Heineken:

Using IBM Net.Commerce and Pervasive Computing to forge stronger customer bonds

Putting e-business to Work

everything

originates

from water.

everything

continues

to exist

through

Water

Goethe

Contents

List of Figures

Overview

e-business Case Study: Heineken

Based in Amsterdam, Heineken is the world's leading beer exporter, and the second largest brewer overall, with more than 100 breweries operating in more than 50 countries world-wide. Heineken has long been associated with good taste, good times and a worldly sensibility. On the strength of its quality product − served in a distinctive green bottle − the Heineken brand is recognized around the world. On the business-to-business e-commerce front, Heineken is also known as a leader, as evidenced by its "HOPS" supply chain management solution in the United States, which links the company's supply chain to its suppliers and intermediaries. However, as this case study shows, Heineken − with the help of IBM − has also begun to focus its e-business energies on the business-to-consumer market.

The past year witnessed a series of milestones for Heineken, including the launch of Heineken Shop, a business-to-consumer e-commerce site powered by IBM's Net.Commerce, (now part of the WebSphere Commerce Suite family), DB2 Universal Database, and the RS/6000 server. Heineken's most recent offering, known as BarTrek, is also its most unique, employing a mix of Web, satellite, and digital map routing technologies to create an interactive consumer services platform. Developed under the assistance of IBM's Pervasive Computing Practice, BarTrek is designed to assist consumers by directing them to "Heineken bars" via downloaded digital maps. As this case study shows, Heineken aims to use Pervasive Computing technologies to fundamentally change the way it communicates and interacts with customers.

Heineken's e-business Solution

☐ Transform business processes

■ Build new applications

■ Run a scalable, available, secure environment

☐ Leverage knowledge and information

■ Primary e-business solution attribute
☐ Secondary e-business solution attribute

Heineken

The Company

- World's leading beer exporter
- More than 100 breweries operating in more than 50 countries worldwide

The Web Sites

- *www.heineken.com*
- *www.heineken.com/bartrek/*
- *www.heineken.com/shop/heineken*

The Solution

- Business-to-consumer e-commerce and map-routing solution

The Benefits

- Increased effectiveness of advertising, increased customer retention, and strengthening of the Heineken brand
- Major increase in Web traffic since introduction of BarTrek, which received well over 4 million hits in December 1999
- 20% of visitors to the site downloaded BarTrek software
- Heineken.com receives 2.5 million hits per week and has 100,000 registered members

The Technology

- IBM Net.Commerce
- IBM Net.Data®
- IBM DB2® Universal Database™
- Java™
- IBM RS/6000®

Services

- IBM Pervasive Computing Practice
- IBM Global Services Content Hosting Services

