was making horse racing easy to follow. The management of the project aimed to have customers play more confidently after trying no more than seven times. The team tried to achieve this target by simplifying the stages of the game: studying the contestants, deciding on a bet, and placing the bet.

To let inexperienced customers study the contestants in an intuitive way, Leung's team tried to simplify the display of racing information. Traditionally, the Club offered its customers a wide range of information in large tables printed in brochures and shown on TV screens. To decide on a bet, regular patrons could use in total over twenty parameters, for instance, about a horse's past performance, the jockey and the trainer. The team wanted to display the parameters in different groups using visuals in order to prevent leisure customers from feeling overwhelmed. After extensive consultation with horseracing experts, four groups (or "anchors") were defined: the past performance of the horse, the trainer and the jockey, the current fitness of the horse, and an "Extra" group.⁵ Leung's team also simplified the interface by displaying betting information about the next race only, thus reducing the amount of presented information by a factor of eight compared to betting brochures and fact sheets, which presented data for all races of a meeting. The team expected that applying these simplifications to the *ibu* table, the surrounding TVs, and racing materials used in the venue would make races easier to study.

Leung wanted to make it easier to come to a bet decision by reducing the available bet types. Using existing channels, customers could choose any of thirteen types, a number Leung found too high for a simple introduction to horse racing. But drastically reducing this number was not easy, as betting experts at the Club argued that offering only a few betting types would harm the game that the customers liked so much. Nevertheless, the project team decided to offer only five betting types that were most popular among the target segment. The simplest ones were "Win," which paid off when the selected horse finished first, and "Place," which paid off when it finished in the top three.

Leung's team aimed to provide technology-savvy customers with a straightforward transition between deciding on a bet and placing it. At the public stands, new and leisure customers who had come to a bet decision had to find a bet form, fill it out, queue for a teller, and exchange it with cash for a bet receipt. To simplify this process, the project team wanted to remove all unnecessary steps and delays. After studying the options, Leung's team decided to integrate a RFID-enabled smartcard payment system in the table. This system would allow customers to place a bet simply by tapping a card, instead of hassling with forms, cash, and receipts.

With these simplifications, the project team was convinced that customers would more easily engage in the game of horserace betting. Later Leung would invite customers to test various specific designs, and an international partner to realize the final application (see Figure 3).



Figure 3. Top View of the User Interface
Source: Possible Worldwide, 2012

⁵ During some special meetings or at specific races, customers might have wanted to consider other specific parameters, such as track bias or draw number. These were included in the "Extra" group.

The System Architecture

Because the table needed to be simple on the outside, the Club could not avoid complexity on the inside. The goal was to deliver a seamless and intuitive user experience. This implied having a real-time information display, multi-touch interaction, and betting transactions through smartcards, requiring the integration of data from many existing information systems, as well as technologies that were totally new to the Club. Hence, the focus on the experience of the target segment made the technical task huge and multifaceted.

The integration was done in two phases. Early in the process, the IT division already started developing a general platform for integration with back-end systems; later it used this to build the system of the table.

A General Platform

The first phase of platform development was deemed necessary, as the Club's information systems landscape had been characterized by many legacy systems and monolithic applications. Integration of these applications was expensive and time-consuming and often did not result in reusable solutions. The Club wanted to become more agile, coming up with products and services that addressed customers' changing needs. Therefore, the Club started developing a platform with a service-oriented architecture in 2009. This platform was a collection of forty software components called "services," spanning twenty-five business entities. The division designed each service to execute a specific real-time task involving communication of structured data with the back-end systems. An example of a service is the placement of a bet. These services could be integrated easily later in composite applications.

It was particularly difficult to define the correct granularity of these services, as the details of the future applications of the services were not yet available at the time. Experts who oversaw the development had to guide programmers with design principles. In view of the volume of data throughout a race meeting, another difficulty to overcome was the testing of services. It was crucial to achieve high quality, but this was expensive and time-consuming, because services were large in number and had multiple versions. To ensure that services could easily be integrated into future applications, adequate reservations in the project budget and schedule had to be made.

