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## OUTRIGGER HOTELS AND RESORTS: A CASE STUDY

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### ABSTRACT

This case describes the history, strategy, and current information systems infrastructure of a mid-size, privately owned hospitality firm. The case is designed to provide the substantial background information needed to engage successfully in setting direction for IS resources and their use at Outrigger Hotels and Resorts headquartered in Hawaii. It enables students to analyze the firm's strategy thoroughly and to assess its current use of information systems resources. With this assessment as a starting point, students can develop an appropriate IS vision, IS architecture, and a strategic IS plan for Outrigger Hotels and Resorts.

The case was originally designed to use the process of setting direction for IS resources as described by Martin and colleagues [2005], but is flexible enough to adapt to the structure of other approaches to planning for information systems use.

**Keywords:** IS planning, IS assessment, IS visioning, infrastructure, hospitality.

*Editor's Note:* A teaching note is available from the author to faculty so requiring it that are listed in the MISRC-ISWorld Faculty Directory.

*I am involved with every decision that senior management takes. They look to me for an IS slant to it – whether an IT solution can capitalize on opportunities or eliminate threats. They also expect my team to independently develop an IS strategy that will further the business.* Joe Durocher, Senior Vice President & CIO

*Every manager must have an IT strategy. You can't delegate to technologists and only worry about your allocated cost or what training your employees need. You must understand how to be master of your own destiny and make IT work best for you. Too many managers still don't get that.* Rob Solomon, Senior Vice President Sales & Marketing

## I. INTRODUCTION

Outrigger Hotels and Resorts, a mid-size lodging firm focused on leisure travel to the Hawaiian Islands and the South Pacific, uses Information Technology (IT) in numerous aspects of its operations and therefore must carefully engage in the information systems planning process. After analyzing Outrigger's strategy and assessing the firm's current use of information systems resources, we can develop an appropriate IS vision, IS architecture, and a strategic IS plan for Outrigger Hotels and Resorts.

## II. OUTRIGGER HISTORY AND CURRENT STRATEGY

On Black Friday, September 13, 1929, Roy C. Kelley arrived in Hawaii with his wife Estelle. An architect by training, Mr. Kelley joined the firm of C.W. Dickey and was responsible for designing many of Honolulu's landmark buildings, including the main building of the old Halekulani Hotel and the Waikiki Theater on Kalakaua Avenue.

Nine years later Kelley set out on his own, building numerous homes, apartment buildings, and hotels on the island of Oahu. In 1963, Kelley took over the land occupied by the old Outrigger Canoe Club. Outrigger Hotels then became a reality with the mission of bringing the dream of a vacation in Paradise within the reach of the middle-class traveler. Included in the agreement were leases on three Waikiki lots that later became the Outrigger East, Outrigger West, and Coral Reef hotels. The Outrigger Waikiki Hotel was built on the site of the old canoe club, arguably the prime spot on Waikiki beach, in 1967.

Throughout the next two decades, Outrigger Hotels Hawaii, as the company was named, continued its expansion in Waikiki. When in the 1970's the zoning authority put a cap on new construction in Waikiki, Outrigger began to expand through acquisition rather than construction, ultimately becoming the largest chain in the State of Hawaii, with over 7,000 rooms and a total of 15 properties concentrated in Waikiki. Thanks to its clustered configuration, with all of its hotels located within one square mile, Outrigger was able to maintain a centralized management structure fitting Mr. Kelley's 'management by walking around' style.

In 1989, Outrigger Hotels Hawaii, now under the leadership of Roy Kelley's son Dr. Richard Kelley, took over management of The Royal Waikoloan Hotel on the Big Island of Hawaii. When hurricane Iniki, heading for Waikiki in 1992, barely missed Honolulu and ravaged the island of Kauai, it provided further impetus for Outrigger's geographical diversification strategy to and beyond neighboring islands. The firm, expanding into management agreements with third party owners, added properties on Maui and Kauai and ultimately grew to a total of 26 locations in the Hawaiian Islands.

In 1996 the firm made its first international foray, opening the Outrigger Marshall Island Resort on Majuro Atoll in the Republic of the Marshall Islands. Through partnerships, joint ventures, acquisitions, and new developments the firm continued to grow internationally, adding properties in Guam, Fiji, Tahiti, Australia, and New Zealand.

While growing geographically, in 1990 Outrigger Hotels Hawaii began to diversify its product portfolio by adding condominium resorts. Because of its geographical and product diversification, in 1995 Outrigger Hotels Hawaii changed its name to Outrigger Hotels and Resorts, and in 1999 re-branded fifteen of its hotels in Waikiki to launch a new hotel brand called OHANA Hotels of Hawaii.

*We had an identity crisis because the market moved up, we upgraded the on-beach properties where we had higher demand and bought some nice properties in neighboring islands. But we had huge variation in the portfolio—if you stayed at a budget property vs. a beach front property, you'd be very confused as to what an Outrigger was. President and CEO, David Carey*

