

THE MISWAK COMPANY

Melissa Jean and Jonathan Drewnowsky wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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In January 2014, while searching online for a biodegradable alternative to gum, undergraduate business student Jonathan Drewnowsky came across a product called “miswak.” Made from the branches of the *Salvadora persica* tree, miswak was a natural and fully biodegradable toothbrush alternative. Drewnowsky wanted to research the possibility of starting a business to sell a miswak product in Canada, so he presented the concept to classmates, who chose to explore the feasibility of starting The Miswak Company (TMC) based out of London, Ontario, Canada, for a class project. If the venture was deemed feasible, Drewnowsky and classmate Christine Peet planned to adjust their undergraduate course load and start the business in September 2014.

The goals of the business would be to maintain a socially and environmentally responsible business profile and to provide a minimum of CA\$10,000¹ in compensation to each of the two partners in each of the first three years of operations. Drewnowsky and Peet had already managed to secure a total of \$50,000 in financing from family sources for the initial investment; however, they wondered whether the investment was sufficient to sustain the cash flows of the business for the first three years, and if not, how much additional financing would be required. If they deemed the venture feasible, they would follow through with a meeting scheduled with a bank at the end of the week, during which they would be expected to present projected statements, including cash budgets, and a financing request. The partners needed to know how much to request and what form of financing would be appropriate to ask the bank to consider.

Together, the group gathered the industry, consumer, competitor, and financial information they would use to assess the feasibility of starting TMC in September 2014.

THE PARTNERS

Drewnowsky and Peet had been exposed to and participated in entrepreneurial and socially responsible activities, although neither had owned or operated a business. Drewnowsky had grown up watching his father work alongside his uncle in a family-run home inspection business and had been active during his

¹ All figures are in Canadian dollars unless otherwise stated.

high school years as the student council environmental representative. He considered entrepreneurship to be a viable career opportunity upon graduation from his post-secondary studies. Peet, on the other hand, had worked as a freelancer, designing marketing materials for a yoga and wellness studio during high school. She was actively looking for an internship in order to acquire the experience necessary to break into a marketing role with a large multinational corporation. She thought that starting TMC might be a good opportunity to build her skill set.

MISWAK

The *Salvadora persica* tree — otherwise known as the toothbrush, mustard, arak, or peelu tree — grew in hot and dry conditions in parts of Africa and the Middle East, including the Arabian Peninsula. The twigs, stems, and roots had been used for oral hygiene for over 7,000 years, beginning with the Ancient Arabs and Egyptians.² Miswak continued to be used widely in Saudi Arabia and in other Muslim countries for a combination of dental hygiene and religious reasons and in other parts of the world including Asia, Africa, and the Americas.³

Once harvested and processed, the end product appeared to be a regular stick about the size of a pencil (see Appendix 1). Users shaved off a thin layer of bark with a sharp object in order to expose the soft inner core, which became like soft bristles when wet. Users could then brush their teeth as they would with a regular toothbrush. After the stick had been used several times, users could either discard the stick or shave off the old bristles so new bristles could be formed.

Chewing on or brushing with miswak was effective at removing plaque and inhibiting bacteria growth that could lead to oral diseases.⁴ Research showed that using miswak for oral hygiene was at least as effective as toothbrushing for reducing plaque and inflammation (gingivitis).⁵ Miswak also contained anti-inflammatory and antibacterial properties that remained present, even after a month's use.⁶

NORTH AMERICAN ORAL CARE INDUSTRY

The Canadian Dental Association recommended a mix of personal and professional dental care in order to maintain good oral health. Personal dental care recommendations usually included brushing twice daily, flossing daily, replacing toothbrushes every three to four months (or earlier if bristles were frayed), and eating a healthy diet. The frequency of dental visits would depend on the recommendations made by the dentist but could range from once a year to more frequently. More than 90 per cent of adults claimed to use a toothbrush with toothpaste as their main form of oral care.⁷

² R. I. Al-Sadhan and K. Almas, "Miswak (Chewing Stick): A Cultural and Scientific Heritage," *Saudi Dental Journal*, 1999, 11(2), pp. 80–88.

³ M. Al-Otaibi, "The Miswak (Chewing Stick) and Oral Health. Studies on Oral Hygiene Practices of Urban Saudi Arabians," *Swedish Dental Journal Supplement*, 2004, 167, pp. 2–75.