The services were coded in a uniform way, accessible through the Club's central hub, so that the IT division could easily integrate them into composite applications, such as the *ibu* table or other future applications. This would drastically reduce the risk and time-to-market of such projects after this initial platform was developed.

ibu-Specific Architecture

Although the Club had a platform in place that eased integration of back-end functionality, the Club still faced a complex technical operation in developing the *ibu* specifically. Because the *ibu* was designed with technologies that were new to the Club, such as a multi-touch interface and contactless smartcard technology, the Club needed to conduct various studies and collaborate with partners.

The Club undertook two large technical studies. One study aimed to evaluate the technology for smartcards and associated risks and took around four months. As these smartcards would store monetary value, security was a priority. Another study aimed to achieve a proof of concept of a multi-touch betting table. Between September 2009 and January 2010, researchers tested the feasibility through development of a prototype in the Club's secret lab.

After completing the prototype, the Club asked for help from third parties to realize the *ibu*'s hardware and software, by releasing requests for proposals internationally. Because such vendors had no specific knowledge of horse racing, the Club chose an organization based on its expertise in designing and visualizing intuitive customer journeys. It selected a proposal from Possible Worldwide ("PWW"), in New York, forming the Club's most important partnership in the *ibu* project.⁶ PWW was responsible for a wide range of components, including graphic PCs, projectors, peripheral PCs, smartcard readers, and printers, as well as the table application and software to integrate the table with the Club's systems. See Figure 4 for a depiction of the table's final system architecture. The parts of the design that were too specific to horse racing were led by the Club. Intense and frequent communication between the partners was especially important for the timely development of the project.

In summary, the investment in the *ibu* technology was large but necessary. It was the first step in creating a horserace betting experience that matched the new lifestyle of the technology-savvy customers. Witnessing widespread adoption of various digital technologies offering intuitive and entertaining experiences, Leung firmly believed that the new technology-oriented lifestyle was here to stay. To accommodate these customers, the Club needed to smooth the customers' infotainment and betting journey. But allowing for intuitive and seamless racing

⁶ Possible Worldwide was a global interactive marketing agency and the digital arm of WPP.

infotainment and betting experiences from start to end—either using *ibu* or future applications—meant investing heavily in its technological capabilities.

