THE STRATEGIC MANAGEMENT OF ENVIRONMENTAL ISSUES: A CASE STUDY OF KODAK'S SINGLE-USE CAMERAS.

by

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B.A. Religion, 1989
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Submitted to the Sloan School of Management
in Partial Fulfillment of
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ABSTRACT

Environmental Management, as a management practice, is beginning to evolve into an issue that all future managers will need to understand. The social pressure for cradle-to-grave product responsibility and for products that do not harm the world we live in are creating increasing pressures for responsible business practices which include redesigning how we manufacture products and how we recycle or re-use them when their useful life is over. Almost all industries are being affected by this new level of consumer awareness. The reality of managing more and more complex products as government- and socially-mandated policies are put into place is requiring a new perspective for managers. This thesis looks at a specific product and how managing environmental issues affects the strategic management of the product line.

The single-use camera market has taken the photo industry by storm in the last seven years. It has created a market niche that is generating millions in revenues to those firms that were able to get into the market early. This case looks at the development of the single-use camera market segment and the management issue addressed by both Fuji and Kodak.

The case systematically addresses the market development, strategic positioning and recycling policies and programs within each firm. It then delves into the details of managing recycling and re-use at Kodak. It addresses issues of design for re-use, design for reverse compatibility, reverse distribution networks and the added complications all of these programs create in managing the product line.

The case concludes that there are social and economic advantages as well as disadvantages to designing for re-use or reverse compatibility. The case's primary goal is as a tool to expose future managers to the more complicated world that they will face.

Thesis Supervisor: Henry D. Jacoby

Title: William F. Pounds Professor of Management
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THE STRATEGIC MANAGEMENT OF ENVIRONMENTAL ISSUES: A CASE STUDY OF KODAK'S SINGLE-USE CAMERAS.

Kodak Cameras. You press the button - we do the rest.
- 1888 Advertisement for the Kodak Camera

A single-use camera is, simply put, a roll of 35mm film in a box equipped with a focus-free lens, shutter and a film advance mechanism. Some come with flashes, and are designed to be waterproof or take telephoto or panoramic photographs. We consider the Kodak FunSaver™ and Fuji Quicksnap™ product lines to be recent innovations in the photographic industry. We can see, however, from the quote above that the first single-use-camera was introduced in 1887 by the Eastman Dry Plate and Film Company of Rochester, New York. Although the original Kodak was returned for reloading and processing, camera manufacturers have not historically designed their cameras to be returned after each use. Today, however, the concept that made the Kodak camera a revolutionary success in 1887 has returned to the marketplace in larger numbers than consumer analysts ever expected.

Today's "one-time-use" cameras are made primarily of plastics and metal and are recycled and/or re-used by their manufacturers. Recycling and re-use creates additional dimensions for the management of the product lines, from product design to the reverse distribution network for the camera's return and the marketing of this new and unique line of cameras.

This case study will look at the introduction of the single-use-cameras, the competition between Kodak and Fuji and the management issues raised by the recycling
and re-use of single-use-cameras at Kodak. This case will address current management issues at the Single-Use Camera Division of the Eastman Kodak Company including:

- Design for Re-use and Design for Reverse Compatibility as a way to maximize cost benefits of a recycling/re-use program.
- Development and management of a reverse distribution network.
- Design of an incentive system that will motivate photofinishers to return the cameras to Kodak.

1 KODAK

1.1 The History of Kodak

George Eastman began his career as an amateur photographer in the 1870s. As he became more interested in photography, he became intrigued with the mechanics of taking and developing pictures. Through this curiosity, he developed a process, which he patented in 1879, for manufacturing and mechanically coating his own dry plates¹.

With money out of his own pockets, and without quitting his day job in a bank, he began a dry plate business in 1880 - The Eastman Dry Plate Company. In 1881 a family friend named Henry Strong became Eastman's partner. He brought capital (a $1,000 investment) and years of business experience to the small firm. By the mid-1880s the Eastman Dry Plate Company had a reputation for high quality emulsion and plates².

George Eastman experimented continuously with new photographic technology. No sooner had he established his company as a premier dry plate manufacturer than he expanded his research and development into roll film. He began to manufacture what was then called "American Film" - the first attempt at cellulose-based rolls of film. In 1888 The Eastman Dry Plate and Film Company introduced its first camera - The Kodak:

... With a fairly fast shutter speed and a short fixed focal length...the Kodak camera was easy to operate...The $25 Kodak camera came loaded with enough film to make one hundred

²Collins. p. 42
exposures. When the photographer had finished shooting his pictures, he simply boxed up the camera and mailed it back to the factory. For $10 the film was developed and printed, the camera reloaded with another one-hundred-exposure roll of film, and prints, film and camera were shipped back to the customer...³

It was a small, leather-bound box in which a roll of film was pre-loaded into the back of the camera. The film was then exposed with a simple shutter mechanism and then wound forward for another picture. This camera did not have a counter to track how many pictures had been taken. Instead, it came with a small notebook attached to keep track of the photographs. It was a simple design with a single lens, a shutter and a cocking mechanism for the shutter. The advertisements read: "...Photography in Three Motions...Anybody Can Use It..."⁴. In late July 1888 the cameras were first available for sale. A month later they were already being returned for film processing and reloading. Less than a year after its introduction, 13,000 cameras had been sold and the company was processing sixty to seventy rolls per day⁵. In May of 1892, the Eastman Dry Plate and Film Company became the Eastman Kodak Company.

By 1960, eighty years after its founding, the Eastman Kodak Company had net earnings of more than $100 million per year, 75,000 employees worldwide and over 100,000 shareholders. It was no longer just a supplier of photographic goods. Approximately 30% of its business was in the area of cellulose derivatives, distillation production and other industrial chemicals. It marketed more cameras per year than any other company in the world. To give a sense of the magnitude of the company, the sprocket perforations that are punched out as part of film manufacturing weighed over a ton daily⁶. Kodak's yellow box was one of the world's most recognizable symbols.

³Collins, p. 45
⁴Collins, p. 57
⁵Collins, p. 60
⁶Collins, p. 339
By 1980, Eastman Kodak's one-hundredth anniversary, the average photographer was able to take quality, affordable 35mm pictures through the introduction of the Instamatic™ camera by Kodak. Kodak's worldwide sales exceeded $10 billion a year, $8.2 billion of which was from sales of photographic goods. By the mid-1980s about 20% of company earnings were the result of chemical sales.

