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Blake Ives
University of Houston, blake.ives@uh.edu

Gabriele Piccoli
Cornell University, gp45@cornell.edu

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CUSTOM MADE APPAREL AND INDIVIDUALIZED SERVICE AT LANDS' END

Blake Ives
Information Systems Research Center
University of Houston
blake.ives@uh.edu

Gabriele Piccoli
Cornell University

ABSTRACT

The case describes a hugely successful example of IT-driven strategy, the Lands' End custom tailored apparel initiative. In less than a year, 40% of Lands' End customers buying chinos and jeans from the firm's web site were buying tailored products. Over 20% of these customers never made a purchase over the web before. The case explores mass customization and web-based customer service initiatives while providing a rich opportunity to discuss the sustainability of competitive advantage derived from IT-driven strategic initiatives. The case also describes the cross-organizational and cross-border supply chain that Lands' End and its business partner, Archetype Solutions, Inc constructed as well as Archetype's extension of that chain to other retailers.

Keywords: apparel, jeans, online shopping

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

I. INTRODUCTION

A tall man, Larry Cantera[1] always found buying clothes a frustrating proposition. Only the largest US cities had high quality big and tall men's apparel stores; the selection was usually small and the prices high. Cantera was intrigued when Lands' End's custom tailored chinos program was announced in late October of 2001.

Using the web-based service, customers could custom tailor trousers based on length, waist size, and a number of other fit variables. Customers could also select among a variety of color and style options (e.g., cuffs, pleats). Only men's and women's chinos were included in the initial

[1] A fictional name for a real Lands' End customer.

offering. In April of 2002, customized jeans were added to the Land's End web site[2] and, in November of 2002, customized men's twill trousers and men's shirts were introduced. Cantera ordered five pairs of trousers and a dress shirt with French cuffs.

Others apparently found value in the program. By the end of September, 2002, 40% of all jeans and chino's sold on the Lands' End web site were custom made, far more than the 10% management initially hoped for. While 20% of Lands' Ends' web shoppers were new customers, an even higher percentage of customers choosing custom apparel were making their very first web purchase [Bass, 2002]. These results were achieved with no advertising other than on the firm's web site and in its catalog [Tedeschi, 2002]. They also, at least temporarily, defied the predictions of one expert in mass customization who believed that suits were a better candidate than jeans for customization because, while suit buyers expect delays associated with alterations, jean buyers want instant gratification [Pine, 2000].

II. MASS-CUSTOMIZATION

In the late 1990's mass-customization became increasingly popular[3]. A potentially industry transforming extension of mass-production, mass-customization was defined as a "process that uses the same production resources to manufacture a variety of similar, yet individually unique products" [TC^2, 2002].

Among better-known examples were: made-to-order assembly of personal computers, first popularized by Dell Computer and later by Apple, Gateway, and others; customization of makeup and beauty care products, pioneered by Reflect.com [Swartz, 2002]; customized automobiles, pioneered by Ford Motor Company (although the need to rely on dealer network inventories for order fulfillment limited the initial success of that and similar initiatives). Peapod, WebVan, MyWebGrocer, FreshDirect, and others, also invested heavily in customized order picking and home delivery of groceries with mixed results [Ives & Piccoli, 2002; Kirkpatrick, 2002, Palmer et al., 2000].

A Kurt Salmon and Associates study in 1997 found that 36% of consumers were willing to pay 12 to 15% more for custom apparel and footwear [TC^2, 2002]. Shoe and jean's manufacturers were among the first to extend customization to apparel, much of it targeting teens. A privately held Internet Company, Customatix, offered sneakers in thousands of combinations of colors, logos, graphics and materials. In 1999, Nike introduced their version of customized sneakers; by 2002 customization accounted for 20% of pairs purchased from the firm's web site [Swartz, 2002]. Levi Strauss was another early entrant in apparel customization; in 1995 Levi introduced their "Original Spin" program, which allowed customers to visit a Levi's store to be measured for jeans. The jeans were then custom-tailored and subsequently home delivered [Tedeschi, 2001]. Levi's attempt to sell merchandise, tailored or otherwise, online from their own web site was curtailed in November of 1999 when the firm announced its intentions to instead sell through the web sites of two of its major customers, J. C. Penney and Macy. [*Wall Street Journal*, 1999]

In November of 2001, Brooks Brothers introduced a "Digital-Tailoring" system for customized suits, jackets, trousers, and shirts. In 12 seconds the system could scan the customers' body and record 200,000 data points. These data points were then translated into exact measurements for 45 specific tailoring measurements (e.g., collar, neck). The customer could then choose from hundreds of fabrics and a variety of styles. Products were shipped in about three weeks. The entry price for trousers was $200 with suits starting at $700 -- $100 more than Brooks Brothers

[2] http://www.landsend.com
[3] See Gillenson et.al. [1999] for a tutorial on mass-customization.

own off-the-shelf suits, and $400 less than the firm's traditionally tailored ones [Colman, 2001]. In January of 2003, the service was still only available in the firm's New York City store.