e-business Solution Profile
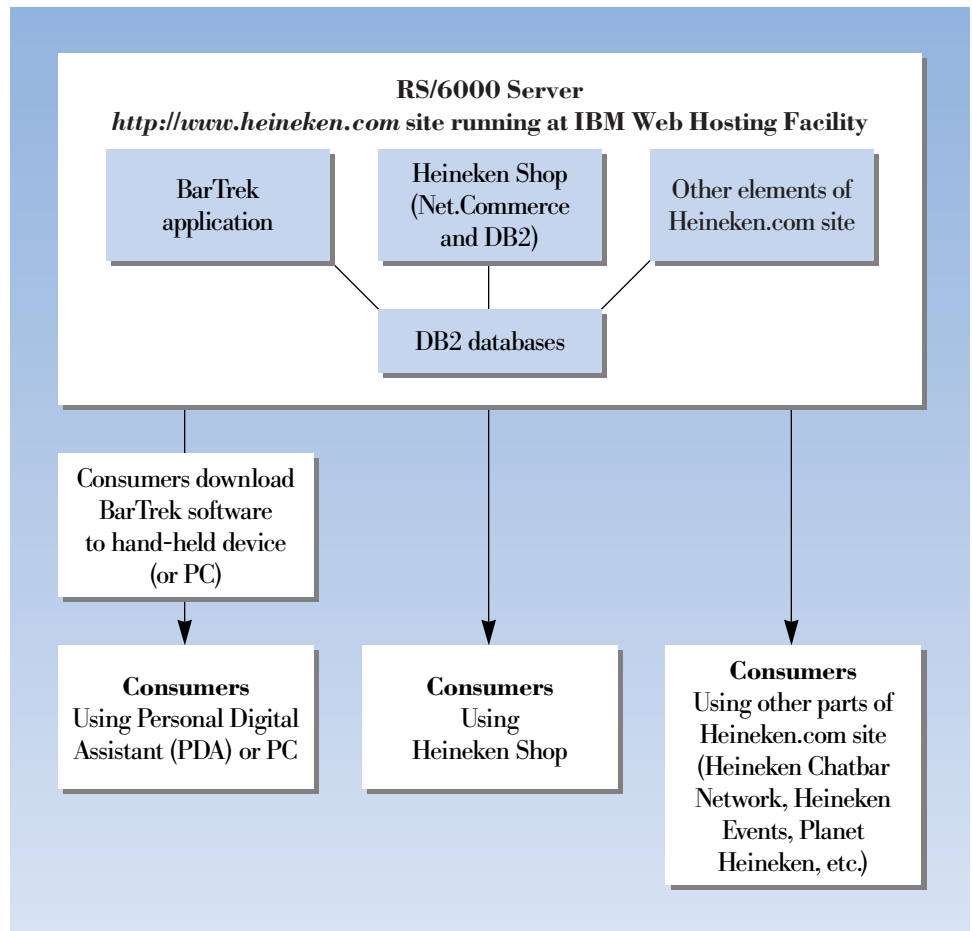
Source: Heineken N.V.

Figure 1. Basic System Architecture of the Heineken e-business Solution

In addition to being one of world's largest brewers, Heineken stands out as being one of the most international in terms of its customer base, with Heineken's flagship brand served in 170 countries worldwide. So it's not surprising that Heineken's recently launched e-business solution – a business-to-consumer platform known as BarTrek – is targeted to international travelers who would like to experience Heineken in the best bars while traveling abroad. In addition to promoting the Heineken brand, BarTrek enables Heineken customers to iden-tify – and precisely locate – outstanding bars in 15 cities worldwide. Designed by IBM's Pervasive Computing Practice and IBM Global Services, BarTrek employs a mix of Web and mobile communications technology, including satellite-based Global Positioning Systems (GPS) running on small hand-held devices, such as the 3Com Palm Pilot. To create the BarTrek solution, IBM assembled a roster of key vendors including 3Com (for the Palm platform), MapQuest (for digitized maps) and GPS Pilot (developer of the PDA application).

To create the BarTrek solution, Heineken selected what it considered the top "Heineken Bars" within 15 cities, with the main criteria being the quality of the experience consumers were likely to have. To develop content for the BarTrek site, Heineken's local country organ-izations created thorough descriptions of the bar (atmosphere, visitors, music, types of drinks, etc.). The locations of these bars were then marked on digital city maps on the BarTrek Web site (*www.heineken.com/bartrek/*). Consumers wishing to use the BarTrek

system download the BarTrek application from the site to their PDA device (*e.g.*, PalmPilot), with each individual map available for selection and download to the PDA. By connecting their PDA to a GPS unit, consumers traveling abroad can find their exact location within the city in relation to the Heineken bar they are seeking. In addition to locating select bars, BarTrek also provides users with city information.

Heineken positions BarTrek as a customer relationship management tool, since it facilitates interactive communication between Heineken and its customers. However, BarTrek's ability to gather and process users' personal information also provides Heineken with the means of better targeting its customers. Heineken's principal vehicle for gathering customer information is the "Virtual Bar," which enables users to discuss various subjects after disclosing information about themselves, including their demographics and tastes. According to José Evers, Heineken's Director of Interactive Marketing, this aspect of BarTrek provides Heineken with a potentially strong tool to create and deliver personalized marketing messages. "If a user in France has stated that he likes jazz music, we can easily send him a personalized e-mail informing him about a Heineken bar that's hosting a jazz concert or a Heineken jazz event," says Evers. "In this way we can create a link between the virtual world and the physical world."