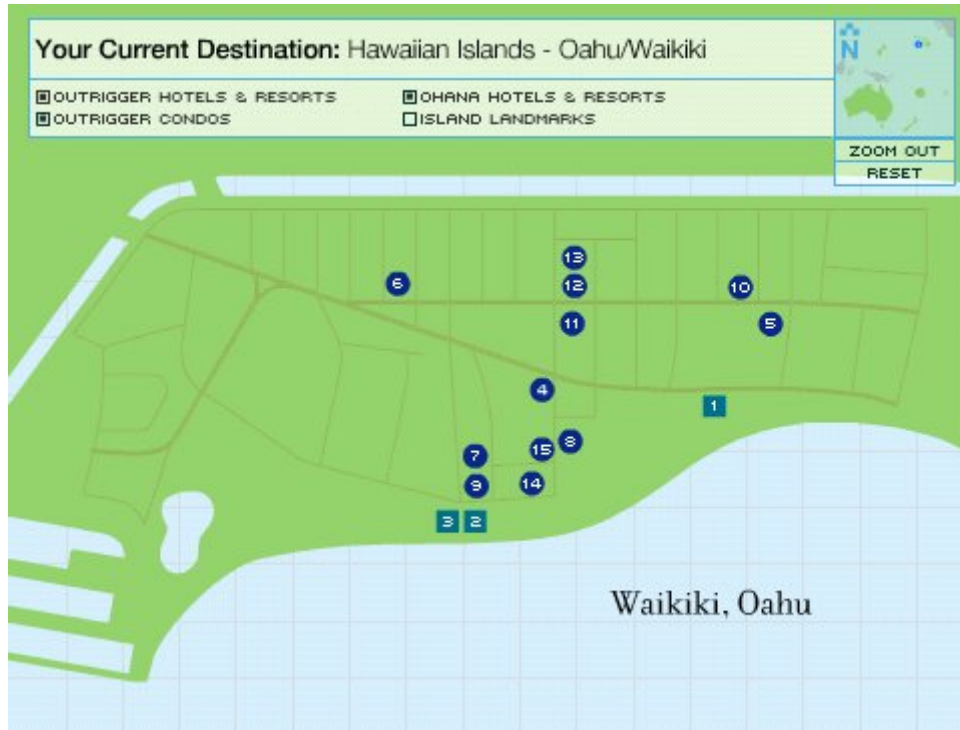


Figure 1: Outrigger Properties in Waikiki



Figure 2: Outrigger Properties in the Hawaiian Islands



Figure 3. Properties Managed by Outrigger Hotels and Resorts (International)

The on-beach properties became upscale full-service hotels under the Outrigger brand. The condos, also typically on-beach upscale locations, maintained the Outrigger brand. Conversely, the OHANA brand was positioned to cater to the budget traveler looking for value on off-beach properties.

Condominiums represented an increasingly important share of the total portfolio of properties, even though the firm stumbled upon the opportunity that condominiums offered. Condominiums appealed to independent travelers who would do much research and planning on their own. Condominiums were also complex, non-standard products that travel agents and wholesalers found hard to sell. Because condos were rarely built as business ventures, but rather were designed as primary or vacation homes for the tenants, they offered little office or staging space for management companies to operate in. They also lacked many of the typical hotel services and departments such as food and beverage, room service, laundry, and daily maid service. These difficulties notwithstanding, Outrigger found the condo business appealing because it provided a means for expansion through management contracts without the need to acquire expensive properties.

By 2005, Outrigger was a sizable firm, with about 3,600 employees (of whom about 230 were at corporate headquarters), a portfolio of properties exceeding US \$1.4 billion, and approximate revenues of US \$45 million [Hotel On-Line, 2003]. But at the heart of its strategic positioning a commitment remained to providing a 'sense of place,' an experience attuned to the culture and the characteristics of the destination, and to avoiding a cookie cutter approach.

*Our business is really about being a "window" to an experience, not the experience itself. We are the enabler through which people can engage in the leisure experience they desire. We don't try to export Hawaii when we go elsewhere, but we do honor the same values in the places we operate hotels and resorts.* David Carey

Outrigger's senior management believed that its key competencies resided in providing hospitality to guests visiting their properties and marketing those properties successfully through leisure distribution channels. To complement these basic competencies, Outrigger's management developed what it believed to be a superior capability to manage in a multicultural environment, including multicultural and multilingual employees and guests. Aided by a turnover rate in the single digits and an average of 25 years of employee tenure with the company, Outrigger managed to be a mostly non-union shop in the heavily unionized Hawaii labor market.

*We operate properties that have good locations, we have a strong travel distribution network, and our employees really provide hospitality from the heart. That creates a differentiated product making price less important.* David Carey

Outrigger was wedded to the success of its destination markets and to the well-being of airlines serving its destinations.

*If Hawaii does well, so do we. I spend a lot of time working with local tourism authorities to improve the appeal of the destinations we operate in. But airlines can be a bottleneck. We may not have available lift at times when we need it. If the airlines are full or they have decided in their yield model that they are going to only sell their top fares, there is nothing we can do. From purely the hotels' perspective, the best thing for us is an airline price war to Hawaii.* David Carey

### III. THE HOTELS AND RESORTS INDUSTRY

As the 21st century dawned, the global lodging industry was estimated to exceed \$295 billion in sales (about 11% of the world's economic output) and employed more than 250 million workers [Encyclopedia of Global Industries, 2003]. The leisure travel segment accounted for about 45% of total volume [Horwath International, 2002].

#### THE HAWAIIAN HOTEL MARKET

In the Hawaiian market, which was Outrigger's traditional stronghold, 2004 data showed performance levels above the average of the global industry. Being quite isolated from any large population pool, Hawaii was a classic destination market with an exclusive fly-in customer base. The major feeders were U.S. westbound traffic and Japanese eastbound traffic. These markets were thought to yield very high return rates<sup>1</sup>—estimated by some to be around 50% westbound and over 65% eastbound. This trend made for a very location-savvy customer base. Peculiar to this market was also the trend of multi-island stays, with guests visiting more than one destination during the same trip.

Table 1. Performance of Hawaii Hotel Market

Occupancy	72.1%
Avg. Number of rooms	706
Average Daily Rate <sup>2</sup>	\$198.41
Revenue*	\$78,488

\* Amounts per available room

<sup>1</sup> In the hotel business, return rate is used to refer to the percentage of visitors who come back again for more than one visit to the same location.

<sup>2</sup> Average Daily Rate (ADR), is the average of all rates charged on a given date for all rooms sold that day. A yearly ADR can be computed by averaging ADRs for all days of the year.