Apparel customization, according to Kurt Salmon Associates [TC^2, 2002], came in three varieties: personalization, fit, and design. A golf shirt customized with an owner's initials was an example of personalization. Customization by fit could involve asking the customer to provide measurements or, as with Brooks Brothers, by visiting a measurement facility. The third type of customization, design, electronically drew the customer into the design process, for instance at Nike, by specifying the colors of the various components of a pair of shoes.

While customized products could fetch higher prices and, presumably, higher margins, it still had its detractors. Some felt that the many choices could be confusing for customers. Others feared for the integrity of the resulting customer driven designs. Still others questioned whether there was enough customer demand for customization. An analyst at Jupiter Research observed that:

> *"For the most part, consumers are perfectly content with mass manufacturing. [TC^2, 2002]".*

III. ABOUT LANDS' END

Lands' End, founded in Chicago in 1963 by its chairman Gary Comer, initially sold sailing equipment. It soon branched off into clothes and home furnishings and relocated to Dodgeville, Wisconsin. The company, according to one observer:

> *"cruised through the 1980s, ringing up annual sales and profit gains of over 40% by selling traditional threads such as khaki pants and rugby shirts. Stressing quality and value rather than fashion fads, it won loyal customers by setting a new standard for service: Calls to its phone centers were answered within 1.5 rings, merchandise was almost always available and orders were usually shipped within a day" [Merrick, 2002].*

In its capsule description of the firm, Hoovers.com described Lands' End as marketing,

> *"its products through its folksy flagship catalog and specialty catalogs (such as Lands' End Kids and Business Outfitters). It also runs about 30 outlet and retail stores in the US, UK, and Japan. Its traditional, casual apparel for men, women, and children is generally immune to the changing tides of fashion. Lands' End also sells accessories, home goods, luggage, and corporate gifts to its primarily middle-aged customers. Lands' End is expanding its Web presence worldwide, but catalogs continue to be its primary means of marketing [Hoovers, 2002].*

Land's End was one of the first major apparel firms to recognize the desirable economics of the Internet. In his letter to the shareholders in the 1999 annual report CEO, David F. Dyer, had noted that:

> *"more than 40 percent of our operating costs is spent in creating, printing and mailing catalogs. E-commerce selling costs are significantly less than catalog. Processing e-commerce orders is significantly less than taking a phone order … and unlike the bricks and mortar merchants, our investments in the distribution infrastructure are perfectly leveraged through e-commerce. Every e-commerce*

> *sale has the potential to be a more profitable sale than through the catalog" [Dyer, 1999].*

While the following year's results reaffirmed Dyer"s assumption that web sales were more profitable than catalog sales, his next letter to the Lands' End shareholders reflected a new understanding of the Internet market:

> *"Based on results from fall 1999, circulation tests to Internet buyers confirmed the synergistic relationship of our catalog to the Web. We know that withholding catalogs from Internet buyers does not generate online sales. We believe that a smaller catalog (fewer pages) with sufficient mailing frequency may produce the best results over time. Still, we will continue to refine our tests to determine the optimum frequency and pages for keeping our Internet customers apprised of Lands' End's exciting new products. The Internet was the fastest growing source of new customer names to our file last year. It is less costly to bring these customers to the Lands' End file through e-commerce than through printed media." [Dyer, 2000].*

From fiscal 1999-2002, Internet merchandise sales at landsend.com progressed from $61m to $138m to $218m to $299m. An income statement and balance sheet are reproduced in Figures 1 and 2.