Launched in November, 1999, Heineken's BarTrek solution comes on the heels of other consumer-focused initiatives, including the Heineken consumer site (*www.heineken.com*), which was also built by IBM and now receives 2.5 million hits per week and has 100,000 registered members. According to Evers, BarTrek further strengthens Heineken's Web-based customer relationship goals. "We seek to strengthen our relationships to customers by enabling *communication*, *interaction* and *transaction*," says Evers. "BarTrek is an example of a consumer-focused service that acts as a platform for communication and interaction with our customers."

In addition to BarTrek, the Heineken site also includes a number of other elements designed to strengthen the degree to which Heineken interacts with its customers. In the business-to-consumer e-commerce arena, Heineken offers Heineken Shop, an e-commerce solution powered by IBM Net.Commerce and DB2. Another feature of the site, the Heineken Chatbar Network, provides visitors with an environment to chat with other visitors, as well as to establish their own customizable bar. Launched in April 1999, Heineken Chatbar Network has thus far received some 220,000 total visits and serves a base of 20,000 users. Still another interactive feature, the Heineken Quest, is a highly popular interactive game now used by a loyal base of 100,000 players worldwide. Aside from BarTrek, Heineken's most significant recent advancement of its interactive goals is its one-to-one marketing program, which was launched at the end of 1999 as part of a general redesign of its Web site. Under the new program, Heineken allows visitors to provide information about themselves at the Web site, which is then used to tailor the information that is presented to them. In the future, one-to-one personalization will be driven by visitors' behavior at the Heineken site (*e.g.*, which chatbar they visited).

The underlying hardware platform for all of Heineken's consumer-focused applications is an IBM RS/6000 server, with the *www.heineken.com* site being hosted at IBM's Schaumburg, Illinois Web hosting facility. Other key IBM technology components used in the Heineken solution include Net.Data, which was used to develop the site, and DB2 databases, which are used by Heineken Shop to house catalog data and to track merchandise sales.

Featured IBM Technology

Pervasive Computing Practice

Pervasive computing aims to enable people to accomplish an increasing number of personal and professional transactions using a new class of intelligent and portable devices. It gives people convenient access to relevant information stored on powerful networks, allowing them to easily take action anywhere, anytime.

www.ibm.com/pvc/

Global Services Content Hosting Services

IBM Content Hosting Services, a managed Internet and intranet service from IBM Global Services, offers Web site hosting and management, freeing you to focus on developing compelling content. Content Hosting Services provides the platform, Internet connection, operations and support required to host content, applications and electronic stores on the Web. You can choose from a range of flexible hosting packages, from entry-level solutions to shared or dedicated platforms that run industry-leading software. Content Hosting Services also can create, implement and operate custom Web hosting platforms to meet the most demanding requirements.

www.ibm.com/ services/e-business/ content_hosting.html

Planning and Decision Environment

> *"We chose to work with IBM because they were the only vendor who could supply the whole package — the software, hardware and services that were needed to build the different applications on the site."*
>
> — José Evers,
> *Director of Interactive Marketing,*
> *Heineken*

The initial impetus behind Heineken's BarTrek initiative was provided by Heineken Virtual Agency, a spin-off of Heineken's Interactive Marketing organization launched in March, 1999. In addition to the Interactive Marketing organization, the Virtual Agency also consists of specialists from other media-oriented companies, with the goal of providing Heineken with guidance on how new media can be leveraged to more effectively reach and engage customers.