⁴ E. Riggs, C. van Gemert, M. Gussy, E. Waters, and N. Kilpatrick, "Reflections on Cultural Diversity in Oral Health Promotion and Prevention," *Global Health Promotion*, 2012, 19(1), pp. 60–63.

⁵ M. Al-Otaibi, op. cit.

⁶ K. Almas, N. Al-Bagieh, and E. Akpata, "In Vitro Antimicrobial Effects of Extracts of Freshly Cut and 1-month-old Miswak (Chewing Stick)," *Biomedical Letters*, 1997, 56, pp. 145–149.

⁷ Mintel, "Oral Care — US — May 2014." http://store.mintel.com/oral-care-us-may-2014?cookie_test=true, accessed March 16, 2016.

According to the Canadian Dental Hygienists Association, oral health care expenditures amounted to 13 billion dollars per year.⁸ Spending had increased 11 per cent between 2008 and 2011⁹ while natural/organic personal care sales jumped 50 per cent from 2005 to 2010.¹⁰

ISSUES WITH TRADITIONAL ORAL CARE

The average toothbrush could contain 10 million bacteria or more as a result of storage near sinks and toilets or in closed containers and as a result of sharing.¹¹ The effectiveness of the toothbrush was also influenced by the length of time it was used before replacement. Frayed and worn bristles made it more difficult for the toothbrush to remove plaque and other debris from the teeth, which could lead to dental problems.

Another issue with traditional oral care tools was the amount of waste these items added to landfills. If Canadians followed the advice of dentists and disposed of their toothbrushes four times a year, over 125 million toothbrushes, or approximately 4,000 tonnes of waste, would end up in landfills each year.¹² Some specialty programs, including Terracycle's Colgate Oral Care Recycling Program, accepted toothpaste tubes and toothbrushes for recycling but noted that toothbrushes were difficult to recycle because the bristles and handles had to be separated in order to be recycled.¹³ Toothpaste tubes were also an environmental hazard, as they posed recycling difficulties (i.e., they had to be cleaned out first) and also often contained eco-persistent triclosan as an ingredient that could be harmful to animals.¹⁴

The ineffectiveness and significant environmental burden associated with traditional oral care routines motivated the partners to further explore the feasibility of launching TMC by conducting primary research.

PRIMARY RESEARCH

A survey (see Exhibit 1) was prepared and administered through Zoomerang online survey software in order to better understand awareness of and interest in using miswak. Group members sent e-mails with the survey link to personal contacts and relied on a snowball technique to increase the sample size. In addition, the group personally visited three organic health-food stores and one specialty travel store in London to interview the managers and share the miswak product idea.

CONSUMER INFORMATION

The group identified three potential market segments for the miswak product: "green" consumers, travellers/campers, and Muslims.

⁸ The Canadian Coalition for Public Health in the 21st Century, "Public Health Fast Facts," May 28, 2012, www.cdha.ca/pdfsOralCare/FAST_FACT-Oral_health_May_2012.pdf, accessed June 24, 2014.

⁹ "Oral Care — US — May 2014," op. cit.

¹⁰ Organic Monitor, "The United States Market for Natural & Organic Personal Care Products - 2nd Edition," Research and Markets, June 2011, www.researchandmarkets.com/reports/1948429/the_united_states_market_for_natural_and_organic.pdf, accessed June 24, 2014.

¹¹ B. Levine, "Is Your Toothbrush Making You Sick," grandparents.com, 2014, www.grandparents.com/health-and-wellbeing/health/sterilize-toothbrush, accessed June 24, 2014.

¹² A. Vasil, *Ecoholics*, Vintage Canada, Toronto, 2007, pp. 21–22.

¹³ M. Mazzoni, "Recycling Mystery: Toothbrushes & Toothpaste Tubes," [Earth911](http://Earth911.com), August 30, 2012, www.earth911.com/living/health/recycling-toothbrushes-and-toothpaste-tubes, accessed June 24, 2014.

¹⁴ A. Vasil, op. cit.