	Jan 02	**Jan 01**	**Jan 00**	**Jan 99**
Revenue	1,569.1	1,462.3	1,319.8	1371.4
Cost of Goods Sold	853.3	817.2	706.6	727.2
Gross Profit	715.8	645.1	613.2	616.7
Gross Profit Margin	45.6%	44.1%	46.5%	45%
SG&A Expense	575.7	560.0	515.4	544.4
Depreciation & Amortization	26.9	23.4	20.7	18.7
Operating Income	113.2	61.7	77.1	59.7
Operating Margin	7.2%	4.2%	5.8%	3.6%
Total Net Income	66.9	34.7	48.0	31.2
Net Profit Margin	4.3%	2.4%	3.6%	2.3%
Diluted EPS ($)	2.23	1.14	1.56	1.01

Figure 1: Lands' End Income Statements
(1999-2002, in millions of US Dollars)

	Jan 02	Jan 01	Jan 00	Jan 99
Cash	122.1	75.4	76.4	6.6
Net Receivables	13.3	19.8	17.8	21.1
Inventories	227.2	188.2	162.2	219.7
Total Current Assets	402.6	321.7	289.4	294.3
Total Assets	599.1	507.6	456.2	456.0
Short-Term Debt	16.2	16.9	11.7	38.9
Total Current Liabilities	185.6	178.9	150.9	205.2
Long-Term Debt	0.0	0.0	0.0	0.0
Total Liabilities	198.4	193.5	159.9	213.7
Total Equity	400.7	314.2	296.2	242.5
Shares Outstanding (mil.)	30.0	29.3	30.1	30.5

Figure 2: Lands' End Balance Sheet
(1999-2002, in millions of US Dollars)

IV. THE ORDERING PROCESS

Lands' End customers could customize certain elements of color, fabric, and design. The men's Chino trouser section on the web site, for example, offered trousers in four colors, with or without pleats, with or without cuffs, loose or tight fitting, and with a short, regular, or medium height waist (rise). In addition, customers provided specifications for the length of their inseam, the width of their waist, and self descriptions of the size of their thighs (slim, average, full), the shape of their seats (four options), and their leg to body proportions (five options). Weight, arm length, as well as collar and shoe size were also collected.

Shirt customization included plain or patterned cloth, three different types of fabric, various colors, two types of pleating, five collar styles, four cuff options, and with or without a chest pocket. The web site included pictures of shirts or trousers that illustrated the various options. For custom shirt size, drawings of men's arms depicted various levels of musculature from which to select. Small browser windows also could be opened to provide larger images of color swatches, including some representation of fabric detail and patterns. Together the various options provided billions of variations for the customized products.

Bill Bass, Lands' End's Senior Vice President for e-commerce, joined Lands' End in 1999 after three years at Forrester Research Inc where he most recently served as group director of research for consumer e-commerce and new media [Merrick, 2001].

Bass was attracted to the position at least partially because he saw at Lands' End the three elements that he felt were conducive to a successful electronic commerce offering:

- proprietary products,
- a strong distribution infrastructure, and
- an established brand.

Their subsequent success on the Internet, he felt, was driven by the firm not setting up its Internet division as a separate business unit and because of the exclusivity of the merchandise [Merrick, 2001]. The former avoided internal competition and the latter reduced competitive threats from other vendors.

Bass believed that in a few years no major apparel company could afford not to offer custom tailored apparel. He viewed the Lands' End custom tailoring program as,

> *"… one of the most significant technology advances in the apparel industry… [that] allows the masses to get the perfect fit without hiring a tailor... no [apparel company] can afford not to use it" [Swartz, 2002].*

According to Bass, Lands' End's approach to tailoring was quite different than the approach used by other automated tailoring systems such as that at Brooks Brothers:

> *"Any type of custom clothes before, you've had to go into a store and get yourself measured and get [your] body scanned, which involved taking your clothes off, both of which for consumers is fairly inconvenient. Now compare that to what we've done online. You can now sit down in front of your computer and within two minutes answer questions that you already know. You don't have to break out a tape measure" [Rivera, 2001].*

Customized products at Lands' End ranged in price from $49 to $69 plus shipping. Lands' Ends margin was reportedly the same on custom and off-the-rack sales, but because the custom products were priced higher they yielded more total profit [Tedeschi, 2002].