According to Evers, Heineken's recent consumer initiatives in general, and BarTrek in particular, represent a qualitative shift in Heineken's e-business strategy. "BarTrek and Heineken Shop were the key elements that were missing from our Web portfolio," says Evers. "In the past, we had focused our e-business strategy on intranets and extranets. We've now begun to expand our focus on how we can use the Web as a way to drive people towards places where they can enjoy our products while building a relationship between the consumer and our brand."

Heineken's selection of IBM as its core technology partner was in many ways an outgrowth of a long-standing e-business partnership. IBM had played a central role in building Heineken's extranet and intranet. However, as Evers notes, Heineken's selection of IBM to build the BarTrek and Heineken Shop solutions is even more a reflection of IBM's specific competencies in areas that would prove key to each project's success. First and foremost on this list is IBM's ability to deliver an end-to-end solution. "We chose to work with IBM because they were the only vendor who could supply the whole package — the software, hardware and services that were needed to build the different applications on the site," says Evers. "Also, in the case of Heineken Shop, the scalability of Net.Commerce was extremely important. Because we chose Net.Commerce, our e-commerce solution is now completely scalable, so we can build on it to respond quickly to new consumer demands, such as launching new country-specific e-commerce Web sites."

The other major factor weighing in IBM's favor was its ability to assemble and work with a diverse set of technology partners to construct a single, seamless solution. In the case of BarTrek, the need to assemble a multi-vendor solution was evident given the range of technologies that went into the solution, including mobile communications, GPS, and PDA application development. In addition to core technology vendors, notes Evers, IBM's experience in working with companies on business and marketing issues also proved critical. "IBM's experience in working with other vendors and suppliers allowed them to work seamlessly with our various Internet agencies to ensure that the online image was in line with our brand strategy," says Evers. "This was a very important factor since the Internet is now a very important marketing tool for us."

The final factor that influenced Heineken's choice of IBM was IBM's focus on the Pervasive Computing concept, of which BarTrek represents an outstanding example. "The fact that IBM has dedicated substantial resources to support the development and growth of Pervasive Computing signifies to us that they take it very seriously," says Evers, "and that was a major selling point. We were eager to work with IBM's Pervasive team on developing the BarTrek service because we share the same philosophy — Heineken needs to reach its customers on a personal basis and IBM's vision of Pervasive Computing allows us to do this."

Goals and Business Drivers

At the root of Heineken's e-commerce strategy is the goal of using new media — principally the Internet — to strengthen its relationship with its customers. According to Evers, the Internet presents Heineken with a unique opportunity to move beyond the limitations of traditional communications media, such as television, as a means of engaging its customer base. "Up until now we have relied predominantly on one-way media to communicate with our customers," says Evers. "Now the Internet gives us the chance to interact, communicate and transact, allowing us to start building a real relationship with our customers. This really captures Heineken's vision of using Internet-based interaction and transaction as a new way of building relationships."

While customer relationship management represents Heineken's broad strategic marketing goal, Heineken has also staked out increased beer sales as a longer term goal of its e-commerce strategy. The basic premise of Heineken's approach is that consumers can be directed to bars via information that they obtain through electronic media such as the Web. "We must focus on how we can use the Web to drive people toward real bars, which will allow us to build a relationship between our customers and our brand both online and offline," says Evers. "We expect this to lead to increased loyalty among our customers and consequently more consumption of Heineken beer."

Heineken has identified three distinct e-commerce strategies which involve using Internet-based communications and transactions to advance its strategic marketing aims: e-HORECA, e-tail, and e-tainment. Named for the HOtels, REstaurants, and CAfes segment to which it is targeted, Heineken's e-HORECA strategy involves using new media to create more interesting experiences for people in our bars and restaurants, allowing them to undergo what Evers calls a "true Heineken experience." Another significant dimension of Heineken's e-HORECA strategy is the creation of an e-services platform that affords Heineken customers the opportunity to translate their online experiences — such as their interaction in Heineken Web site's "Virtual Bar" — to real world experiences. To illustrate this, Evers cites an example of how people playing an online game at the Heineken Web site could be invited to come to a Heineken bar to play the same game in person. "In this way Heineken acts as the facilitator and the creator of a memorable experience for the consumer," says Evers. "We believe that our Heineken Web site has the unique ability to create a real-life community of interest from a virtual community of interest."