During the 1980s, Japanese photographic companies were challenging Kodak's leadership in the film market. Through its quality reputation and intensive research and development efforts, Kodak had managed to stay ahead of the competition - up to that point.

1.2 Competition between Kodak and Fuji

In the early 1980s, Fuji entered the U.S. market with Fuji film. It was an attempt to make a dent in the virtual monopoly Kodak had in the U.S. film market. Kodak failed to see the changing dynamics Fuji created in the marketplace and therefore did not respond to Fuji's aggressive marketing and sales tactics. As Fuji gained market share in the U.S., making significant in-roads in all areas of Kodak's photography business, Kodak was forced to become more aggressive. Fuji was able to take advantage of a weak yen in the early eighties and undercut Kodak on price. Kodak responded by increasing R&D efforts, layoffs and restructuring. The result was that the decreasing profits experienced in the mid-eighties were replaced with a record 100 product introductions and increased productivity levels in fiscal 1987. Kodak had been forced to stand up and take notice of Fuji.

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7 Collins, p. 339
8 Collins, p. 357
10 Leslie Helm. p. 134.
It wasn't until 1985 that Kodak moved a research and marketing team to Tokyo\textsuperscript{11}. Kodak began selling film in Japan before the turn of the century, but it had never done more than sell products there. In 1985 it realized that in order to compete with Fuji it had to make a dent into Fuji's home market and become a more globally directed firm. It was no longer enough to sell in Japan; it now had to target the Japanese market.

A key aspect of Kodak's response to Fuji was a "me too" tactic in which Kodak paid careful attention to Fuji's products and copied them where necessary to eliminate competitive advantage\textsuperscript{12}. This necessitated a level of cooperation within Kodak that had not previously been present.

By the end of the eighties, increased competition between Kodak and Fuji on both film and paper products was affecting the margins of both companies. The competition was based on price discounting to affect market share, which caused a squeezing of profit margins for both firms at a time when the U.S. market was particularly sluggish\textsuperscript{13}.

2 SINGLE-USE CAMERAS

2.1 The Introduction of Single-Use Cameras

One method of increasing profits when market growth is declining is to find a way to open a new segment within the current customer base: to find, or create, an undeveloped market niche. This is what single-use cameras did in the photographic industry. The single-use camera tapped a segment of consumers that had not previously been served by the players in the photo industry.

A unique feature of the single-use camera is that the film is loaded and "wound out" of the canister so that as the user takes pictures and winds the film it is being

returned to the canister. This means that there is no rewinding necessary. Also, single-use cameras "offer an inexpensive alternative to exposing more elaborate cameras to adverse weather conditions, damage, loss or theft."\textsuperscript{14}

It is generally believed among the photo industry press that Fuji introduced its HR100 "Utsurundesu" camera (literally translated as 'film with lens') to address a need it saw among Japanese consumers. There was a large gap at the low end of the camera market: there were no inexpensive non-SLR (Single Lens Reflex) cameras. The HR 100 was an attempt to develop and fill that market niche in Japan.

According to Nick Wegman, Worldwide Marketing Manager of Kodak's Single-Use Camera Division, Kodak's marketing staff saw this opportunity in Japan as well. When Kodak became aware of Fuji's development of the HR 100, it was working on several different products to address a low-end non-SLR market niche. The research was primarily a "skunk works" formed by Kodak's camera division to look at several potential ideas for this market. Kodak knew that Fuji was planning to announce its new product line at the PMA (Photo Marketing Association) trade show in 1986. In response to Fuji's planned product announcement, Kodak made the strategic decision to announce its new product as well, even though the product was still in the "drawing board" stage of development. This could be considered a classic oligopoly move between these two dominant market players. In a situation in which there are a few (in this case two) significant market players, the firm that covers the market niche first has a significant advantage. Kodak therefore felt that it was strategically necessary to appear to be ready to introduce a comparable product to Fuji's, even though the product was nowhere near introduction.

That announcement by Kodak effectively increased the competition for product development and product introduction between Fuji and Kodak\textsuperscript{15}. It created a driving

force for each firm to reach the market first in order to establish its own models as the consumer’s first choice.

Kodak did not view the Single-Use Camera Division as strategic when the first single-use camera was introduced. Kodak’s strategic goal as it entered this segment was to create a stand-alone business that would not interfere with film sales\textsuperscript{16}. It was considered to be "incremental picture taking" and not part of its corporate strategy. Corporate headquarters viewed it as a potentially profitable enterprise that wasn’t getting in anybody’s way.

In July of 1986 Fuji launched its first "film with lens" camera: the Fujicolor Super HR 100. It used a 110 film cartridge, and the process of removing the film destroyed the camera. This camera was truly a disposable design\textsuperscript{17}.

In 1987 Kodak began shipping the Kodak Fling\textsuperscript{TM}, which also used a 110 film cartridge. The camera was barely larger than its Kodacolor 200 film cartridge - smaller than its Fuji counterpart. Kodak viewed the Fling as a line-extension type of product. It built off of cameras they were already making and created a market niche opportunity\textsuperscript{18}. Shortly after the introduction of the Fling, Fuji announced the introduction of its Quicksnap\textsuperscript{TM} product line of 35mm disposable cameras. In early 1988, Eastman Kodak countered with the Kodak Fling 35mm camera. Both companies, soon afterwards, introduced their respective 35mm disposable cameras in a flash version as well.

Because it was seen as a small niche product with limited market potential, Kodak’s strategy for camera development was initially reactive: it came out with the cameras that Fuji had in order to deny Fuji market dominance. After Fuji’s introduction of the flash version of its Quicksnap camera, however, Kodak developed its own flash camera and then began to look for additional niches that the single-use cameras could be

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\textsuperscript{16}Conversation with Nick Wegman.

\textsuperscript{17}Conversation with Bruce Alexander 15 October 1993.

\textsuperscript{18}Conversation with Nick Wegman.
used for. Kodak's strategy began to change. It was trying to get its manufacturing
volume up, as a way to make the cameras more affordable, by looking for further line
extensions of the product\textsuperscript{19}. This product proliferation has led to stiff competition
between Kodak and Fuji as they have sought ways to further segment the market.