After an order was placed, customers were sent a confirmation message (see Figure 3). Another was sent when the order shipped. Among other things, this message included the Lands' End guarantee:

> *"All Lands' End items are backed by our Guaranteed. Period.® promise: If you are not entirely satisfied with an item, return it to us at any time for an exchange or refund of its purchase price."*

Lowering return rates was one claimed benefit for custom tailoring. While estimates of returns for traditional mail order goods varied widely,[4] and Lands' End did not share this number, they had reported that returns for their custom products were similar to that experienced for their ready-made sizes (Tedeschi, 2002). This discrepancy in expectations might be explained by the fact that customers rating purchases as fair or worse were requested to return them for a refund and given a discount on a reorder. The details dissatisfied customers provided about product fit were then used to fine tune the algorithms used to create the patterns driving the design of custom made apparel, as well as to fine tune each customer's own electronic data models.

Another benefit of the customizing program was in customer loyalty. According to Bass,

> *Customer loyalty to our custom tailored clothing has surprised me. The level of feeling that customers have is amazing. This is particularly true for women. Fitting 100 some million women in the U.S. in 8 or 10 basic sizes as well as they would like is really impossible. Once they get a pair of jeans to fit some will order every color in every fabric. [Bass, 2002].*

[4] Tedeschi [2001] reports that 30% of all apparel bought on line is returned; an analyst with Kurt Salmon and Associates reports that the figure for Chinos bought on line is closer to 20% [Tedeschi, 2001]; Bass of Lands' end, reports that their returns are lower than the industry and that custom tailored returns are in line with those of standard products bought off the firm's web (Bass [2002]). .

Date: Thu, 07 Nov 2002 23:40:54 -0600 (CST)
From: Lands' End <orderinquiry@landsend.com>
Subject: Your Lands' End Order #999999
To: lcantera@aisnet.org

Thank you for shopping at Lands' End.

Your order #999999 is being processed.
Please refer to this number if you have any questions.
^^

$ 69.00	Your merchandise total
$ 7.95	Shipping costs
$ 0.00	Taxes

$ 76.95	Total for this order

Payment:
$ 76.95 on Visa **** **** **** 9999

^^
The following items will be shipped to:
LARRY CANTERA
1 MAIL STREET UNIT 1
HOUSTON, TX 77000-0000
United States

Men's Regular Custom Classic Stripe Broadcloth Shirt
Blue, Size: Custom-made for Me
$69.00

NOTE: Your Lands' End Custom products will ship separately
from other items sent to this address. They will be delivered
in 3-4 weeks regardless of the shipping method you choose for
the balance of your order.

^^
If you have questions about your order, please call us at 1-800-963-4816 (USA), or 608-935-6170 (Intl). You can also reply to this e-mail.

Thank you for shopping at landsend.com.

Are you getting our free e-mail newsletter?
You can receive a periodic "heads up" e-mail with the latest word
about new products, online overstocks specials, plus all the news from Dodgeville and environs.
Visit our sign-up page and subscribe Today.

http://www.landsend.com/newsletter.cgi

Figure 3: Order Confirmation

As new custom apparel categories were rolled out sales increased, as Bass explained:

> *Once a customer returns to the site to look at the new category, they are often inclined to also re-order from a category they had shopped before [Bass, 2002]*

V. CRAFTING CUSTOMIZED CLOTHES

Customized orders placed on the Lands' End web site were entered into a form provided by Lands' End's partner, Archetype Solutions, Inc (ASI). Using that form, the order, with a tracking barcode attached, was then transmitted to ASI's offices in California.

For each clothing line, ASI pattern makers were required to develop base patterns including allowances for the various styling alternatives. They then decided how the patterns would change based on the possible range of customer inputs. Software coders then automated all of these decisions.

A pattern for a particular customer's garment was a two-dimensional "drawing" of all the pieces to be cut and assembled into a garment. A pattern was designed using key measurements (e.g., for pants it would be waist, seat, front and back rise, thigh circumference, leg opening) and shape considerations (how curvy or straight, how much tapering, how much ease, etc.). Electronic patterns were precise representations of the garment to be prepared for a particular customer. Customer specific patterns were retained by ASI and not shared across its retail partners[5].

In November of 2001, *Bobbin Magazine*[6], an apparel-industry trade publication, awarded ASI one of that year's ten Bobbin All-Star Awards, for the best innovations in the business. The following is the award certificate's description of what happens once an order is received by ASI.