## PRICING

Because the Hawaii and Pacific Rim markets were exclusive destination markets, the use of packages – including air and accommodations – was pervasive. Historically, packages were assembled and sold by wholesalers and tour operators who purchased both air and hotel rooms in bulk and re-marketed them to the traveling public. With the widespread adoption of the Internet, a new type of package was emerging under the leadership of large online travel agencies: dynamic packages. A dynamic package was one that enabled the guest to choose air, hotel, car rental, and even activities, ticket them independently, and then price them out as a bundle. Dynamic packages were appealing to suppliers because the price of each item was not disclosed, making price comparison difficult and alleviating commoditization fears. They were appealing to prospective travelers because they increased choice and fostered flexibility. Finally, they appealed to online travel agents because they built upon their value proposition—customer choice—and could potentially improve their margins.

## COMPETITORS

As a mature destination, Hawaii had been entered by many of the larger branded hospitality and resort companies. The largest hospitality firms, such as Marriott International, Hilton Hotels and Resorts, and Starwood, developed a significant presence with eight, five, and eleven properties respectively. But the largest operators in Hawaii were geographically- and leisure-focused players such as Outrigger, ASTON Hotels & Resorts Hawaii (with twenty-eight properties), and Marc Resorts Hawaii (with eleven properties).

## IV. OUTRIGGER CUSTOMERS AND THE COMPETITION

### THE OUTRIGGER HOTELS AND RESORTS CUSTOMERS

Outrigger's original mission was to bring the opportunity for a vacation in Paradise within the reach of middle-class families. As the firm began to diversify its portfolio, the profile of its customers and the competition also changed. The typical guest staying with the premium brand – Outrigger – was often a multigenerational customer with a sense of loyalty to the brand (about 25% of guests were returning to Outrigger) and an annual income exceeding \$75,000. Outrigger guests were almost exclusively leisure travelers. This customer base created seasonality, with winter and summer being the high seasons when properties like the Outrigger Waikiki on the Beach reached an ADR of \$260 and an overall occupancy around 90%.

*Our customers are independent-minded and look for an experience that is more regional and attuned to the destination, but still within their comfort zone. They may stay with big brands in their road warrior capacity, but that's not what they are looking for in a tropical destination. Rob Solomon*

Table 2. Outrigger's Portfolio and Sample Competitors

	Location	Properties	Rooms	Lowest Rate *
Outrigger Hotels and Resorts	Waikiki	2	1,383	\$160
Starwood Hotels and Resorts	Waikiki	4	4,132	\$150
Marriott International	Waikiki	1	1,297	\$209
Hyatt Hotels and Resorts	Waikiki	1	1,230	\$210
Outrigger Hotels and Resorts	Guam & Fiji	2	895	\$203
Starwood Hotels and Resorts	Guam & Fiji	3	995	\$145
Hilton Hotels and Resorts	Guam	1	587	\$110

\*Rates for comparable rooms as they appear on the company website, December 2004, for January 2005 stays

Competing for these customers, Outrigger went head-to-head with major brands that enjoyed name recognition amongst the traveling public, a flow of customers redeeming points, available capital, and availability of programs for employees such as discounted travel beyond Hawaii and the Pacific region. In response, Outrigger leveraged its assets: some of the premier locations in the markets in which it competed, strong name recognition, long-term relationships with the travel distribution network, a strategic focus on vacation destinations, a deep local knowledge and community ties, and good employee relations.

### THE OHANA HOTELS CUSTOMERS

The typical OHANA guest was a value-minded and Hawaii-savvy leisure traveler with income below \$100k a year. Typically, OHANA guests had visited Hawaii multiple times, stayed longer than average, and visited more often. Business travel was mainly military personnel and employees of corporations who operated on multiple islands. Groups accounted for less than 10% of OHANA's overall traffic.

*We have about 50% return guests. Your first trip you want a beach front hotel, the atmosphere, the ambiance—you want the full Hawaii experience. When you come more often, you still want the experience, but you look for more value and instead of spending \$250-\$300 a night for a beachfront you can stay longer off-beach for \$70-\$80 a night.* Chuck Shishido, OHANA Hotels VP of Operations

With seasonality similar to that of the full service Outrigger Hotels, OHANA Hotels typically achieved an ADR around \$66 and approximate occupancy levels of 75% over the year. A number of small regional chains (such as Marc Resorts and Castle Resorts) and many off-beach independent hotels existed in the Waikiki market. Pricing for off-beach properties was much harder to manage because of the commodity nature of the hotels not enjoying a premium location. OHANA was the largest operator in Waikiki and the largest Hawaii-owned operator.

Table 3. OHANA's Portfolio and Sample Competitors

	Location	Properties	Rooms	Lowest Rate *
OHANA	Waikiki	13	4564	\$76
Marc Resorts	Waikiki	4	314	\$74
Castle Resorts	Waikiki	6	N/A	\$75

\* Rates for comparable rooms as they appear on the company website, December 2004, for January stays

### CONDOMINIUMS CUSTOMERS

Two types of customers typically stayed at the condominiums. On the low end of the \$90,000 to \$160,000 income bracket were families visiting during school breaks, looking to control expenses, and control their vacation experience. They valued the full kitchen – a standard in every unit – and the two bedrooms and two baths. This assessment was substantiated by the fact that condos had four times as many reservations coming direct from the Internet and tended to recover faster after a soft economy. On the upper end were 'newlyweds' and 'nearly dead' couples who liked the privacy and space afforded by a condo.

Because of the need to convince individual owners to join the pool of Outrigger managed units, the firm competed with small local management companies and individual owners' beliefs that they could do a better job alone. This idiosyncrasy of condominium operations amounted to dealing with two customers—the unit owners and the guests. The guests were unaware of the workings of condo operations and looked for the same level of service they would receive at a resort. On average, a condominium with mostly two bedroom units would achieve an ADR around \$175, while properties with mostly studio and one bedroom units would go for around \$140.