"...the Internet gives us the chance to interact, communicate and transact, allowing us to start building a real relationship with our customers. This really captures Heineken's vision of using Internet-based interaction and transaction as a new way of building relationships."

— José Evers

> *"By developing a solid foundation of understanding of e-commerce, we can more effectively develop and implement more sophisticated online strategies such as one-to-one marketing. This is the first step on a long road that we see as an experiment in technology-enabled social life."*
>
> — José Evers
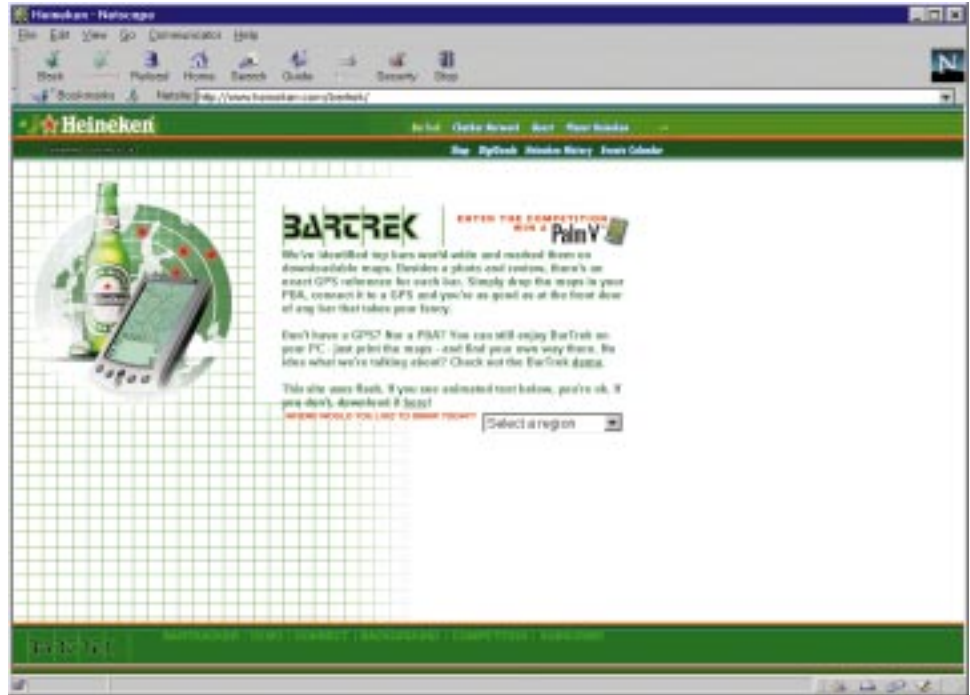
The second element of Heineken's e-commerce strategy, e-tail, is defined broadly, from selling Heineken branded merchandise over the Web via Heineken Shop, to delivering programs to consumers over the Web that are ultimately designed to increase sales of Heineken beer. In the latter case, notes Evers, increased sales would be achieved any number of ways, such as Heineken sending consumers a sales promotion that would be fulfilled "offline" at a physical retail outlet or by sending customers to selected online retailers. Evers views his company as being in the "learning stage" of its e-commerce development, and points to Heineken's eagerness to gain and benefit from experience selling online. "We built the Heineken Shop e-commerce site for two main reasons. The first was consumer demand for Heineken branded merchandise and the second was to give us a strong base of experience in business-to-consumer e-commerce," notes Evers. "By developing a solid foundation of understanding of e-commerce, we can more effectively develop and implement more sophisticated online strategies such as one-to-one marketing," says Evers. "This is the first step on a long road that we see as an experiment in technology-enabled social life."
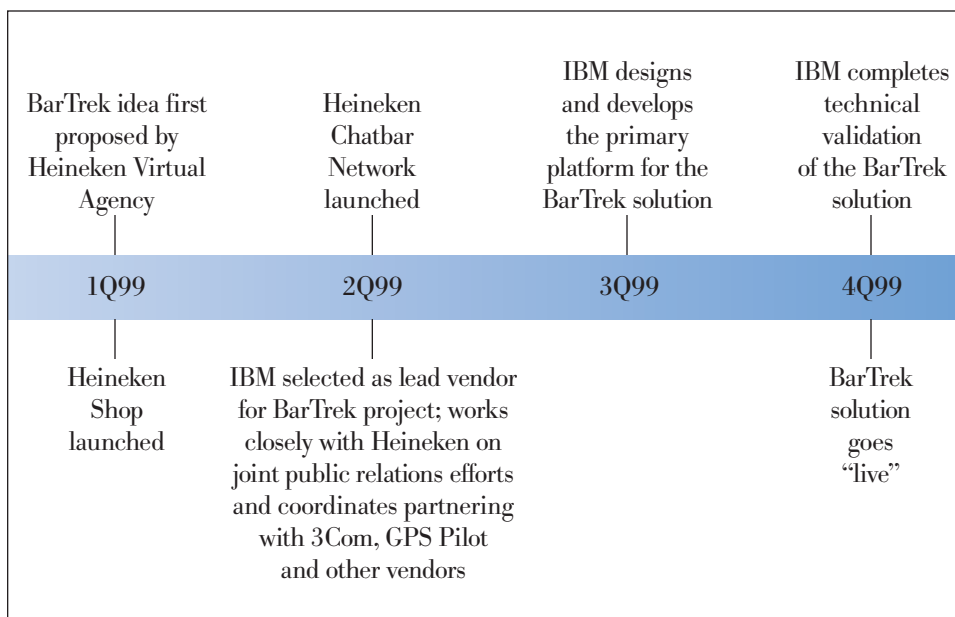
The third element of Heineken's e-commerce strategy, e-tainment, is focused on using the Web to increase the "interactivity" of Heineken's customer communications. Evers points to the Web's inherently interactive nature as clear evidence of its ability to match or even supersede the importance of traditional advertising as a means for Heineken to communicate with its customers. "When one considers that, in the United States, young adults spend almost as much time online as they do watching TV, it is evident that our marketing strategy must focus on strengthening this relationship through the use of the Internet."