> *"Using Gerber's7 PDF 20008 and made-to-measure programs and Nester9 software, patterns are swiftly drafted. The trio of software programs allows Archetype to match the specific measurements and styling demands of the consumer [and] make and manipulate the patterns. Then the pattern files are sent electronically to select contract manufacturing locations, where Archetype has already installed its systems, including Gerber's automatic, conveyorized, single-ply DCS 3500 cutters10" [McElwain, 2001].*

It took less than 30 seconds to create a pattern for a particular customer. Individual patterns were then transmitted to a manufacturer, batched by the material selected. At the plant a roll of fabric was placed on the input end of the laser-driven cutter and then each pattern was automatically cut in single-ply, based on the pattern created by ASI [McElwain, 2001]. The specific stages in the selling, manufacturing and distribution process are shown in Figure 4.

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[5] Personal communication with Jeff Luhnow, ASI President, January 8, 2003. Luhnow notes that "they [retailers] have the customer information and sizing inputs, but the patterns and specifics are our property."
[6] http://www.bobbin.com
[7] http://www.gerbertechnology.com
[8] An expert system enhanced software package for developing patterns based on the entire garment rather than pieces of it (http://www.gerbertechnology.com/gtwww/01library/Literature/Apparel/PDS2000exE.pdf)
[9] Nester Software produces software for arranging elements of a pattern or patterns to minimize material waste (http://www.nestersoftware.com).
[10] The Gerber Technology DC3500 is an automated machine tool for cutting single (single-ply) or small layers of material (http://www.gerbertechnology.com/gtwww/01library/Literature/Apparel/dcs3500e.pdf).

1. Archetype supplies retailer with sizing questions and answer choices.
2. Consumer answers questions on web site, in store, or over phone[i].
3. Retailer sends Archetype the order file once a day.
4. Orders automatically processed by Archetype software in California.
5. Software produces electronic pattern and order file for each order.
6. Sent via e-mail to production facilities in Latin America or Asia.
7. Manufacturers are set up with one central server and five or six networked desktops located at different stages in production process.
8. Garments assigned unique id.
9. Fabric is cut using supplied digital pattern and automated cutter
10. Barcode ID label printed out as fabric is being cut.
11. Label is attached to the product.
12. Production order also printed out as fabric is cut.
13. Production order has a bill of materials listing necessary pieces for each garment (zippers, buttons, labels, pockets, etc.)
14. Garments are made, inspected and packed for shipping.
15. Garments scanned and status updated at each stage of process.
16. Garments shipped from factory to a third-party shipping center in the US.
17. Garments received by shipping center and individual items scanned.
18. Shipping labels are printed.
19. Items are express shipped to consumers.
20. Status report for all orders sent nightly to retailers.

Figure 4: Production and Distribution Process for Custom-tailored clothes[11]

According to Lands' End's Bass, the manufacturing process was challenging:

> *"When people are used to doing it with mass production, it is very difficult. Moving from standard manufacturing to modular requires significant training and testing before production can be started; it takes several months. But, using technology and our experience we have been able to bring the cost of custom apparel to a level comparable with mass production. For example, setting up a fabric to be cut takes 15 minutes. Unless you can batch a certain number of orders for that fabric, it is not feasible to offer the fabric for selection by customers" [Bass, 2002].*

According to Bass, the global reach of the tailored-apparel supply chain was long and expanding. The firm's chinos and jeans were currently produced in Mexico and the firm was looking to add further capacity in Asia. Dress shirts and higher-end trousers were to be made in Costa Rica and the Dominican Republic [D'Innocenzio, 2002].

[11] Personal communication with Jeff Luhnow, ASI President, November 18, 2002.

VI. ABOUT ARCHETYPE SOLUTIONS

Robert Holloway founded Archetype Solutions Inc. in early 2000. Originally named DNAwear, the firm started in a small facility in Richmond, Ca. It soon changed its name and re-located to Emeryville, CA, also located in the San Francisco Bay Area. That same year, the firm raised $1.5M in venture capital. In November of 2001, ASI attracted second round financing of $6.25M from Carlyle Venture Partners. In early 2001, ASI approached Lands' End for a possible partnership and, later on that same year, signed a deal with Lands' End to provide custom tailored jeans and chinos [McElwain, 2001]. The arrangement gave Lands' End a six-month exclusive license to ASI's proprietary customizing solution for each new apparel category roll-out. Lands' End also made a significant, but non-controlling, investment in ASI. In 2002, with Holloway still at its head, ASI employed over 40 people and held several patents pertaining to the customization process and the algorithms used to create custom made apparel.