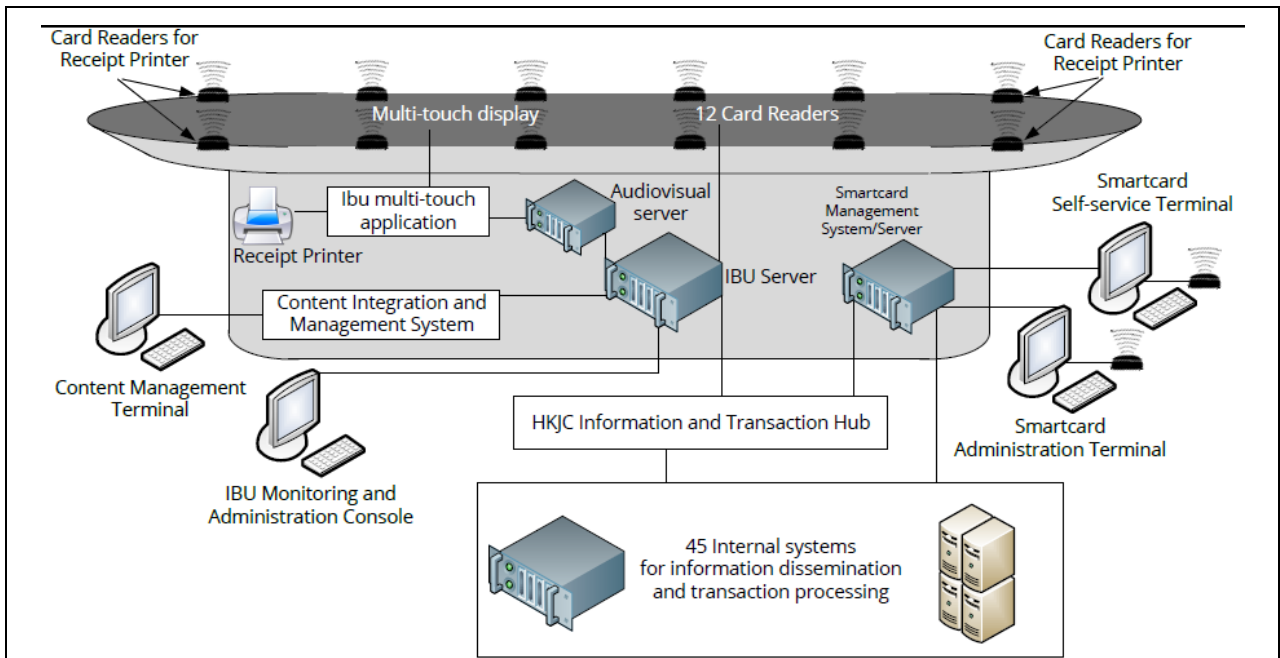


Figure 4. The *ibu* System Architecture

V. PROJECT

The *ibu* project was completed in twenty-four months. The project, from the problem definition to the opening of the Experience Zone, was divided into four stages: conceptual development, prototyping, development by the partner and the in-house team, and installing the technology in the venue. Based on the problem definition and an understanding of the target customers, a small project team brainstormed on ways to deliver the customer experience, resulting in basic design decisions.