It took several years for the industry to begin to react to the implications of single-
use cameras on the dynamics of the marketplace:

...Four years after the first single-use ...cameras were
introduced in the United States, the photo industry is still
divided over how to categorize the products. Many view one-
time-use cameras as a division of film sales because they are
inexpensive, include film and are primarily supplied by major
film manufacturers. Disposable cameras are also frequently
sold along side film in many mass merchandise stores. But
these disposable units are also rudimentary fixed-focus point-
and-shoot cameras...\textsuperscript{20}

Although Fuji entered the market first, by 1990 Kodak had caught up in product
development. It was the first to introduce both panoramic and underwater cameras
worldwide. Both cameras were very successful in Japan, the first because of the penchant
in Japan for taking group photos and the second because of the popularity of snorkeling.
In 1990, Kodak sold over 7 million panoramic cameras in Japan and could not keep up
with market demand\textsuperscript{21}.

Currently Kodak and Fuji dominate the single-use camera market. The other
competitors in the market segment include Konica and several store brands manufactured
by a handful of suppliers. Kodak and Fuji's product lines both include 35mm cameras
with and without flash, panoramic cameras, telephoto cameras and underwater cameras

\textsuperscript{19}Conversation with Nick Wegman.
\textsuperscript{20}Greg Tarr. p. 132
\textsuperscript{21}Ronald E. Yates. "Japan's Markets Still Monopolistic Maze for Foreign Firms. With Marketing
Patience, Kodak Finds a Foothold". \textit{Chicago Tribune}. Copyright 1991 Chicago Tribune Company.
(water resistant to a depth of eight to ten feet). Both firms are introducing smaller, more compact, 35mm cameras into the market as this case is being written.

2.2 The Beginning of Recycling

By 1989, environmental organizations had begun to realize the implications of the fact that these new cameras were designed to be thrown away. A great backlash ensued which pressured all players in the market to respond with recycling programs. In May and June of 1990, Kodak and Fuji, respectively, introduced recycling programs for their single-use cameras. Additionally Kodak renamed its product line the Kodak FunSaver™ to avoid the inference that the cameras were simply throwaways. Additionally, both companies added "recyclable" in their ads and at point of purchase.22

For both firms this recycling program consists of paying the photofinisher 5 cents per camera, and shipping costs, for bundles of 50 cameras or more. Both companies will accept the other's cameras, but will not pay the 5 cent incentive for them.23 In the first year of the new recycling programs, Kodak reclaimed more than 1.5 million cameras in the U.S. and Fuji reclaimed 250,000 cameras in the U.S.24

2.3 Single-use Cameras Today

The single-use camera segment of the photographic industry has developed beyond anyone's initial expectations into a major market segment with growth potential. Therefore, it is receiving a lot of attention from both manufacturers and consumers:

...one-time-use cameras are emerging as one of the fastest growing product categories in the photo industry. Apparently, the product has clicked in consumers' minds as a great way to take quality pictures with virtually no hassle...the camera's

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24Fahey, p. 17
expendability encourages users to take pictures in circumstances where they may not have been willing to take a camera before...25

Since the introduction of single-use cameras in 1987, this market segment has seen phenomenal growth. In 1988 only 3 million cameras were sold in the U.S. By 1992, 21.5 million cameras were purchased in the U.S. alone and over 55 million cameras were purchased in Japan. That represents a growth rate of 30-50% per year26. In 1987, only 3.3% of U.S. households had ever used a single-use camera, in 1992 over 20% of households had used one. Of the single-use cameras purchased in the U.S., 79% are Kodak brand and 17% are Fuji brand27. Well over half of these cameras are purchased at discount department stores, drugstores/pharmacies or supermarkets. Additionally, 69% of

**EXHIBIT 1**

![Single-Use Camera Sales in the U.S.](image)

Source: 1993 PMA U.S. Consumer Photographic Survey

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Americans who have purchased single-use cameras say that they bought them while traveling or on vacation\textsuperscript{28}. Nearly 75\% of all single-use camera purchases are done on impulse\textsuperscript{29}. See Exhibits 1, 3 and 4 for a breakdown of market growth and consumer demographics. Exhibit 1 shows the growth of Single-Use Camera sales in the United States. Exhibits 3 and 4 show consumer characteristics of Single-Use Camera users and reasons of purchase.

Nearly half of the cameras purchased are the standard camera with flash. Additionally, more than half of the users take all the exposures in the camera at one shooting\textsuperscript{30}. This market, however, has a lot of seasonality and cyclical behavior. The majority of the underwater cameras are sold in the summer months and there is a second cycle during peak winter vacation season. The flash cameras, however, are sold mostly around the winter holiday season. The product cycle of single-use cameras begins in March around Spring Break and ends around Labor Day. The winter months are a much slower time, overall, for single-use camera sales\textsuperscript{31}.

The average price of this line of cameras ranges from around $8.50 for a standard (without flash) camera to $12 for the telephoto camera. Nearly fifty percent of the people who purchase these cameras have never given any thought to what happens to the cameras once they have returned them to the photoprocessor\textsuperscript{32}. Currently, in the U.S., societal trends show that consumers are becoming more aware of the "cradle to grave" concept of product development. This specifically relates to how products are made and what happens to products once their useful life is over. This poses an interesting issue for competitors in the single-use camera market segment: if environmental issues are having increasing influence in this industry as a whole, is there a way to significantly affect

\textsuperscript{28} --. \textit{1993 PMA Consumer Photographic Survey}. p. 58.

\textsuperscript{29}Greg Tarr. p. 132.

\textsuperscript{30} --. \textit{1993 PMA Consumer Photographic Survey}. p. 150.

\textsuperscript{31}Conversations with Bruce Alexander.

\textsuperscript{32} --. \textit{1993 PMA Consumer Photographic Survey}. p. 59.
customer perceptions and increase market share by focusing on these issues in the overall product strategy?