Prior to founding ASI, Holloway was President of Levi Strauss North America, a firm he served for 17 years. His plan was to follow his vision about the future of apparel:

> *" What if you could go online to a store, or phone up a catalog, and in two or three minutes design your own pair of pants, design your shirt, whatever, and have it made for you as an individual so it's exactly to your specifications, and it fits you absolutely? And what if you could do it at a price that was fairly similar to what you pay for off-the-shelf [goods]? That's what we set about doing for two years - solving this fundamental issue for the apparel industry...Ultimately, what I'm excited about - and what we talk about - is redefining apparel" [McElwain, 2001].*

ASI's President, and co-founder, was Jeff Luhnow, previously a management consultant at McKinsey & Company and, before that, an engineer at Gore Fabrics. Luhnow, felt that finding manufacturers with the mindset to embrace customization was essential; so too was ensuring those manufacturers were also willing to invest:

> *"It does require some investment on their part up front - they are sharing part of the risk, hoping and assuming this idea will take off and that it will be something that they will be a part of for a long time. All our manufacturers need to be able to be adept and flexible, and able to learn new technologies fairly rapidly. They need to have automated cutting machines [because] part of what we send them is instructions for these cutting machines, along with all the files that help track the order through the manufacturing process" [McElwain, 2001].*

Contracts between retailers and independent manufacturers were negotiated in the usual manner but manufacturers were then required to license manufacturing and tracking software from ASI. As Luhnow explained, the licenses did not yet generate revenues for ASI.

> *"We recognize that [manufacturers] would more than likely pass that cost through to the retailer, and we like being in a position where we don't get anything from the manufacturer - it allows us to be more neutral and objective*[12]*."*

According to Luhnow, ASI sought to provide its retail partners with flexibility in production partners:

[12] Personal communication with Jeff Luhnow, ASI President, January 8, 2003

> *"Brands and retailers don't like to be locked into one apparel supplier for a category; we give them the flexibility to choose whichever manufacturer they want - then as long as that manufacturer can set it up and work with us, it will happen. The hard part is the set up of new products, styles and brands. That takes many months. Also, the brands and retailers have to trust us; we are making products with their name. That takes a while to build.*[13]"

Retailers paid ASI a license fee as Luhnow explained:

> *"There is an annual fixed component based on number of categories (men's chinos, women's jeans, etc) and then a per unit fee. The annual fee only partly covers our costs... so we only succeed if they sell a lot of units. That way, incentives are aligned*[14]*."*

Starting in the summer of 2002, ASI began to work with Bob's Stores[15], a regional apparel company, to develop a service similar to Lands' Ends. By October of 2002, Bob's was selling customized chinos from their web site. Bob's chinos were priced at $39.95 plus shipping and included several elements not available from Lands' End including the number and cut of the pockets. Initially the firm would rely on the same manufacturing plants that produced the Lands' End jeans, but offer different choices in color and fabric [Tedeschi, 2002].

Setting up a new retailer was not an easy process as an ASI executive explained to a reporter:

> *"'There's a ton of work that has to be done for each customer before we can launch. A lot goes into getting to know each customer's brand, and how best to customize with them" [Tedeschi, 2002].*

VII. OTHER TECHNOLOGY-DRIVEN INNOVATIONS AT LAND'S END

Lands' End had long been a progressive user of technology for enhancing customer service. The firm's web site, accessed over one hundred thousand times on a typical day, included several innovations intended to enhance service to Land's End 2 million customers.

Bass, expressed strong views about the use of innovative technologies:

> *"I never, ever want anybody on our site to go, `Wow, what cool technology,' I want the technology to be like the oxygen in the air -- you don't even notice it because it works so well" [Merrick, 2001].*

Nevertheless, the firm did try each year to roll out, usually in September or October, an innovation on the Web Site that attracted attention.

[13] Personal communication with Jeff Luhnow, ASI President, November 18, 2002
[14] Personal communication with Jeff Luhnow, ASI President, January 8, 2003
[15] www.bobsstores.com

> *"Nothing changes on a retailer's web site once you get into November. So we launch in September or October – no one has time to copy our innovations."[Bill Bass, 2002]*

For the 2001 holiday season, the innovation was customized chinos. In 2002 it was custom-tailored men's shirts.

In 2000, the Smithsonian recognized Lands' End for "outstanding achievements in leading the information technology revolution to enhance and enable the relationship between company and customer [Lands' End, 2000a]. These innovations included, "ImageTwin" ™, a body scanning system that created a precise virtual model of the consumers body[16], "My Virtual Model" ™, a visualization of the customer on which selected merchandise could be displayed, "My Personal Shopper," employing a sophisticated modeling tool to make personalized recommendations based on responses to a few questions, "Shop with a Friend," that permitted friends to shop together, but from different locations, on the Lands' End web site.