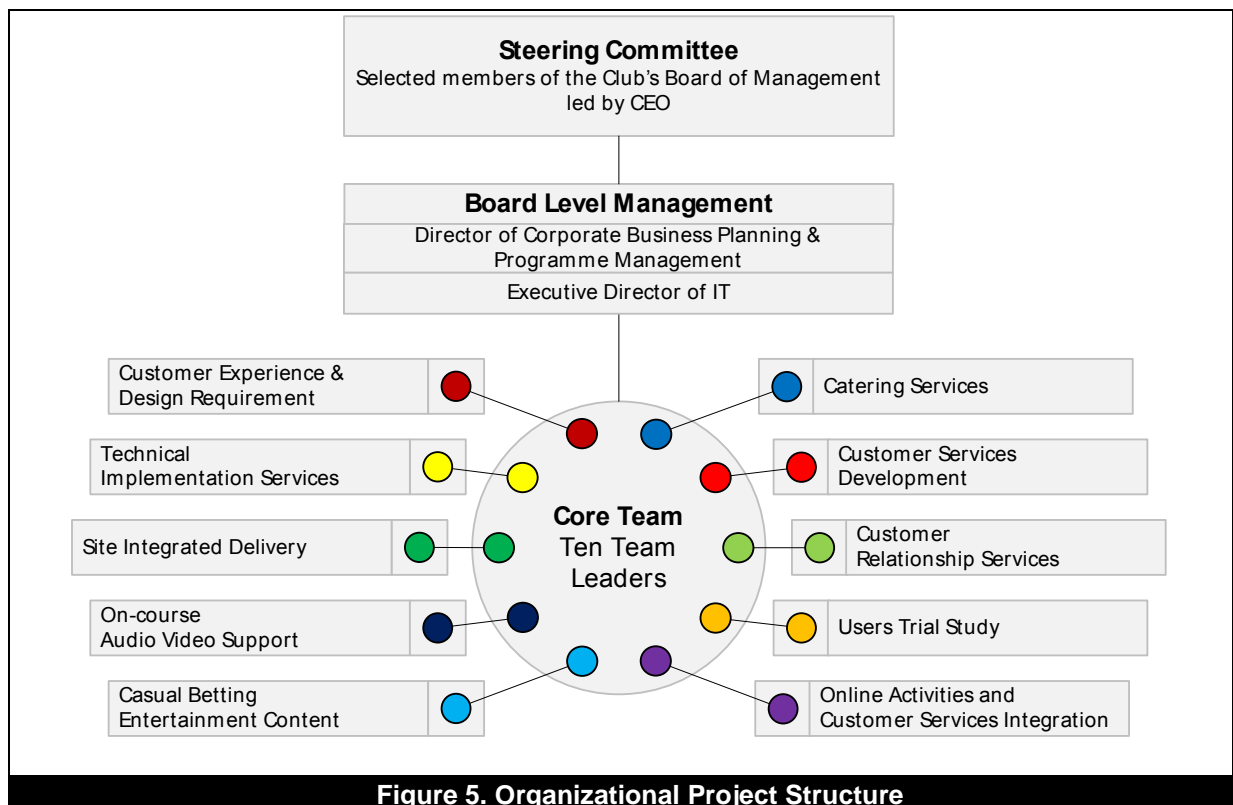


Figure 5. Organizational Project Structure

After the conceptual development stage, a larger number of people became involved. They researched multi-touch and smartcard technology from late 2009 to early 2010 and built a prototype in the Club's secret lab. Prototyping proved very useful for translating abstract ideas into many details. In collaboration with the IT director, Leung grouped these details into ten parallel work streams, and set up ten teams dedicated to one stream each (see Figure 5). These teams consisted of eighty experts from over twenty departments of the Club.

In the third phase, the IT team collaborated with PWW to design the user interface, program the application, and source the hardware. To minimize cost and time-to-market, vendors and development teams around the world contributed to the realization of the *ibu*, including teams in Hong Kong, New York City, Costa Rica, Singapore, and China. To coordinate this international endeavor, the project managers relied heavily on teleconferences and instant messaging. Frequent and open communication helped to address arising issues quickly and effectively.

In the last phase, the *ibu* was installed and tested in Adrenaline, the Club's bar and lounge at its Happy Valley racecourse (see Figure 6). The Club made sure that in a range of scenarios both hardware and software worked properly and the staff was well-prepared to respond to questions. The team tested the technical system during thirty-one race meetings between October 2011 and April 2012. Customers were involved also in testing the *ibu*. Moreover, the IT team paved the way for future technical developments by writing guidelines on how to combine the modular services in new applications.

The *ibu* project was a major management undertaking. The project managers coordinated more than eighty staff members from over twenty functional teams as well as international partners across different geographical locations. See Appendix C for an organizational chart of the Club.



Figure 6. Two *ibu* Tables During Installation
Source: Possible Worldwide, 2012

Work Climate

Teamwork played an important role in the development of the ibu, with over 20 functional departments involved in this customer centric experience and high-tech creation. The complexity of the project was immense [Hong Kong Jockey Club, 2012d].

The main difficulty in the project management was to convince people it could be done. In the early stages, many people could not envisage where this large cross-functional project was going. In various ways, the project managers tried to create optimal conditions to change that, cultivating an open, creative, strategy-based, and disciplined work climate.

First, they tried to have ideas recorded in minutes of meetings and on online collaboration platforms. They hoped that making knowledge explicit and shared would have a self-reinforcing effect.

Second, they encouraged using as much visualization as possible. For virtually any aspect of the table, physical or abstract, employees used formal and informal techniques to create sketches, diagrams, and even a prototype. Project managers called for the help of an external business consultancy to map out operational processes. These visualizations eased communication and learning so that employees could better see how they could contribute to the desired result.

Third, the management helped the teams make the right decisions by constantly referring to the Club's strategy. To decide between various action or design alternatives, the alternatives that were aligned with the Club's strategy ("On-Strategy") were always preferred over those that were not ("Off-Strategy").

Fourth, the project managers divided the entire roadmap into detailed work streams with many milestones along the way. Team members were dedicated to a specific stream, so they could focus on their work without worrying about the bigger picture. Having many deadlines to solve specific problems forced employees to share ideas.

Fifth, and last, management personnel were actively involved with solving the most serious problems. When teams feared they would not meet their deadlines, they could seek help from the board-level management. Although the project managers were at times constantly addressing detailed issues, this practice prevented problems from escalating and delaying the project and also gave the teams a sense of pride.