**EXHIBIT 2**

![Pie chart showing Global Photographic Market in 1991: US 41%, Japan 28%, Germany 7%, E. Block 10%, Other 3%, Europe 11%]  

Source: Wolfman Report '91 - 92

Initially, Kodak and Fuji competed only on price points, but today manufacturers of single-use cameras compete on meeting customer needs and providing high quality affordable pictures. Customer needs include the number of pictures per camera, durability of the camera and actual camera size. The Japanese market, in particular, is demanding that the standard camera (with and without flash) be small enough to fit in a shirt pocket. Although, as mentioned above, consumer awareness of what happens to the cameras after use seems to be low, Kodak and Fuji still feel that the "greenness" of the camera is an important customer attribute.33

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33 Conversation with Nick Wegman.
**EXHIBIT 3**  
Single Use Cameras, Selected Consumer Characteristics

<table>
<thead>
<tr>
<th>Camera Purchase</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gift</td>
<td>12%</td>
</tr>
<tr>
<td>Purchased for Self</td>
<td>88</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purchasers by Age Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25 Years</td>
<td>9%</td>
</tr>
<tr>
<td>25 - 34 Years</td>
<td>29</td>
</tr>
<tr>
<td>35 - 44 Years</td>
<td>27</td>
</tr>
<tr>
<td>45 - 54 Years</td>
<td>15</td>
</tr>
<tr>
<td>55 Years and Older</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purchasers by Sex</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29%</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purchaser by Household Income</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $10,000</td>
<td>5%</td>
</tr>
<tr>
<td>$10,000 - $20,000</td>
<td>10</td>
</tr>
<tr>
<td>$20,000 - $30,000</td>
<td>14</td>
</tr>
<tr>
<td>$30,000 - $40,000</td>
<td>27</td>
</tr>
<tr>
<td>$50,000 and Over</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: Wolfman Report '91 - '92

---

**EXHIBIT 4**  
Breakdown, by reason of purchase, of Single-Use Cameras Used in Past Twelve Months

<table>
<thead>
<tr>
<th></th>
<th>Standard (no flash)</th>
<th>Camera with flash</th>
<th>Panoramic</th>
<th>Telephoto</th>
<th>Underwater</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased for Self</td>
<td>30.7%</td>
<td>22.8%</td>
<td>12.7%</td>
<td>2.1%</td>
<td>5.8%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Purchased as Gift for Household Member</td>
<td>6.3</td>
<td>3.7</td>
<td>1.1</td>
<td>0.0</td>
<td>1.1</td>
<td>12.2</td>
</tr>
<tr>
<td>Purchased as Gift for Someone Outside Household</td>
<td>2.1</td>
<td>1.5</td>
<td>1.1</td>
<td>0.0</td>
<td>0.5</td>
<td>5.3</td>
</tr>
<tr>
<td>Received Free from Contest</td>
<td>6.3</td>
<td>2.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Total</td>
<td>45.4</td>
<td>30.2</td>
<td>14.9</td>
<td>2.1</td>
<td>7.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: 1993 PMA U.S. Consumer Photographic Survey
2.4 Recycling and Re-use at Fuji Photo Film

Based on the research of the writer, which included conversation with Fuji Photo Film U.S.A., there is no centralized international recycling and re-use policy for Fuji's Quicksnap product line. Fuji Photo Film is structured as "an international business run by operating units based in each regional market"\textsuperscript{34}. It is not clear from Fuji Photo Film's public information how its international operating units manage the re-use and recycling of the Quicksnap line. In Japan, however, Fuji has a comprehensive re-use program in place.

The Japanese market for single-use cameras has dynamics that are different from those of the United States and other international markets. In Japan, there are no anti-trust issues surrounding the bundling of single-use cameras and film processing. Therefore, the market is structured so that the consumer can buy a single-use camera, pay up front for film processing costs, and then return the camera to the manufacturer for processing and film development. This allows for a much higher yield of cameras returned after use than is seen, on average, in the U.S. market.

Fuji re-uses 70\% of the mechanical parts in its line of Quicksnap cameras. Currently they recover 70\% of the Quicksnap cameras sold in Japan and are working to increase recovery rates around the world\textsuperscript{35}.

Fuji Photo Film refers to this as a closed-loop manufacturing process because the camera comes back to the manufacturer after each use. In 1992 Fuji built an automated line for the recycling of its single-use cameras next to its major film plant in Ashigara, Japan. The line is able to classify collected items, sort them, remove paper packaging, dismantle cameras and then inspect them for re-usability\textsuperscript{36}. The line was put in to handle domestic cameras only.

\textsuperscript{34}Fuji Photo Film Co., Ltd. 1992 Annual Report. p. 3.
\textsuperscript{35}Fuji Photo Film Co., Ltd. 1992 Annual Report. p. 6.
\textsuperscript{36}Kodak interoffice memo. 10 August, 1993.
The disassembly line was built to create greater efficiencies in the recycling and re-use of these cameras. Because the Japanese single-use camera market is significantly larger than the U.S. market, Fuji gains economies of scale in the disassembly process, making an automated system more cost effective than a labor-intensive sorting process.

In the U.S., Fuji has a very different program in place. Although the program was officially put into place in 1990, when Fuji began collecting single-use cameras for recycling and warehousing them in their two facilities in Carlstadt, NJ and Cypress, CA\textsuperscript{37}, the cameras were not actually being recycled until 1992. The recycling program, as it stands today, collects single-use cameras at these two warehouses and then ships them to a recycling center in Texas. This center then breaks down the cameras and grinds the plastic parts into reusable plastic pellets suitable for the manufacturing of new products\textsuperscript{38}. All of the other material in the cameras is disposed of. Occasionally the circuit boards used as part of the flash are sold on a secondary market, but most often everything but the polystyrene plastic camera body (including the batteries) is thrown away\textsuperscript{39}. Fuji does not find that there is any cost benefit in returning the cameras to Japan for re-use and recycling at their manufacturing facility in Japan. Senior Product and Packaging Manager Doug Fachnie, who is in charge of Fuji's recycling program here in the U.S., believes there is no money to be saved through returning even the small expensive components in the Quicksnap camera, like the flash circuit boards or the shutter mechanism.\textsuperscript{40}