**MARKETING AND DISTRIBUTION**

Outrigger operated a Central Reservation Office (CRO) in Denver, Colorado with anywhere from 40 to 70 reservationists (FTEs), mainly depending on the volume of business. A corporate marketing staff of 12 people, allocated about 6% of revenue, was responsible for managing the brand and for going to market. An additional 2% of revenue was used to fund reservation and other distribution costs. Reservations were centralized for all properties in Hawaii; beyond Hawaii reservations were only taken at each property.

Outrigger’s executives believed that distribution was a cornerstone of the company’s success, with about 50% of the business coming from wholesalers. Consumer direct (via voice or the Web), travel agents, government and military, and corporate clients made up the rest. For international properties, the source of business percentage from wholesalers was close to 80% and almost all reservations were faxed to the property.

**V. OUTRIGGER’S ORGANIZATION**

Outrigger Hotels and Resorts was a management company wholly owned by a holding corporation called Outrigger Enterprises. Reflecting its real estate development roots, Outrigger Enterprises also owned a real estate ownership company called Outrigger Properties. Figure 4 shows the Outrigger organization.

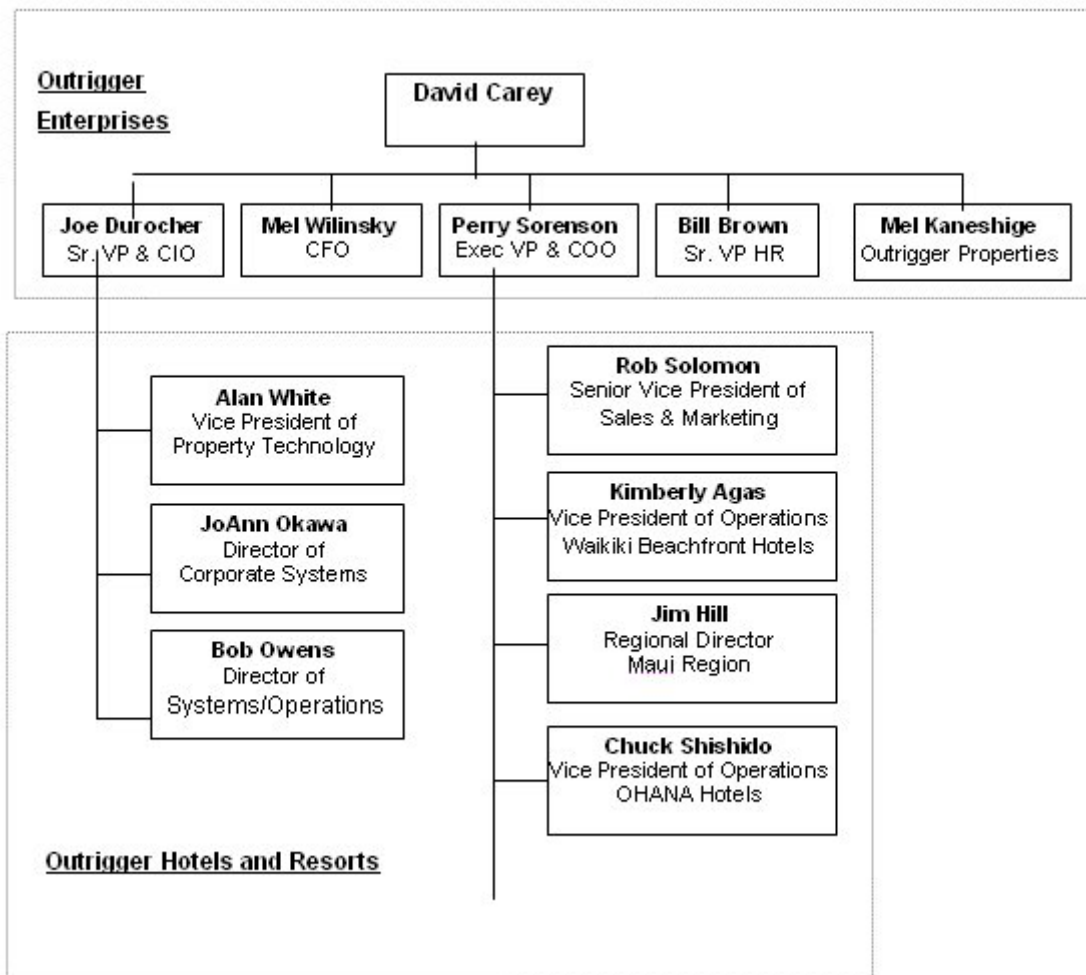


Figure 4. Organization Chart

Outrigger Properties wrote and managed real estate contracts with third party owners and supervised the owned assets (accounting for about a third of all properties in the Outrigger portfolio), as well as the development, acquisition, and sale of properties. Outrigger Hotels and Resorts, the operating arm of Outrigger Enterprises, was responsible for the writing of new management contracts, and for overseeing property renovations and operations of the managed hotels, resorts, and condos. Outrigger Properties generally negotiated a base rent and a percentage of revenue with tenants;<sup>3</sup> revenues from leased space were assigned to the hosting property's own P&L. Room revenue made up the bulk of each property's revenue. Income from leased space ranged from as low as 5% in hotels with little retail space to as high as 20% in some of the most appealing locations. Other more marginal revenue was derived from parking, in-room entertainment, telecommunications, and kids' clubs operations.

Outrigger Hotels and Resorts historically maintained a highly centralized organizational structure. As the firm grew in size and geographical distribution a more distributed structure emerged, but, reflecting its roots, Outrigger Hotels and Resorts remained consolidated where possible.

*We have centralized services – accounting, IT, finance, engineering, purchasing, special projects – that support all the properties on Oahu, as well as indirectly the neighboring islands. There is also one executive housekeeper in charge of all properties. We run the OHANA Hotels like a 4,200 room distributed hotel. It is very efficient.* Chuck Shishido

As the firm expanded internationally it became more decentralized, with resorts in the Pacific Rim working much more like independent operations and organized like traditional resorts.