This work climate helped to launch the *ibu* only twenty-four months after its conception.

VI. RESULTS

The Club now delivers a revolutionary experience of horse racing that is digitally interactive, intuitively simple, graphically attractive and [that] matches the lifestyle of the younger generation [Hong Kong Jockey Club, 2012c].

After the launch in May 2012, the Club saw how customers started to experience the *ibu* in Adrenaline. The Club's bar and lounge offered them a casual and cheerful environment, in which they could socialize with friends, have a drink, enjoy the buffet food, and listen to live music. On race evenings, guests of Adrenaline were invited to the *ibu* Experience Zone to learn about horse racing and place a bet while enjoying the company of their friends. After visitors had received a card at the entrance, the Club's *ibu* racing ambassadors introduced the *ibu* table (see Figure 7). In less than one minute, they taught customers the basics of horse racing and introduced them to the betting mechanism. They also assisted with any questions that followed, much like flight stewards helping passengers who pressed a button for help. In total eight standing people could use a table simultaneously, four on each long side of the 10-foot-long table.



Figure 7. New *ibu* Users Getting Help from a Racing Ambassador Hong Kong Jockey Club, 2013b

After users activated the table using a smartcard, they could browse information about the twelve contestants in the next race. To identify a promising contestant, they could compare the odds, which changed in real time as bettors were placing their bets. Studying a jockey could give a clue about his confidence, while inspecting a horse's track record or its current condition with a video shot could provide another hint. This information was displayed under four tabs, according to the anchors defined earlier. The window contained text, pictures, and videos, and users could move this window to their friends who were using the table at another station by simply dragging it.

To place a bet, users could intuitively use their finger to drag the icon of a horse to any of five bet-type icons. After selecting a betting amount, users confirmed their bets by tapping their smartcard again. This action registered the bet in the Club's system and reduced the stored value on the card. If they wanted, users could obtain a printout of the bet, or place more bets until the race started.

During the race itself, visitors could cheer for their horse while overlooking the track at the balcony or watching any of the TVs. If a bet was successful, the stored value on the card was automatically increased. Users could change the card to cash or keep it for future betting.

Evaluation

The launch of *ibu* Experience Zone generated attention from media and customers alike (e.g., Li, 2012; Muncaster, 2013). To evaluate the project, the Club had a research firm conduct a customer experience survey. In total 102 guests of Adrenaline were interviewed face-to-face during their visit in Fall 2012. Many customers were interested in using the table, and 90 percent said they were satisfied with the experience. They easily learned to use the table; after about the third race they started doing it without requesting help from representatives. See Table 1 for an overview of the survey results. See Figure 8 to see how customers used the table simultaneously.

Table 1: Results of the Customer Experience Survey (n = 102)

Customers agree (%)	Statement
90%	Overall experience is satisfactory.
84%	Browsing information is easy.
82%	Placing a bet is easy.
over 90%	Overall ambiance at Adrenaline is enjoyable.
over 90%	Clarity of interface design is outstanding.
88%	<i>ibu</i> gives a "WOW," (people aged 18 to 34, n = 59)
75%	<i>ibu</i> enhances experience at racecourse. (people aged 18 to 34, n = 59)
87%	Most likely to recommend Adrenaline to others (female, n = 31)
78%	Most likely to recommend Adrenaline to others (male, n = 71)



Figure 8. Customers Using *ibu* Simultaneously
Source: Possible Worldwide, 2012

The responses from the Club's customers revealed a marked improvement in the experience of horserace betting. Customers of the technology-savvy generation could now learn horserace betting in an easier, more intuitive, interactive, and social way, matching their lifestyle and interests. The development of the *ibu* table also paved the way for future products, as its technology in the information platform and user journey design could be reused.