\textsuperscript{37}Conversation with Bruce Alexander, Recycling Engineer.
\textsuperscript{38}Conversation with Mr. Dough Fachnie, Senior Product and Packaging Manager, Fuji Photo Film U.S.A. 15 October 1993.
\textsuperscript{39}Conversation with John Chad, President of Talco, Inc. Fuji Photo Film's recycling center. 16 October 1993.
\textsuperscript{40}I have two hypotheses as to why this might be the case. First, there could be differences in the manufacturing costs of Kodak and Fuji making it economically cost effective for one firm and not for the other. Secondly, because Japan is the largest market for single-use cameras, and Fuji has a significant portion of the market, its international sales may be small enough that international camera returns are not economically justified. Both hypotheses suggest that there could be economies of scale for camera returns that are making it economically unfeasible for Fuji.
2.5 Recycling and Re-use at the Single-Use Camera Division of Kodak

Kodak has a highly developed reverse distribution network for the return and disassembly of its single-use cameras. By weight, 86% of the camera is recycled or reused. The cameras are inspected upon return and reconditioned and reloaded with film. The cardboard casing for the camera is burned in Kodak's incinerator and used to provide energy and steam to Kodak manufacturing facilities. Once out on the assembly line for the final stage of assembly (film loading and testing), a recycled camera is indistinguishable from a new camera. Kodak's long-term goals are to make its single-use cameras of almost all recycled material.

Bruce Alexander, Recycling Engineer at Kodak's Single-Use Camera Division feels that it was easy to develop the infrastructure to enable camera returns: the cameras were already coming back to photofinishers. Kodak only had to provide the process to get them from the photofinisher back to Rochester. There are approximately 40 large photofinishing labs in the U.S. and over 1,000 mini-labs. The labs put the cameras into a box, enclose a form with their name and how many cameras are in the box and send the box collect via common carrier to Kodak. The photofinishers' account is then credited 5 cents per camera. Shipping costs are approximately 4 cents per camera, bringing the average cost per camera returned to 9 cents each.

3 The Development of Recycling and Re-use at Kodak

3.1 The Recycling Process at Kodak

When photofinishers return the cameras they are sent to The Out-Source, a recycling center run by the Rochester Rehabilitation Center. The center is designed to

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41The section that follows is from personal research conducted at Kodak's international manufacturing facility in Rochester, NY and from visits to its primary recycling center (The Out-Source) also in Rochester. The author's conversations were with Bruce Alexander, Recycling Engineer in the Single-Use Camera Division of Kodak and Sandy Saylor, Sales Manager at the Out-Source.
42Mason Resnick. p. 45.
43The section that follows is from personal research conducted at Kodak's international manufacturing center in Rochester, NY.
provide a work environment for physically and mentally disabled workers as well as people recovering from alcohol or drug addiction. Their piece rates are competitive with other recycling centers and suppliers in the area. Along with initial sorting and inspection, The Out-Source is also a supplier of one of the subassemblies of the FunSaver camera. They do initial assembly from both reconditioned and new parts to meet the supplier's weekly order rates for camera components.

The entire inspection and disassembly process is done by hand. When the cameras arrive on the shipping dock they are weighed in to determine approximately how many cameras are in the box, and the shipping forms are collected to be sent to Kodak for account crediting. The boxes are then opened and inspected to make an initial check of the quality of the cameras.

The boxes are then taken to an automated belt that weaves through part of the shop floor. As the cameras move along the belt, the employees begin initial separation and sorting of the cameras. It is at this stage that the flash circuit boards are removed and placed in crates for inspection and re-use, the underwater camera cases are removed for separate recycling shipments, the batteries are removed, and non-Kodak cameras are separated out for exchange with their manufacturers or disposal. Non-Kodak cameras cannot be recycled with Kodak cameras because Kodak cannot be sure of what type of plastic is in a competitor's camera. If different types of plastic are recycled together it will affect the quality of the recycled plastic. Approximately 6% of returned cameras are Fuji cameras.

The Kodak cameras are then sorted by type for further inspection or disassembly. The camera types are color coded to facilitate manual sorting. It is during this sorting stage of the recycling process that "previous generation" cameras are separated out for complete disassembly. The component parts of the old camera that are still in the new camera are taken to be reconditioned and the rest of the camera is completely broken down to be recycled into new components.
Once a camera has been separated by type it is then inspected for re-use. The front and back panels of the camera are removed for remolding into new camera panels, and the camera body itself is inspected for any nicks or marks. The camera panels are recycled because they are often scratched in return shipment which would affect the look of the camera if the panels were placed on a new camera. Additionally, if there are any nicks or marks on the camera body that would allow light to leak inside the camera exposing the film and affecting the finished picture quality.

Once these cameras have been approved for re-use, they are sent to the Kodak suppliers who build up sub-assemblies for Kodak. It is up to those suppliers to meet Kodak camera demand through both reconditioned and virgin cameras. Each supplier must manage its assembly lines to ensure they have enough reconditioned or virgin material to meet their assembly needs in any given week. Kodak provides the suppliers with all new camera components required for assembly.

Sometimes cameras have been damaged in shipment to The Out-Source and cannot be re-used. Occasionally, photofinishers have sent cameras back in boxes that were originally used to store photoprocessing chemicals. If any chemical residue was left in the box, the cameras cannot be handled and the entire box cannot be re-used. Those cameras are taken for disposal. Cameras that can be recycled are completely broken down by type of plastic (polycarbonate, polystyrene, or polypropylene) and metal components. The lens aperture is saved for re-use and the brass metering lever is also saved in order to track how many cameras have been broken down.

The plastic bodies of the camera can be re-used up to six times and the flash circuit board up to ten times. This exceeds "world standards" for re-usability which state that a product must be re-used a minimum of five times in order to be considered a re-usable product. As the body of the flash circuit board is approved, it is marked (literally by a black marker) by the inspector to indicate that the part is being re-used. This allows Kodak to track how many times a part has been through the recycling center.
3.2 Kodak's Attitude toward Recycling and Re-use

Kodak strongly believes in recycling the plastic from the cameras that have to be completely broken down, even though it is not cost effective. It is part of their effort to keep a closed loop manufacturing process in place and keep down their sourcing requirements of parts like the flash circuit board which costs Kodak $3 each. Additionally, an international recycling program helps Kodak to achieve source reduction goals mandated by various countries around the world. The more Kodak is able to increase the number of cameras that can be re-used the more cost effective the recycling program will be.