Recognizing the significant advantages offered by its centralized structure, Outrigger was looking at the possibility of integrating its international resorts better. However, distance presented new challenges:

*We need a reservation solution for Australia, a real-time coordination with a central reservation service. They are operated as individual hotels; the central 800 number today is just switched to the correct hotel. A centralized system would offer tremendous value because we get drive-in business and substantial potential cross-property traffic.* Executive VP and COO Perry Sorenson,

## VI. OUTRIGGER IT INFRASTRUCTURE

Joe Durocher, the CIO of Outrigger Enterprises, was hired by David Carey in 1986.

*Mr. Roy Kelly was a hands-on manager. He once told me he hated two things: computers and vice presidents. As the VP of IT, I had two strikes against me. Yet, in 1986 I was brought in to overhaul Outrigger's IT infrastructure and we built Stellex—our integrated CRS/PMS.<sup>4</sup> At the time all our properties were in Waikiki, within one square mile of each other.* Joe Durocher

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<sup>3</sup> In this type of agreement the landlord receives a fixed payment plus a percentage of the total sales made by the tenant business (e.g., restaurant, shop).

<sup>4</sup> The CRS, Central Reservation System, is the computer system used by a hotel chain to support call center operations and, generally, its web site. The CRS holds chain-wide inventory and allows reservationists to sell room inventory at all the hotels affiliated with the chain. The PMS, Property Management System, is the "brain" of hotel operations. It is the computer system that is used to manage the inventory of hotel rooms at an individual property.

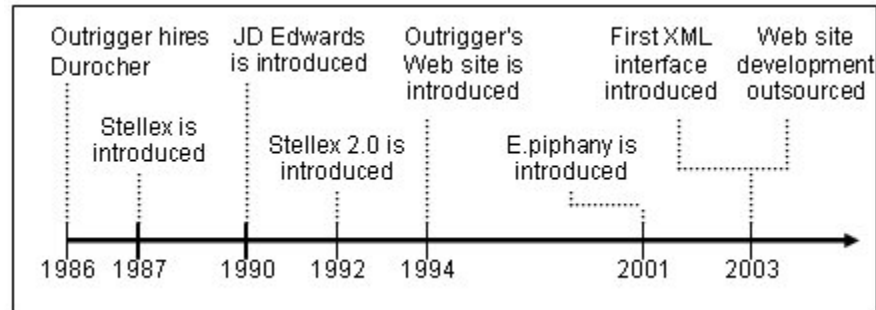


Figure 5. Timeline of Major Infrastructure Developments at Outrigger

## OUTRIGGER'S SOFTWARE

Stellex, to which Durocher refers, was introduced in 1987 as a COBOL application that guaranteed complete redundancy and 24 x 365 uptime. These two properties are particularly important in the hotel business, which depends on being able to make reservations at any time during the day and wants to make sure that its computer system is always operational. For the technically minded, the application ran on a Tandem NonStop platform and a proprietary Enscribe database management system.<sup>5</sup>

In 1992, Outrigger introduced its first major update to Stellex, Stellex 2.0, which ran on a Sun Microsystems UNIX platform and provided revenue management functionality and reservation center support. Because of its unique need for substantial wholesale interaction, Outrigger engaged Opus, a software company specializing on revenue management systems,<sup>6</sup> to build their revenue management module for Stellex 2.0. Outrigger retained control of Opus' source code<sup>7</sup> and over the years made substantial enhancements, mainly to manage wholesale relationships. Outrigger implemented JD Edwards ERP as the cornerstone of its back-office operations in 1990, years before the ERP craze swept the business world. JD Edwards ran on an IBM AS 400—widely considered to be a mature and stable platform.

The firm felt that its centralized IT infrastructure was a source of competitive advantage. Durocher discussed the trade-offs associated with centralized IT:

*Decentralizing IT would decrease our capabilities while increasing overall costs. But centralized IT creates friction at times. When a hotel is sold for example, the IT allocation may increase for other properties.*<sup>8</sup> Joe Durocher

Stellex provided the anchor to which all other operational systems connected, including telephone switches, call accounting, and in-room entertainment. All of the properties in the Hawaiian Islands had access to Outrigger's centralized IT systems, served from the Honolulu-based data center, through the firm's proprietary Wide Area Network. Stellex, for example, was accessed using an ASP model by all the properties in the Hawaiian Islands, the firm's Denver-based Central Reservation Office, and the Portland, Oregon-based Web servers, thereby greatly simplifying the achievement of single image inventory, disaster recovery, and overall IT management. This configuration enabled the properties to operate with PCs (as few as 12 in a

<sup>5</sup> Tandem Computer Systems was bought up by Compaq in 1997. Compaq, in turn was purchased by HP. Enscribe is still in business in December 2004.

<sup>6</sup> Opus was subsequently bought by Micros-Fidelio, the dominant hospitality-focused software company.

<sup>7</sup> 'Source code' refers to the original, human readable computer program. By owning it, Outrigger could change it as they saw fit. Note that Microsoft, for example, guards its source code jealously so that others can't change Microsoft's programs.

<sup>8</sup> In many companies, such as Outrigger, IT costs are allocated to users, such as hotels, on an annual basis. IT cost is relatively fixed and not affected much by the number of units it supports. If a property is sold, the fixed cost allocated to all other properties must therefore go up.