Leung was happy with these results. She attributed the success of the project to a variety of factors. First, the project fit the Club's strategy of improving the racing experiences of its customer groups. This was an important foundation for the support from the Club's top management. Second, Leung tried to keep the customer-oriented strategy in mind, throughout the project. The Club listened closely to the opinion of the technology-savvy generation, and learned about their lifestyle. The resulting insights were the basis for making decisions throughout the project, even if this meant more complexity in the development or rejecting suggestions from more experienced bettors. This approach, Leung found, was essential to achieve the high level of customer satisfaction. And third, Leung found that

the work climate at the Club was also a critical success factor. She cultivated an open, sharing climate, while encouraging dedicated focus and effort on detailed work tasks by specifying ten work streams with many milestones along the way. Without such a climate, Leung believed, realizing the *ibu* Experience Zone in two years had not been possible. All these factors contributed to a better customer experience, and helped the Club bring one of world's oldest sports into the digital age.

VII. LOOKING FORWARD

Leung wondered how effective the *ibu* tables would be in the long term. The tables were certainly attracting leisure and technology-savvy customers, and customers seemed happy with the experience. But to what extent would the *ibu* Experience Zone help change the public's perception of racing as entertainment for the older generation?

Leung knew that the Club could not just wait and see. Illegal online bookmakers and the casinos in Macau were working hard to attract more gaming dollars from people in Hong Kong. Many online bookmakers were profiting from a worldwide growth of online gambling of around 18 percent annually [GGB News, 2013]. Meanwhile, the construction of a delta-crossing bridge promised to make "offline" entertainment in the world's gambling capital more accessible to Hongkongers in the near future.⁷ This certainly would accelerate the growth in Hong Kong visitors to Macau. Clearly, the Club needed to continue innovating to remain competitive. One area of innovation was fueled by the *ibu* project. "We have now a hub for following and experiencing racing in a different form," Engelbrecht-Bresges said. "We will use this in apps on both iPads and Android tablets, in the coming months" [Hong Kong Jockey Club, 2013c]. This innovation would allow customers who had been introduced to racing through the *ibu* tables to continue enjoying digital racing entertainment elsewhere.

But the details for the third phase of the Club's master plan, starting in 2015, still needed to be worked out. What should these investments look like? How could the Club keep innovating to remain competitive in the ever-changing gambling industry?

ACKNOWLEDGMENTS

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Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the article on the Web, can gain direct access to these linked references. Readers are warned, however, that:

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APPENDIX A: FINANCIAL SUMMARY OF OPERATIONS⁸

Table A1: Financial Summary of Operations [Hong Kong Jockey Club, 2012b]					
in HK\$ million	2012	2011	2010	2009	2008
Number of race meetings	83	83	83	78	78
Amounts wagered by customers on horserace betting	86,117	80,413	75,497	66,820	67,685
Horse race betting dividends and rebates	-72,115	-67,211	-63,056	-55,583	-56,221
Horse race betting revenue	14,002	13,202	12,441	11,237	11,464
Horse race betting duty	-10,159	-9,557	-9,002	-8,120	-8,286
Payment to racing jurisdictions outside Hong Kong	-48	-51	-41	-32	-30
Horse race betting net margin	3,795	3,594	3,398	3,085	3,148
Amounts wagered by customers on football betting	47,285	39,763	38,908	35,108	34,442
Football betting dividends	-39,404	-32,643	-32,494	-29,308	-28,238

⁸ Data corresponded to full seasons, not to fiscal years.

Table A1: Financial Summary of Operations [Hong Kong Jockey Club, 2012b] – Continued

Football betting revenue	7,881	7,120	6,414	5,800	6,204
Football betting duty	-3,940	-3,560	-3,207	-2,900	-3,102
Football betting net margin	3,941	3,560	3,207	2,900	3,102
Amounts wagered by customers on lottery	7,693	6,866	6,375	6,429	6,382
Lottery prizes	-4,154	-3,708	-3,442	-3,472	-3,446
Lottery revenue	3,539	3,158	2,933	2,957	2,936
Lottery duty	-1,923	-1,716	-1,594	-1,607	-1,596
Lotteries Fund	-1,154	-1,030	-956	-964	-957
Lottery commission	462	412	383	386	383
Other net revenue	1,903	965	933	727	658
Total operating income	10,101	8,531	7,921	7,098	7,291
Direct operating costs	-4,921	-4,561	-4,410	-4,224	-4,195
Miscellaneous donations	-279	-203	-62	-50	-64
Depreciation, amortization, impairment, and expensed project costs	-757	-750	-767	-667	-696
Total operating costs	-5,957	-5,514	-5,239	-4,941	-4,955
Operating surplus	4,144	3,017	2,682	2,157	2,336
Financial surplus/deficit	691	1,437	942	-2,258	2,821
Surplus/deficit before taxation, charitable donations to Charities Trust, transfer to Contingency Fund and Development Fund	4,835	4,454	3,624	-101	5,157
Unclaimed prizes transferred to the Snowball Pool	91	54	68	65	102