Kodak believes that this recycling/re-use program is advantageous for large-volume photofinishers. The large-volume photofinishers earn more than the 5 cents per camera they are paid because their waste management costs decrease by not having to landfill the cameras. The smaller mini-labs, on the other hand, do not receive proportional benefits through camera returns. It may take several months, if not longer, for enough cameras to accumulate to justify a shipment to Kodak (or another competitor). For these low-volume photofinishers, the necessity of having a minimum number of cameras in order to return them, combined with the need to separate by brand, is a disincentive.

Kodak benchmarked return policies when it developed its recycling program. In a comparison with companies like Anheuser-Busch, Coca-Cola and PepsiCo it determined that a 5 cent return fee was an acceptable standard rate. Additionally, Kodak noted that after ten years of bottle and can return programs, these companies were getting approximately 60% in actual returns. In Kodak's first full year of reverse distribution it received only 25% of cameras back. Today, however, they are currently getting over 50% of cameras back. Mr. Alexander feels that they are exceeding the return rates expected from their benchmarking studies.
Kodak is trying to significantly improve both its return and re-use rates. Re-use rates, or yields, are the percentage of cameras that can be re-used out of the total number of cameras returned to the recycling center. The more that are returned and re-used the better it is for the environment and the more cost effective it is for Kodak. The weak link, Mr. Alexander feels, is with the small photofinishers. The question he faces right now is how to improve the process so that small photofinishers will participate more. Is it a matter of incentive or convenience for the small mini-labs? Re-use yields are an economic issue for Kodak. Therefore, the management of the reverse distribution program is being centralized to improve return and re-use yields.

Top management now supports continual improvement goals for the recycling process at Kodak. This support makes it easier for Mr. Alexander to get the necessary cooperation to increase return and re-use rates, thereby making the process more effective over time. A systematic understanding of the current process will facilitate the coordination between Kodak and its suppliers and recyclers to improve the recycling program currently in place.

3.3 Complications from Recycling and Re-use

Sandy Saylor, Sales Manager at The Out-Source, manages all of the Kodak projects that the rehabilitation center is currently undertaking. She is in charge of the day to day operations of Kodak's recycling program. Sandy believes that the two greatest challenges for the recycling and re-use program are the management of the cyclical nature of the market and education of the photoprocessors on the best way to return cameras to increase yield.

The cyclical nature of the market means that on any given week, The Out-Source does not know how many of any type of camera will come through the shipping doors. Additionally, in the summer months more cameras are returned than they can physically
process and in the winter months they have overcapacity. The volatility of the return pattern creates an area of uncertainty as to how many cameras will be returned when.

3.4 Return Policies

When recycling first began at Kodak, each international division was able to decide how to structure a return program. Today, Kodak sets a standard policy in all international divisions for the worldwide return of its single-use cameras. The cameras must be returned worldwide as mandated by corporate headquarters. Each international division of Kodak around the world is responsible for the collection of all single-use cameras at a central location and Kodak-Rochester then arranges for shipment back to the United States for sorting and inspection. Kodak allows each country to decide how it wants to encourage photofinishers/consumers to return the cameras. For example, the Canadian division of Kodak offers a similar 5 cent credit for cameras returned. In addition, they make contributions to the World Wildlife Federation with a percentage of the savings they realize through recycling and re-use. In Western Europe, there is no deposit offered for the cameras because executives feel "recycling is a more active part of the culture", although it is interesting to note that the return rate is only 20%. Cameras are returned from as far away as Australia.

In the summer of 1993 Kodak began a re-use program for the AA batteries used in its flash cameras. Many of the flash cameras returned to The Out-Source arrive without batteries, but enough are returned to make it an issue. These batteries cannot be re-used in new single-use cameras because the partially depleted batteries increased the flash recharge time beyond what customers find acceptable. The batteries, however, still have useful life in them. Therefore Kodak instituted a procedure at its recycling center whereby all returned batteries are collected and shipped on pallets to United Way Charities. The batteries are then used for toys, games and electronic equipment that are donated as part of charitable contributions.
The worldwide recycling and re-use program allows for lower unit manufacturing costs of the cameras which means that there is a lower transfer cost for the international divisions. Kodak is unwilling to discuss the actual transfer costs, but they will admit that their recycling program has reduced costs. The lower transfer costs saves money for every division around the world. Many international divisions make contributions to local environmental charities with the cost savings. By trying to re-use as many cameras as possible they not only reduce their sourcing requirements, but lower the average cost of components per camera. If a part is re-used in several cameras each camera has a reduced cost for that component.

3.5 Design for Re-use

As discussed above, when environmental issues and the impact of a disposable camera were first brought to the attention of the public, Kodak was selling a camera that could not be re-used. The models at that time were sonically welded together during assembly. This meant that the photofinisher would literally have to tear open the camera to remove the film. Therefore, the camera could only be disassembled and its parts shredded and recycled. Since the secondary markets for plastics and metal are not large, the early days of recycling for Kodak cost the company money, on net.

There are many issues surrounding camera design that would be of interest to the reader. I would like to highlight three issues that are extremely relevant to this analysis. One issue relates to the second generation camera design that made the camera re-usable. The next design issue was to change the camera's basic structure to improve the re-use yield of the cameras that are returned. Thirdly, is the area of designing for reverse compatibility. Reverse compatibility is when new camera designs incorporate

44The average cost per unit (estimated by the casewriter) to manufacture and load film into these cameras ranges from over $2 for the standard camera to a little over $4 for the flash camera. These costs are approximate calculations made by the case writer based on information gathered at Kodak. These values are designed to provide a reference for the reader and not to be an exact number for the purposes of financial calculations.
components from the previous generation of camera allowing some parts to still be re-
usable between the generations.

The second generation camera was re-designed by Kodak so that the front and
back panel of the camera could be snapped on and off, facilitating the removal of the film
by the photofinisher. This change also allowed Kodak to re-use the camera body. See
Exhibit 6 for a sample camera design. Additionally, the second generation camera
contained features that prevent a photofinisher from reloading the camera with film for
re-use/re-sale. All single-use camera manufacturers have made design modifications to
avoid this problem.

Kodak has noticed, however, that most photofinishers do not put the panels back
onto the camera before shipping them out. Often this results in small nicks or scratches
on the camera body that could cause light leaks. As discussed above, when this occurs
the camera is not re-usable. Therefore, for the third generation camera (available since
June 1993) Kodak redesigned its standard 35mm FunSaver to have a film pod that snaps
off the body of the camera45. This pod is easy for the photofinisher to remove, and allows
the body of the camera to stay intact during return. This will increase the re-use yield of
the camera which makes the entire program more cost effective for Kodak and solves a
major design problem in the re-usability of the second generation camera.