Implementation Timetable and Strategy

BarTrek traces its origins to March, 1999, when the Heineken Virtual Agency first proposed the concept. After beginning its vendor selection process early in 2Q99, Heineken selected IBM's Pervasive Computing Division, in Europe, to design and develop the BarTrek solution. From 2Q99 to early 3Q99, IBM also worked closely with Heineken to publicize the BarTrek initiative, after which the design and construction of the platform began. In addition to designing and building the site, IBM was responsible for assembling and coordinating with other technology partners such as 3Com and GPS Pilot.

As IBM began designing the site early in the summer of 1999, Heineken began concurrently gathering information from its operating companies that would serve as the core content for the BarTrek system, including lists and locations of the bars that would be included in the system. Core development work on the BarTrek solution was begun in July, 1999 and completed in September, 1999. After performing technical validation of the BarTrek solution throughout October, 1999, the BarTrek site went live on the first of November, 1999. Heineken launched Heineken Shop in early 1999, after a design and development period of approximately one year.

In developing the Heineken e-business solution, IBM varied the mix of technologies applied based on the complexity of the underlying application architecture. As a rule, it employed DB2, Java JDBC, and Java servlets for more complex functions, while DB2 and Net.Data were used for simpler front-end applications. An example of the latter was the use of Net.Data macros to develop the front end of the Net.Commerce portion of the solution. An example of a more complex function − again associated with the Net.Commerce component of the solution − was the use of DB2, Java JDBC, and Java servlets to perform complex calculations related to shipping costs and taxes for products purchased through Heineken Shop. Java technology also played an important role in the development of the Heineken Chatbar Network, which was launched in April 1999. In addition to applets on the client side of the application (*i.e.*, browser), the solution also employs server-side Java applications as well as a servlet engine to perform all database access. The BarTrek solution also employs a Java application that allows customers to construct their own Virtual Bars.