APPENDIX B: RESULTS OF GAMBLING SURVEYS IN HONG KONG

Table B1: Analysis of Respondents to a 2008 Survey Who Had Taken Part in Gambling Activities in the Last Year [Cheng, 2009]

2008 Survey		Mark 6		Horse racing		Football betting		Macau casinos	
		(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)
Sex	Male	66.4	645	25.7	250	15.3	149	10.9	106
	Female	57.8	646	9.6	107	1.1	12	10.7	120
Age	15–19	17	31	1.6	3	4.9	9	3.3	6
	20–39	63.2	409	12.2	79	11.6	75	14.2	92
	40–59	73.6	654	22.5	200	7.5	67	11.5	102
	60 or above	53.1	197	20.2	75	2.7	10	7	26
Education	Form 3 or below	63.2	451	23.4	167	4.8	34	9	64
	Form 4 to matric	63.6	522	16.4	135	10.6	87	10.1	83
	Tertiary/above	57.5	312	9.6	52	7.2	39	14.5	79
Work	Employed	72.1	819	21	238	11.1	126	13.6	154
	Unemployed	49.2	464	12.3	116	3.6	34	7.5	71



Table B2: Analysis of Respondents to a 2012 Survey Who Had Taken Part in Gambling Activities in the Last Year [Wan, 2012]

2012 Survey		Mark 6		Horse racing		Football betting		Macau casinos	
		(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)
Total		89.8	1133	261	20.7	10.6	134	19	240
Sex	Male	62.8	565	21.8	196	13.7	123	12.9	116
	Female	50.5	568	5.8	65	1	11	11	124
Age	15–17	3.5	4	0	0	0	0	0.9	1
	18–21	45	67	2	3	11.4	17	11.4	17
	22–29	59.4	111	7	13	10.2	19	18.7	35
	30–39	57.8	186	9.6	31	7.5	24	14	45
	40–49	64.1	307	14.4	69	6.1	29	11.1	53
	50–59	60.8	319	17	89	5.3	28	11.6	61
	60–64	55.7	131	23.8	56	7.2	17	11.5	27
Education	Form 3 or below	58.2	281	17.6	85	5.8	28	10.6	51
	Form 4 to matric	54.3	436	14.8	119	7.1	57	10.8	87
	Tertiary/above	56	408	7.7	56	6.6	48	13.7	100
Work Status	Employer	60.3	35	19	11	8.6	5	25.9	15
	Employee	63.3	625	15.7	155	9.1	90	13.4	132
	Self-employed	65.5	91	18.7	26	6.5	9	11.5	16
	Job seeker	60.8	48	6.3	5	5.1	4	11.4	9
	Retiree	57.9	103	18.5	33	3.9	7	9	16
	Homemaker	51.4	160	7.1	22	1	3	11.9	37
	Student	21.9	55	1.2	3	5.6	14	5.6	14