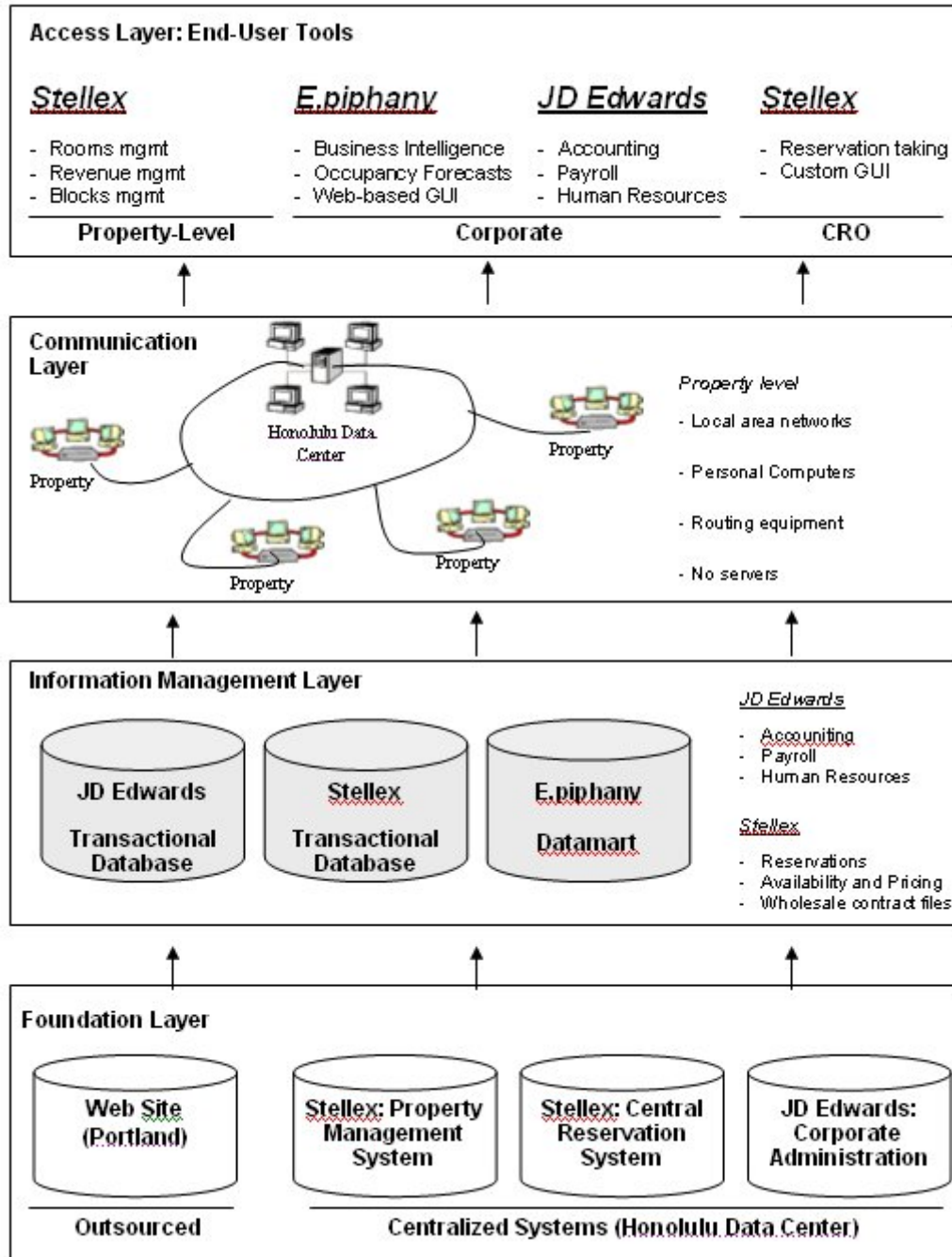


Figure 6. Outrigger's IT Infrastructure

typical 500-room property) and networking equipment. The Point of Sales (POS) systems<sup>9</sup> were not centralized, since Outrigger leased retail and restaurant space. This state of affairs generated some friction at times:

<sup>9</sup> The POS is the computer software used to support retail and restaurant operations. It enables operators to keep track of sales and accurately bill customers.

*We offer to interface their POSs to Stellex and pay for interfaces to automate room charges. But many of those POS are old and can't interface, they must be upgraded first. Restaurants have to write a manual charge voucher and walk it to the front desk for input. It's not a popular or efficient way to do it. VP of Property Technology, Allen White*

Due to the need for local support, the high telecommunication costs to and from Hawaii, and the unacceptable reliability of international networks, Outrigger did not extend this centralized model to its operations in Australia and the Pacific. The properties in Australia and New Zealand, all condominiums, used a highly specialized PMS particularly well suited for their condominium properties and their unique tax code requirements.

*None of the properties in Hawaii has a server on property. In the outer regions we have standalone PMS's and on-property reservations. We don't even try to keep Stellex in sync, they just open and close. If a date is getting full, they issue a stop-sell. Reservations that are taken centrally are automatically emailed. Joe Durocher*

### **APPLICATION DEVELOPMENT**

Beyond maintaining and upgrading Stellex, Outrigger's IT professionals engaged in minimal application development—mainly writing customized reports, and configuring and interfacing off-the-shelf applications. The use of outsourcing was limited to the Web site, developed and hosted by a third party in Portland, Oregon. Yet, in order to maintain the integration of direct channels, Stellex served as the booking engine behind Outrigger's Web site. A key initiative for Outrigger was the development of electronic interfaces with wholesalers. These interfaces were custom-developed by the firm's IT group using XML.<sup>10</sup>

*With many wholesalers we have real-time electronic interfaces—they can check availability and we get their reservations instantaneously. Without the interface, if they create a reservation six or three months out, we don't see it until reporting time, ten days out, when we receive a fax and manually input it. It is virtually impossible to revenue manage like that. Many big brands have great revenue management systems, but don't have real-time wholesaler data. Moreover, we can write wholesale contracts brand-wide. Joe Durocher*

Outrigger felt that its electronic interfaces afforded it a competitive advantage and preferential treatment from interface-enabled wholesalers, a relationship that proved particularly important during slow periods or a soft economy. Electronic interfaces generated substantial efficiencies, including automatic billing and invoicing without human handling, lowering estimated costs for these functions to \$0.75 from an estimated \$10 for manually handled ones. But not all wholesalers were able or interested in automating reservation processing. This lack of interest was particularly true for small operations or those for whom Hawaii and the Pacific represented a small percentage of business.