Internet instant messaging services were another Lands' End innovation in technology-driven customer service:

> *"Lands' End uses real-time communication to help online shoppers find what they're looking for. Surfers visit the company's Web site and click on the Ask Us button if they have a question about chinos, T-shirts or jeans. After typing in their names, they are greeted by a cheery representative, whom they are introduced to on a first-name basis. Questions are answered promptly and courteously, with a healthy dose of exclamation points" [Dukcevich, 2002].*

VIII. LANDS' END ACQUISITION BY SEARS

On May 13, 2002, Sears Roebuck announced [Sears, 2002] its intention to acquire Land's End for $62 per Lands' End share, or approximately $1.9 billion -- an $11 premium over the stock's closing price the previous trading day [Lewis, 2002].

The terms of the agreement left day-to-day management of Lands' End in the hands of its current executive team, though the members of Lands' Ends Board and founder Comer no longer were involved with the firm. The acquisition gave Sears an exclusive right to sell the Lands' End lines in their retail stores. By November of 2002, 180 stores would be carrying the line [*Milwaukee Journal Sentinel*, 2002] and by the fall of 2003, the Lands' End lines were to be available in all of Sears' full-line stores [Merrick, 2002]. Dave Dyler, Lands' Ends CEO took over responsibility for Sears direct selling operations including Sear's remaining specialty catalog sales operations as well as the Sears.Com web site [Lewis, 2002]. Sales from these catalogs amounted to about $500 million in 2001 [Merrick, 2002].

Cantera, a professor at a local business school, stood before a too short full-length mirror and admired his new blue and white striped custom-tailored French cuffed shirt and black twill pants. While expensive at $69.00 each (plus $7.95 in shipping costs), they fit better and were far less expensive than he would pay at the high-end big and tall men's store where he normally shopped in Houston.

[16] Though popular with many customers the service was discontinued after a year of use because it was felt by Lands' End executives not to have improved service [Merrick, 2001].

IX. CONCLUSIONS

Sitting down at his desk, Cantera's mind returned from fashion to his upcoming lecture on electronic retailing. He could predict some of the questions the Lands' Ends experience would raise for his students: How popular would custom tailored clothing become and what would be the implications on apparel retail and catalog sales? And how, if at all, would Sears strategically leverage this element of its new acquisition?

He also wondered who in the retail channel would be the winners and who the losers if customization caught on? On one hand, there were the giant retail chains including Sears who, with their acquisition of Lands' End, could now test the waters of customization. At the other extreme, was Amazon's newly opened apparel store where the customer could select from over 400 brands. Among these were Lands' End's lines, but also Levi's, Tommy Hilfiger, and Van Heusen. Just the previous day, Cantera received a broadcast email from Jeff Bezos, Amazon's CEO and founder, boasting the results of the firm's one-week pilot of the apparel store. In that short time, over 40,000 items of apparel were sold.

Another question was the role, if any, Archetype Solutions, and their likely future competitors would play.

"As usual," Cantera thought with bemusement, "this example raises far more questions than it answers."

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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 paper on the Web, can gain direct access to these linked references. Readers are warned, however, that

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ABOUT THE AUTHORS

Blake Ives is Past President and a Fellow of the Association for Information Systems and Director of the University of Houston’s Information Systems Research Center. He is a past Editor-in-Chief of the *Management Information Systems Quarterly* and twice served as Conference Chair for the International Conference on Information Systems. Blake is also a founder of ISWorld. A frequent contributor to *CAIS*, Blake also published in *MIS Quarterly, Information Systems Research, Sloan Management Review, Journal of Management Information Systems, Decision Sciences, Management Science, Communications of the ACM, IBM Systems Journal*, and variety of other journals. He has been a visiting Fellow at both Oxford and Harvard. He holds the Charles T. Bauer Chair of Business Leadership at the C.T. Bauer College of Business at the University of Houston.

Gabriele Piccoli is Assistant Professor of Information Technology at the School of Hotel Administration at Cornell University. His research interests relate to the business application of network and Internet technologies in support of internal activities, such as training and teamwork, and external activities, such as customer service. His research also appears in *MIS Quarterly*, *Information Technology and Management,* and the *Proceedings of the International Conference on Information Systems*.

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