APPENDIX C: ORGANIZATIONAL CHART OF THE HONG KONG JOCKEY CLUB⁹

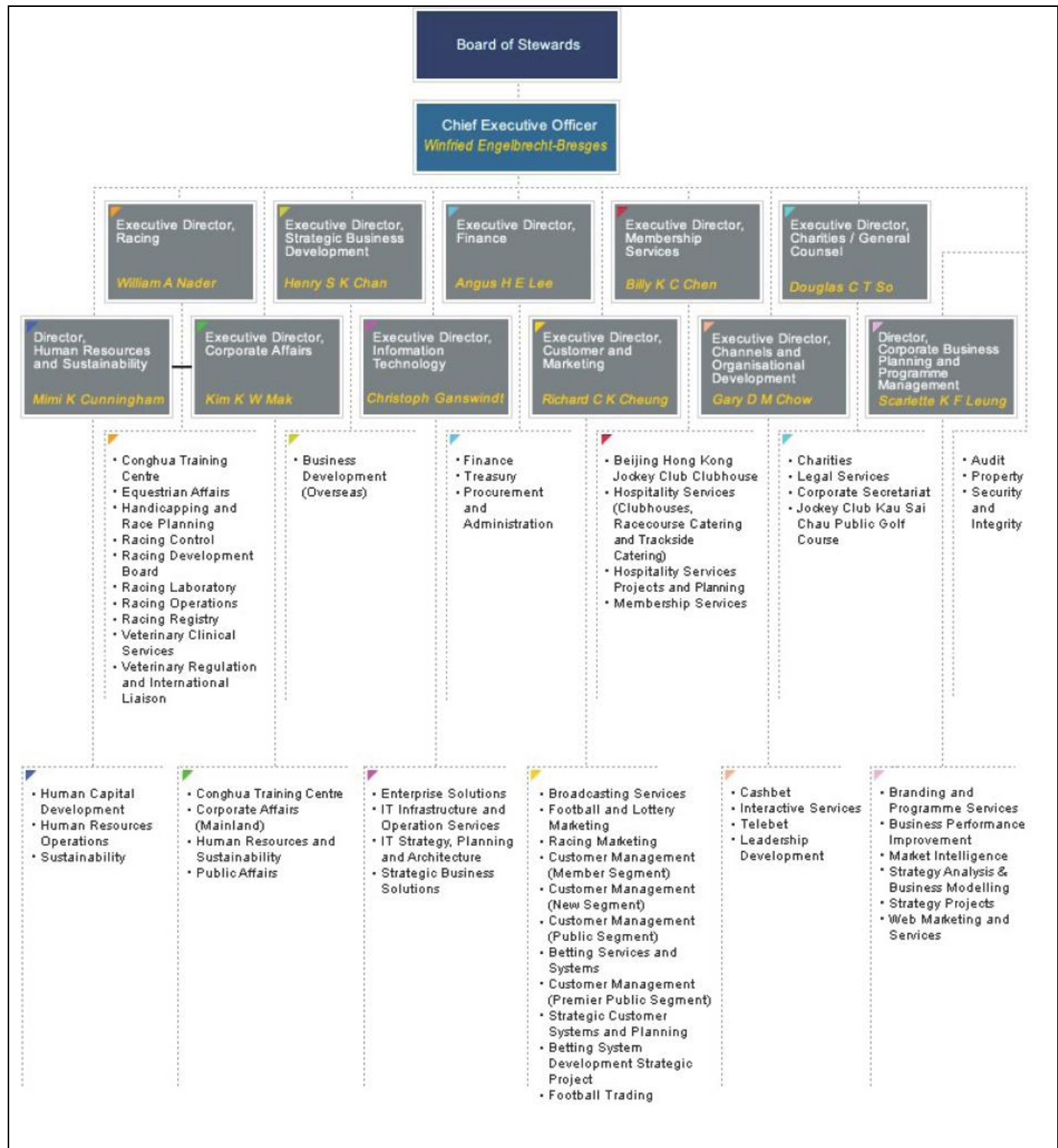


Figure C1. Organizational Chart of the Hong Kong Jockey Club [Hong Kong Jockey Club, 2013d]

⁹ Sunny Lee was Executive Director of Information Technology before 2013.

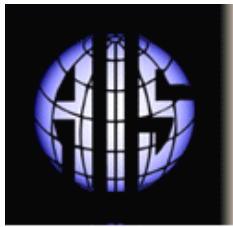
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