Green Consumers

Although enthusiasm for green products¹⁵ had increased since 2012, many consumers demanded convenience along with accessibility, affordability, and quality from the companies supplying these products. Green consumers sought transparency and authenticity from companies selling products with an environmentally conscious claim.¹⁶ Environmentally conscious consumers were often willing to try new products, but wanted — before purchasing — to know the story behind the product, steps in the manufacturing process, ingredients, and benefits.¹⁷

In addition, consumers between the ages of 18 and 34 were found to be more likely to purchase green products, and green purchases increased alongside household income.¹⁸ Approximately half of environmentally conscious consumers made their personal-care purchases from mass retailers like Target and Walmart. Younger shoppers and females were more likely to shop at natural/health food stores like Whole Foods.¹⁹

Vegans constituted an underserved group in the green consumer population. In their search for natural alternatives to the plastic toothbrush, this group would have the added requirement that the bristles of the alternative product should not be made from animal hair.

Travellers and Campers

Travellers and campers tended to look for products that were lightweight and would not take up much space in their luggage. These consumers often researched products online before a trip and made purchases from a specialty travel or camping store in their local area.²⁰ Campers were often interested in purchasing biodegradable products that would not harm the water, plant life, and animal life that they so valued in the destinations they visited.

Although the Canadian camping market had declined between 2001 and 2011,²¹ Canadian domestic travel spending had increased by 13.6 per cent²² between 2000 and 2011. In addition, international tourism departures from the Americas had increased by 20.7 per cent between 2000 and 2010 and were projected to increase a further 32.6 per cent between 2010 and 2020.²³

¹⁵ “Green” products were generally viewed as those that had qualities that would protect the environment and/or contained natural ingredients instead of artificial ingredients.

¹⁶ F. O'Donnell, “Marketing to the Green Consumer – US,” Mintel, March 2014.

¹⁷ R. Bemporad and M. Baranowski, “Conscious Consumers Are Changing the Rules of Marketing. Are You Ready?” BBMG, November 2007, https://www.fmi.org/docs/sustainability/BBMG_Conscious_Consumer_White_Paper.pdf, accessed July 21, 2014.

¹⁸ F. O'Donnell, op. cit.

¹⁹ S. Romanowski, “Natural and Organic Personal Care Consumer – US,” Mintel, December 2013.

²⁰ The Coleman Company, Inc. and The Outdoor Foundation, “2013 American Camper Report,” www.outdoorfoundation.org/pdf/research.camping.2013.pdf, accessed July 21, 2014.

²¹ Parks Canada, “Learn to Camp,” June 18, 2011, www.pc.gc.ca/APPS/CP-NR/release_e.asp?bgid=1484&andor1=bg, accessed July 21, 2014.

²² HLT Advisory, Tourism Industry Association of Canada and Visa Canada, “The Canadian Tourism Industry: A Special Report,” Fall 2012, http://tiac.travel/Library/documents/The_Canadian_Tourism_Industry_-_A_Special_Report_Web_Optimized_.pdf, accessed October 29, 2015.

²³ Ibid.

Muslims

Many Muslims already knew about miswak since it was the traditionally preferred dental hygiene product for use during Ramadan (i.e., since toothpaste would break the fast if swallowed). There were approximately five specialty grocery stores and markets in London that catered to the Arab market.

COMPETITION

Manufactured under brands like Crest, Colgate-Palmolive, GUM, and Oral-B and sold through mainstream grocery, drug, and superstore channels, traditional toothbrushes were made from plastics that were not recyclable under municipal programs. These toothbrushes ranged in price from \$1 up to approximately \$7.

As an alternative to traditional toothbrushes, replaceable-head toothbrushes, were available in the electric or battery-operated styles of toothbrush and in the manual or standard toothbrush varieties. Some of the well-known brands, including Oral-B, GUM, and Reach, sold replaceable-head electric or battery-operated toothbrushes through mainstream channels for approximately \$20 to \$70, with replacements costing around \$5 each. Source, Eco-DenT and Fuchs offered replacement-head toothbrushes for the manual option and generally sold them online and through specialty stores.²⁴ Eco-DenT focused on the ecological benefits of the replaceable-head option, as well as the composition of the handle. Source's version was moulded from recycled U.S. dollar bills, and it incorporated recycled flax, wood, and polypropylene, resulting in a bio-plastic that was 100 per cent renewable or recycled. These manual replacement options cost approximately \$6 for the starter brush and \$6 for a three-pack refill.

Sustainable toothbrushes represented another available category and were made from renewable resources, most often using bamboo for the handle. One option, the Environmental Toothbrush from Australia, cost approximately \$5, while Smile Squared offered a product for \$6 and also ran a Buy-One, Give-One Program that donated a toothbrush to a child in need from a developing country for every toothbrush sold.