An additional way in which Kodak designs for re-use is in the actual redesign of
new cameras. The new camera, called "the mini", re-uses some of the previous
generation's major components. One part they re-use is the flash circuit board. As
mentioned above, that part costs approximately $3 to manufacture. By designing the new
camera so that it can use the old circuit board Kodak has effectively saved millions of
dollars in potential manufacturing costs of new flash circuit boards and the waste disposal
of the old circuit boards. The greater the amount of design for re-use and design for

reverse compatibility that Kodak does, the more cost effective their manufacturing and sourcing will be.

Designing for reverse compatibility is another aspect of product development at Kodak that has not been adopted by Fuji. Each new generation of single-use cameras at Fuji has been built around a new camera platform. This, in the long run, affects the usefulness of, and economic benefit from, global return and re-use of the cameras.

In the five years that Kodak has been manufacturing single-use cameras there have been three generations of the product line introduced.

3.6 The Complications of Re-use

Re-use has not been an easy program to develop at Kodak. Every step along the value chain can be complicated through the process of re-using the single-use cameras. Although designing for reverse compatibility is an environmental advantage, it can restrict the type of design changes that can be made from one generation to the next, possibly affecting the market appeal of the new camera design.

An example of how this conflict between market appeal and re-usability plays out can be seen in the new "mini" camera. The current consumer trend in the single-use camera segment is towards smaller, more compact cameras that still take quality pictures. This means that the manufacturer must try to design the camera in such a way as it is barely bigger than the film, lens, flash and winding mechanism necessary to take a picture. Since Kodak decided to re-use the flash circuit boards, they limit how small they can make the cameras. If they designed a whole new camera body and flash circuit board they would be able to make the camera smaller than if they re-use parts from the previous generation of cameras. Therefore, they have restricted their ability to meet changing consumer tastes quickly.

Conversely, Fuji must face is that each generation of single-use cameras has been different enough from the last to eliminate the possibility of re-use. They are unable to
gain from the scale advantage of reverse compatibility with their parts, but they are able to
design each new generation of camera to meet all of the customer needs Fuji sees as
relevant.

The section of the value chain in which the most complications occur is in manufacturing. It is typical for a firm to make minor modifications to the camera design as complications in production or glitches in camera use are discovered. This needs to be avoided as much as possible because every time there is a modification made to the camera on the manufacturing end it has an impact on camera recyclability and re-usability on the reverse distribution end. It is critically important that Kodak and Fuji be sure of their camera designs before beginning large-scale production runs in order to avoid the complete breakdown and recycling of cameras.

The reverse distribution and sorting of cameras is the most complicated aspect of re-use. If the cameras were simply recycled and not re-used, like Fuji Photo Film USA does then there would be minimal labor costs. All cameras would be shipped out for recycling and then broken down and sold on a secondary market. When the products are sorted, inspected and re-used, the process is increasingly more complicated.

As new generations of cameras are introduced, or minor modifications are made to camera design, the sorting and disassembly process becomes more complicated and costly. The previously-built camera may no be longer re-usable, and may require separation from the main camera recycling area. On average, it takes approximately three to five months for a camera to be returned for re-use after being manufactured at Kodak.
4 STRATEGIC ISSUES AT KODAK

4.1 Strategic Planning for Single-Use Cameras

The corporate structure of Eastman Kodak is broken into manufacturing, business units, and sales. Manufacturing is treated as a separate entity. The business units are organized around product lines and each manager is responsible for the overall planning or destiny of the products in that unit. The business unit manages the manufacturing of the product lines it is responsible for. The sales function is divided into four regions - North America, Europe, Asia and Latin America - and each region sells products from all of Kodak's business units. The Single-Use Camera division is one of many business units at Kodak.

As discussed above, there was initially no strategic management done for the single-use camera product line. It was seen simply as a product with niche-market potential that would continue as long as it was profitable and did not adversely affect film sales. The recycling and re-use of the cameras was also initially viewed in a hand-off manner. It was felt that it had to be done even though it was a money-losing proposition.

In the last year, however, Kodak has begun to realize the magnitude of the single-use camera market and the potential revenue it can generate for the company as a whole. This product line has gone from a quiet little division to a hot and exciting market. The U.S. and Japanese markets combined sold almost 77 million cameras in 1992. The number of units sold combined with the increased segmentation of single-use cameras has combined together to provide a dynamic and profitable market that Kodak is paying heed to. There are currently business goals that include cost reduction through increased recycling and re-use.

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46 The paragraphs that follow are based on the writer’s personal interviews with Kodak employees - specifically Nick Wegman, Worldwide Marketing Manager of the Single-use Camera Division.
Kodak currently has a long-term goal of 100% recycling and re-use. Nick Wegman, Worldwide Marketing Manager of the single-use cameras feels that a 100% goal is probably not achievable, but to target anything less would be unacceptable. Kodak will take recycling and re-use as far as it can go, economically, in the single-use camera division and other divisions of Kodak.

Since recycling and re-use began in 1990 it has been managed both by Kodak and its marketing partners (retailers, photofinishers, etc.). There was no central incentive structure to improve return yields. Within the last year the management of recycling and re-use of the cameras has become part of Kodak corporate strategy for the product line. The corporate strategy is to strongly encourage its regional divisions (North America, Europe, Latin America, Asia-Pacific) to optimize recycling and re-use programs through increased coordination with Rochester and improving the infrastructure to facilitate reverse distribution. Key countries have been identified at corporate headquarters based on volume of cameras sold and Kodak is focusing on designing policies to improve camera yields. Design for recyclability and re-usability is therefore part of the corporate strategy of single-use cameras at Kodak.

4.2 Marketing of Single-Use Cameras

From the sales and marketing segment of the value chain, issues of consumer awareness and product positioning are raised. Nick Wegman feels that the successful marketing of single-use cameras is a formidable challenge for Kodak today.