*The industry is a mess from a connectivity standpoint. We are fortunate that we have the in-house expertise and the recognition from senior management of how important this is. Even the big companies often don't understand the conditions for success. The dirty little secret of the travel industry is that the fax machine still rules. Rob Solomon*

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<sup>10</sup> XML stands for eXtensible Markup Language. It is a language used to create a protocol enabling computer applications of partnering firms to exchange information easily.

*I spend 30-40 hours a week working with wholesalers on interfaces. There are many legacy systems out there; the fax is state of the art. We have made great progress with the more advance wholesalers or those that upgraded recently.*  
Alan White

Outrigger found the Open Travel Alliance (OTA) XML standards, specifying common message format and common content, of great help. But being able to pick the right partner, and avoid costly failures, remained the major challenge. While Outrigger felt it had been successful to date, with an estimated 33% of total reservations received electronically through the various channels, it still handled more than half a million faxes a year—about eight hundred a day from its largest wholesaler alone before that wholesaler migrated to the electronic interface.

The firm felt that it had been able to capitalize on the use of technology to increase distribution efficiencies in the face of ever rising labor costs. Conversion rates at the Central Reservation Office improved from 20% to 45%-50% with widespread consumer adoption of the Internet. The firm estimated that as much as 60% of callers had already researched the Outrigger website and made a purchase decision but, as Solomon put it, “had one more question.” In an effort to provide support right on the website, the firm introduced live chat functionalities and offered email confirmation for significant savings in labor and postage costs.

## **DATA MANAGEMENT**

In 2001, Outrigger acquired business intelligence software, a data mart, and analytical tools from E.piphany running on a Windows 2000 platform.<sup>11</sup> The data mart held detailed data for three years, enabling analysis down to the individual guest folio. Data were consolidated afterwards, enabling only aggregate analyses. While E.piphany was a recent purchase, Outrigger had been disciplined in collecting data for some time.

*We had 10 years of high quality data from Stellex; we are very rigid about data capture standardization like room category, naming conventions, request codes, [and] what goes where. For example, postal and country codes are mandatory fields. Our employees' long tenure helps, and peer pressure is a great asset—nobody wants to be the one that ruins the value of these reports for all.* Alan White

The data collected by Stellex, including source of business, stay information, and consumption, were extracted every night by load programs that scrubbed (i.e., cleaned) them, and transferred them to the JD Edwards ERP system for accounting and to the E.piphany system for analysis. Feeding historical data and forward looking availability and reservation activity, Outrigger learned to harness the analytical power of E.piphany to do forecasts and generate business intelligence both at the source of business and at guest levels.

*We want the marketing data. It is stupid to have a treasure trove like that and not use it. We mine it. We send thank you letters to recurring guests, we can give you history on who visited, how they got here, what in-flight magazine we should hit. We sold a resort once and they figured they would have to hire 3 people to achieve manually what our reports gave them automatically. They even set their rates based on E.piphany forecasts.* Alan White

The IT group served as custodian of the data, but any user with security clearance had access to E.piphany data through a web interface; the data was used for marketing and operational analysis (e.g., analysis of call patterns to evaluate the appeal of Voice over IP solutions). Incorporating the information into daily operations was more challenging.

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<sup>11</sup> Definitions of technical terms such as Business Intelligence, Data Mart, Data Mining, and many others used throughout this case study can be found free of charge at <http://www.whatis.com>.

Outrigger found it hard to justify a frequent guest program—with an average repurchase cycle for returning guests of three years, a once a year purchase was considered very high in Hawaii resort operations. Speaking about recognition programs,

*Individual properties have their own customer database and a strong informal recognition system. We haven't been able to justify the investment technologically to do it brand wide. It would be a natural extension of the recognition we give our return guests, but it must be cost-effective.* Perry Sorenson

*If a guest did not tell us he is returning when making the reservation, our current system does not have a database with guest history. Many times we recognize our frequent return guests only at the door, or during check in at the front desk. We have special programs (e.g., for honeymooners, wedding anniversaries), but we need to know their history to appropriately acknowledge these returning guests.* VP of Operations for Outrigger's Waikiki Beachfront Hotels Kimberly Agas, a 20 year veteran with the company,

## IT STAFFING AND ORGANIZATION

Outrigger's IT staff consisted of 26 full time employees. Of these, 4 data entry operators and 3 developers were housed in a separate limited liability company to help Outrigger take advantage of tax incentives offered by the state of Hawaii. One corporate IT professional supported the Australian properties' application needs. Hardware support was contracted out to local vendors. The IT function was organized along user needs rather than traditional departmental lines (e.g., data entry, application development, support). As was shown in Figure 4, Alan White, VP of Property Technology, led the group in charge of creating and supporting IT solutions for the hotels. JoAnn Okawa, Director of Corporate Systems, led the group in charge of creating and supporting IT solutions for the firm's back-office needs (e.g., general accounting, HR, payroll, purchasing). Bob Owens, Director of System Operations, and his group managed the data center and supported the other two groups. The group also performed advisory work for the international properties where local MIS managers were in charge of procuring and managing technology solutions locally.

This organization enabled operations personnel to unequivocally ask the Property Technology group headed by White for support, while administrative personnel referred to the Corporate Information Service group headed by Okawa.

The IT function at Outrigger was designated a cost center. Its operations were funded through allocations to the business units and to each property using four different methods.

- A charge, based on room count, was assessed for use of property technology.
- The same mechanism was used to account for use of administrative systems.
- Group sales software<sup>12</sup> was charged based on each property's meeting space.
- Ad-hoc solution (e.g., the writing of a specialized report) was charged directly to the requesting unit.