BarTrek idea first proposed by Heineken Virtual Agency	Heineken Chatbar Network launched	IBM designs and develops the primary platform for the BarTrek solution	IBM completes technical validation of the BarTrek solution
1Q99	2Q99	3Q99	4Q99
Heineken Shop launched	IBM selected as lead vendor for BarTrek project; works closely with Heineken on joint public relations efforts and coordinates partnering with 3Com, GPS Pilot and other vendors		BarTrek solution goes "live"

Source: Heineken N.V.

Figure 2. Implementation Timetable for the Heineken e-business Solution

> *"The fact that IBM has dedicated substantial resources to support the development and growth of Pervasive Computing signifies to us that they take it very seriously, and that was a major selling point. We were eager to work with IBM's Pervasive team on developing the BarTrek service because we share the same philosophy — Heineken needs to reach its customers on a personal basis and IBM's vision of Pervasive Computing allows us to do this."*
>
> *— José Evers*

Return on Investment

"Since introducing BarTrek in November, we've had thousands and thousands of visitors on the Web site, of which approximately 20% have actually downloaded the BarTrek software. In the month of December, the BarTrek site has received well over 4 million hits."

— José Evers

As Evers explains, the main benefit realized through Heineken's successful implementation of Heineken Shop and BarTrek has been the "real world" exposure to business-to-consumer e-commerce it has gained. "While selling merchandise is not our primary business, the experience we've acquired through Heineken Shop has already been extremely valuable for us as an organization," says Evers. "Going forward, Heineken sees Internet-based e-business as being at the core of our marketing strategies, so it's crucial that we move up the learning curve as quickly as possible. Thus far, our e-commerce experience has been invaluable, and IBM's assistance has been an important part of that success."

In addition to valuable experience, Evers also points to the positive impact Heineken's e-business initiatives are expected to have as it moves forward with more sophisticated e-commerce initiatives such as one-to-one marketing. "We've already seen that Heineken Shop is a very powerful form of marketing for Heineken as a brand. Not only do we get valuable customer information from the order forms but we are also strengthening our brand," says Evers, who also sees BarTrek as an important marketing medium in the future. "BarTrek represents a completely new way of doing marketing communications because it adds a high degree of interaction in a way that television advertising cannot. It is a much more impactful form of advertising."

Because the BarTrek solution was deployed only recently, Heineken continues to define the metrics that it will track to measure the solution's success. Thus far, however, Evers sees one of the most fundamental metrics of the BarTrek program as the frequency with which it drives consumers to Heineken bars to partake in the "Heineken experience." But as Evers points out, the effectiveness of the BarTrek solution will be measured by more than just foot traffic and beer consumption — it will also include the overall effect on the consumer's experience. "We see BarTrek as a successful translation of the Pervasive Computing concept to a real world application that brings our e-HORECA strategy to life," declares Evers. "But the real determination of its success as a platform for interaction with the consumer will be the 'Wow' factor — whether it creates a consumer experience that really exceeds what that consumer expects from the Heineken brand. For us it is not about technology, it's about consumers."

So far, Evers is quite happy with what he's seen. In the short time since BarTrek was introduced, it has aroused a significant amount of interest and participation among consumers, notes Evers. "Since introducing BarTrek in November, we've had thousands and thousands of visitors on the Web site, of which approximately 20% have actually downloaded the BarTrek software," says Evers. "In the month of December, the BarTrek site has received well over 4 million hits. That's an outstanding showing for a consumer products Web site, and we see Heineken BarTrek as one of the key reasons for such heavy volume."