The photographic industry has traditionally been a "dirty" industry. There are a lot of chemicals used in both the manufacture and processing of film. The industry, however, is not viewed as such by consumers. Single-use cameras, through their name, give the perception of disposability and environmental unfriendliness to consumers. This has forced consumers to make a conscious decision about the use of these cameras, which is a decision they would not have to make before the purchase of other cameras. The
perception of "greenness" is a marketing issue faced by both Kodak and Fuji. Mr. Wegman believes it would not be effective for Kodak to advertise the recycling and re-use of the single-use cameras until the yields for the cameras have increased. It is an area in which Kodak has an advantage, but in which there is still a lot of room for improvement. Mr. Wegman outlined several issues raised in the marketing of these cameras once return and re-use rates are significantly higher.

The first is consumer communications. Kodak needs to increase awareness of the recycling and re-use of single-use cameras in order for the consumer to make an informed decision. This can be done through advertising, point of sale advertising, packaging and brochures. In fact, the new packaging for single-use cameras in Canada (and eventually in the U.S.) indicates how much of each camera can by recycled and re-used as a percentage by weight. It is important to tell the consumer that Kodak is recycling and re-using the cameras, Mr. Wegman says, as long as 100% return is not implied, since that would be misleading the consumers.

Secondly Kodak can work within the photo industry to increase return rates. By providing, perhaps, a different incentive structure Kodak could more effectively close the manufacturing loop of single-use cameras. By closing the loop, yields would increase and advertising of the recycling and re-use of the camera would be effective.

The third point is how this advertising will affect other segments of Kodak's business. To advertise that Kodak is being environmentally friendly with its single-use cameras could invite attention to other divisions of the business that are dirtier. The ramifications of this kind of advertising is part of the reason why Kodak has not advertised the recycling and re-use of single-use cameras before.
5 Conclusion

There are many challenges Kodak must face if it hopes to continue to be a market leader in the Single-use Camera market segment. It must continue to address the growing consumer needs for high quality images that do not have significant environmental consequences.

The future of the single-use camera industry will be different from the present. Now, in 1993, the single-use camera market is growing rapidly. Kodak and Fuji are continuing to segment the market in an effort to penetrate even further. As discussed above, the vast majority of consumers are still unfamiliar with single-use cameras. The predictions for future market growth, however, are slowing. Growth rates in excess of 30% are a thing of the past.

Under the assumption that the market is beginning to cap off, it will become even more important for Kodak to find ways to differentiate its products from Fuji and to meet customer needs. The current trend is towards smaller, more compact cameras. As the attributes that the consumer finds important change (whether it be smaller cameras, or the picture quality) Kodak will have to be able to respond quickly to keep its market share advantage. Kodak's policy to design for reverse compatibility may restrict its ability to respond to changes in customer desires as quickly as Fuji will be able to. This design for reverse compatibility policy will have to be re-evaluated as the market matures.

Secondly, there is a question as to whether or not a 100% return rate is truly a reasonable goal. Plastics recycling is not simply a matter of regrinding plastic over and over again. As plastic, is repeatedly shredded and remolded its material properties begin to change. Therefore, recycled plastic is often a fraction of both new and recycled material. If this in fact the case, as Kodak closes its manufacturing loop it may have more plastic coming in than it can mix with virgin material to make new cameras. This raises the question of whether or not a goal of 100% re-use is feasible and/or realistic.
Lastly an issue that Kodak will have to face is how to incorporate recycling and re-use into all of its activities. Currently Eastman Kodak has recycling programs in place in other areas of the business including film manufacturing and processing. Corporate-wide, there is no coordination for the return of products to Kodak. Photofinishers and mini-labs are required to collect, separately, products to be returned to the single-use camera division, the film division and the film processing division (chemicals) to name a few. There are scale economies to be gained by both Kodak and the photofinishers if these activities are coordinated. It will also be easier for the photofinishers if they can collect all of these items together and send them to one Kodak location instead of having to send them to multiple locations.

The single-use camera division at Kodak is a model of how recycling and re-use programs have become part of the strategic management of a product line. It shows many of the challenges and advantages of closed loop manufacturing and design for re-use and reverse compatibility. There are many challenges that Kodak must face in order to remain a market leader in this dynamic area. It is up to Kodak to maximize the economic benefits of being socially/environmentally responsible with those of being responsive to consumer needs.
**EXHIBIT 5**

Eastman Kodak Health, Safety and Environment Guiding Principles

**Guiding Principle 1:** To extend knowledge by conducting or supporting research on the health, safety, and environmental effects of our products, processes, and waste materials.

**Guiding Principle 2:** To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public...and is efficient in the use of natural resources and energy.

**Guiding Principle 3:** To make health, safety and environmental considerations a priority in our planning for all existing and new products and processes.

**Guiding Principle 4:** To develop, product and market products and materials that can be manufactured, transported, used and disposed of safely and in a way that poses no undue environmental impact...and to provide services in a safe and environmentally-sensitive manner.

**Guiding Principle 5:** To counsel customers on the safe use, transportation, storage, and disposal of our products, and for those services we provide, to provide them safely.

**Guiding Principle 6:** To participate with governments and other in creating responsible laws, regulations and standards to safeguard the community, workplace, and environment and in applying environmentally sound management practices and technologies.

**Guiding Principle 7:** To measure our environmental performance on a regular basis and provide - to officials, employees, customers shareholders and the public - appropriate and timely information on health, safety, or environmental hazards, initiatives, and recommended protective and preventive measures.

**Guiding Principle 8:** To recognize and respond to community concerns about our operations and to work with others to resolve problems created by handling and disposal of hazardous substances.

**Guiding Principle 9:** To encourage employees to apply off the job the same principles for health, safety, and the environment that are applied at work.

Source: Environmental Report - Eastman Kodak Company 1992
EXHIBIT 7

Has Your Household Ever Used Any One-Time Use Cameras?

1987

Yes
3%

No
97%

1992

Yes
20%

No
80%

Source: 1993 PMA U.S. Consumer Photographic Survey
The used cameras are rebuilt. Parts are only replaced as necessary. Then, the cameras are reloaded with Kodak Gold film. Outer packaging, made from recycled paperboard, is added.

Kodak buys back used Fun Saver cameras from photo labs.

You take pictures.

Your film is developed and you receive your color prints.
It Pays To Recycle.

Join The KODAK FUN SAVER 35 Camera Recycling Program.
BIBLIOGRAPHY


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