Traditional metrics to measure success (e.g., on-time and on-budget project delivery) were used. The IT function introduced service level agreements in 2003.<sup>13</sup>

*Service level agreements enable the management of expectations, increase accountability, and offer choice to user-managers. If you feel you are paying too*

<sup>12</sup> Outrigger used the Delphi package from Newmarket International (<http://www.newmarketing.com/>)

<sup>13</sup> A service level agreement is a formal document that specifies the level of service that the IT group of an organization will provide to a business function (e.g., Marketing) for a given charge. For example, the service level agreement may specify that daily back-ups are available for \$300 a month while weekly back-ups are available for \$120. The business function can choose the level of service it desires.

*much, you can reduce your allocation, accepting less service. Or you can request more service and we'll adjust your charge. Of course, we still get some of the 'I want more service but I don't want to pay for it.'* Joe Durocher

## VII. IS ASSESSMENT

Outrigger's senior executives found technology to be a great asset to enable communication<sup>14</sup> and felt confident that the IT function was enabling the firm to compete effectively.

*We think that our IT capability in the leisure travel space exceeds the major chains and we have an ability to implement things very quickly. [That's] the advantage of being small.* David Carey

The IT function was thought to be able to operate more efficiently than the competition, often offering the same level of service with one or no property-level IS professionals when the competition needed three to six. Outrigger also felt that its size enabled it to move faster than the competition.

As the firm was expanding aggressively and had yet to find an integrated solution for its international properties, some questioned the viability of reinvesting in Stellex. Outrigger Hotels and Resorts' rapid geographical and product growth notwithstanding, the IS group felt that its legacy technology—specifically its mature ERP, integrated PMS/CRS, and electronic interfaces with distribution partners—was serving the firm well.

*Stellex is 18 years old. So three years ago we developed the business case for PMS and CRS functionalities. We could not find anything better, with one exception—Stellex is a green screen application that needs a Windows GUI.* Alan White

The firm was prompted to re-evaluate the role of Stellex after a failed attempt to migrate to a more modern platform thought to simplify connectivity with the other off-the-shelf computer systems in the portfolio. After testing in two properties over an eight month period the project was aborted, principally blaming the difficulty in managing wholesale relationships and billing with the new PMS.

Outrigger engaged in limited formal technology training and relied mainly on on-the-job training when it came to software applications. This approach created difficulties for people who were hired from outside the firm, however:

*Our people have been working with Stellex so long that they have effective workarounds when necessary, and we have very low employee turnover. If someone new comes in we have many experienced employees to help them; this makes training easier.* Perry Sorenson

As guests became used to ever increasing technology choices and availability both at home and on the road, even resorts focused on the leisure traveler felt the pressure to provide it to guests—whether they used it or not. But for a mid-size company like Outrigger, chasing the technology curve could be dangerous.

*Our guests say: "I do wireless at home, why can't I do it here?" As a company we use our buying power to do what's best for the company. But as two beachfront properties with guests paying the highest ADR and expecting more, sometimes we are held back when it gets to technology as we explore what is best for all.* Kimberly Agas

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<sup>14</sup> Outrigger's operations spanned 11 time zones.



## VIII. THE FUTURE

Outrigger's senior management felt that the firm could leverage its hospitality and marketing expertise, as well as big brand name recognition, by entering into management agreements with third party owners and large brands. While it remained committed to growing and strengthening the Outrigger family of brands, it also had plans to engage in this type of partnership.

Another important trend affecting Outrigger's future strategy was the rapidity with which hospitality distribution was changing. Travel agents historically provided significant amounts of information, counseling, and reassurance to leisure travelers, but more and more consumers were now turning to the Internet for this information. This change presented Outrigger with the challenge of populating the new electronic world. The emergence of powerful online agencies (e.g., Expedia, Orbitz) was creating significant opportunities and threats.

*We have grown up with wholesalers; we know how to yield manage the merchant model. The major chains are not yet embracing the capabilities of the internet. They look at Internet bookings through third party providers as a threat. We see it as just another wholesaler. We all must recognize the consumer's desire to shop before they buy. The single web site solution will not work in my opinion. David Carey*

This ability to manage distribution accurately was particularly evident with wholesalers using electronic interfaces. With these partners, Outrigger was able to open and close rates dynamically. Yet questions remained as to the long term effects that powerful online intermediaries were having on customer loyalty and brand preference. As some senior managers put it: "Whose customer is it, Expedia's or ours?" For a company with relatively small scale and a niche positioning, the commoditization threat could be quite dangerous.

*In the days of Mr. Kelley and Dr. Kelley, Waikiki was running at 98% occupancy annually. Get the reservations in accurately was the main concern. That world has changed, now we compete in mature destinations. Joe Durocher*

With the increasing competition in its key markets, Outrigger felt that strengthening electronic relationships with distributors, improving its trademark hospitality and customer service, better managing inventory yield, and better integrating its international properties were crucial stepping stones to the firm's continued success. More importantly, the right information systems strategy was crucial to enabling these goals. Developing such a strategy was predicated on a deep understanding of the current infrastructure, developing a clear vision for the role that IS should play at Outrigger, and crating a solid IS architecture.

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## **ABBREVIATIONS**

ADR: Average Daily Rate

ASP: Application Service Provider

CRO: Central Reservation Office

CRS: Central Reservation System

GUI: Graphical User Interface

OTA: Open Travel Alliance

PMS: Property Management System

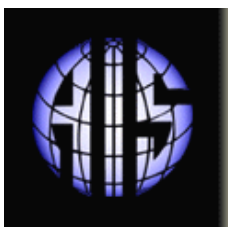
POS: Point of Sale

XML: eXtensible Markup Language

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Gabriele Piccoli is Assistant Professor of Information Technology at the School of Hotel Administration at Cornell University. His primary research and teaching expertise is in strategic information systems and the use of IT to create and appropriate economic value. His research appears in academic and applied journals including *MIS Quarterly*, *Decision Sciences Journal*, *Communications of the ACM*, *MIS Quarterly Executive*, *Harvard Business Review*, and *Communications of AIS*. He serves on the editorial board of the Cornell Hotel and Restaurant Administration Quarterly.

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