Aside from the benefits of the e-business solutions themselves, Evers also praises the IBM technology that underpins the Heineken Shop and BarTrek solutions. In the case of BarTrek, Evers specifically cites the ease of content management as one of the platform's greatest strengths. "Since Heineken performs content management for the BarTrek system, we considered it very important that ongoing changes could be administered very easily," says Evers. "For example, if we need to add a half-dozen bars to the BarTrek DB2 database, we can do it in a matter of minutes instead of a matter of days. In BarTrek, IBM has created an extremely intelligent content management system that has exceeded our expectations." Speaking of the Heineken Shop Net.Commerce solution, Evers reserves the highest praise

for the reliability, availability and scalability of IBM's hardware and software platforms. "For Heineken, the reliability factor has been an extremely strong benefit of working with IBM, and was one of the main reasons IBM was chosen as a technology solutions partner," says Evers. "If there are consumers out there who have taken the time and effort to go to Heineken Shop, we must be certain that we can deliver the uptime and availability to make it worth their while."

For Evers, the flexibility and scalability of the IBM Net.Commerce platform is an especially important factor in light of Heineken's plans to expand its e-commerce offerings by creating country-specific Heineken Shops. "Heineken is really unique among brewers because of the truly global distribution of our product," says Evers. "This creates special demands from an e-commerce platform, since we are determined to maintain the same high standards of customer service in all our markets around the globe. On this score, we're extremely happy with the performance we've gotten from Net.Commerce." Examples of Heineken Shop's more valuable features cited by Evers include its ability to immediately show a product's price in local currency, the ease and speed with which Heineken can create different shops in different countries, as well as the ease of content management.

Overall Benefits	
Area	**Benefit**
Marketing Communications	Increase in advertising impact
	Increased customer retention
	Major positive impact on Heineken branding
Increased Traffic at the Heineken.com Web Site	Major increase in Web traffic since introduction of BarTrek
	Heineken.com site averages 2.5 million hits per week; Heineken.com/bartrek site received well over 4 million hits in December, 1999
	20% of visitors to the site downloaded BarTrek software
Choice of IBM Technology	Highly flexible
	Highly scalable
	Highly reliable

Source: Heineken N.V.

Figure 3. Benefits of the Heineken e-business Solution

> *"We've already seen that Heineken Shop is a very powerful form of marketing for Heineken as a brand. Not only do we get valuable customer information from the order forms but we are also strengthening our brand."*
>
> — *José Evers*

Future Plans

In 2000 and beyond, Heineken plans to further refine and expand its entire range of e-commerce programs, including an expansion of the BarTrek initiative beyond the 15 countries now involved. Heineken also plans to deepen its involvement in online retailing by introducing a next-generation commerce site — also powered by IBM Net.Commerce — that will enable Heineken to conduct one-to-one marketing. Other e-commerce developments expected in the next year include a decentralization of Heineken's e-commerce infrastructure, such that major countries will have independent local e-commerce sites. To achieve this, Heineken plans to create an "international template" using the Net.Commerce platform, which it will then apply to individual country-specific sites.

As it broadens and deepens its range of e-commerce activities, Heineken also plans various initiatives designed to strengthen its relationship with customers. Specific initiatives cited by Evers include an expansion of Heineken's Web exposure, with the aim of better reaching Heineken's targeted audience. "We want to bring BarTrek and e-HORECA to a larger audience, which means that we need to strengthen our Web presence outside of Heineken.com," says Evers. "So as we fine tune the services and programs we have, we will also be finding new ways of bringing it to consumers. In the near future we expect programs such as BarTrek and Heineken Shop to have a deep impact on the way we interact and build relationships within our company and with our business partners. As we do, we are more confident than ever that our partnership with IBM will continue to provide us with the e-business tools to enable our vision."

**For more information,
please contact your**
IBM marketing representative.

Visit us at:
www.ibm.com/e-business

For information about
Heineken, visit:
www.heineken.com

IBM®

G325-6667-00