A company called Preserve sold toothbrushes individually and through a subscription program. The handles of Preserve toothbrushes were manufactured from recycled yogurt cups. These toothbrushes could be returned to the company as part of its Gimme 5 recycling program. Each Preserve toothbrush cost approximately \$3.

Independent miswak retailers sold processed miswak, often in vacuum-sealed plastic packaging, on sites like Amazon.com and Alibaba.com for approximately \$5 (including a plastic carrying case). These retailers did little advertising outside of these sites.

PRODUCT DETAILS

TMC planned to sell its product vacuum sealed in a fully recyclable plastic case, equipped with a protected blade located in the cap, similar to a pencil sharpener, in order to allow users to shave off layers as the miswak was used. The tubes would be placed in quantities of 50 in a brown cardboard box for shipping to stores.

²⁴ "Eco Dent: Premium Natural Oral Care Products," www.eco-dent.com/, accessed February 4, 2016; "The Future of Dental Care: Different Strokes for Different Folks," www.fuchs-toothbrushes.com/, accessed February 4, 2016; "Better by Design," <http://madebyradius.com/>, accessed March 3, 2016.

OPERATIONS

Three suppliers, as well as a packaging partner and an assembly partner, would be required to produce the finished product. The raw miswak would be ordered from Impexpo in Pakistan at a delivered cost of \$0.33 per stick. It was expected to take approximately two weeks for an average order to reach Canada; however, all orders would have to clear Canadian Customs first.

The plastic cases would be manufactured by Lights Out Molding, based out of Georgetown, Ontario, whose vision for sustainability aligned with that of TMC. The plastic case would be made from recycled polypropylene, which was non-toxic and recyclable. The design and preparation costs for the mould would equal \$22,500, which would last five years, and the cost to manufacture the cases would be \$0.49 each.

The final materials needed for production were the labels and boxes. A label would be affixed to each individual plastic case and would include directions for use and the TMC logo. Labels would also be applied to the boxes for easy recognition on store shelves. The labels would cost \$0.15 each and the boxes would cost \$0.50 each. The final product would be boxed in groups of 50.

All raw materials would be shipped to ARC Industries in London, Ontario, for assembly at a cost of \$0.05 per stick. ARC was a light industrial work setting that employed adults with developmental disabilities to complete contracts for local businesses. With assistance from support workers, ARC employees would put each miswak into its plastic case, label each case, pack and label the boxes, and prepare the orders for shipping. The partners believed the partnership with ARC Industries was representative of their mission.

Local deliveries would be made by the partners, but other deliveries would cost \$15 per box, which TMC planned to cover in its first three years of operations.

RETAIL SALES CHANNELS

Three out of four store managers visited indicated that they would commit to ordering one box of miswak as a trial. One store manager was initially confused by the product but, after a demonstration, agreed to purchase a trial box. She suggested that the company should ensure that instructions were somehow incorporated into the packaging or display.

TRADE SHOWS

The group identified four Ontario trade shows in which to participate. The Green Living Show targeted individuals who were committed to lightening their environmental footprint. This Toronto-based show took place over a three-day period in April and hosted 450 exhibitors. Approximately 38,000 guests attended the event, and the attendee profile indicated that 84 per cent were between the ages of 20 and 49, 66 per cent were female, 69 per cent had university or post-graduate degrees, and 59 per cent held professional or managerial positions. It would cost \$1,800 to exhibit, with a 30 per cent deposit required at the time of booking.

The Total Health Show also took place over three days in April and was held in Toronto. This show offered more than 60 international speakers at three main theatres, two exhibition-hall demo stages, a raw café oasis, a spa oasis, and over 200 exhibits devoted to a natural healthy lifestyle. Approximately 20,000 attendees could be expected, and it would cost \$1,400 to exhibit, with a 20 per cent deposit due at the time of booking.

The Whole Life Expo was touted as Canada's largest showcase of natural health and green living. It took place each year for three days at the end of November in Toronto and would cost approximately \$1,350 for exhibitor space. The event hosted over 90 speakers and approximately 200 exhibitors each year.

The Outdoor Adventure Show attracted more than 28,000 outdoor enthusiasts who were committed to a sports and activities lifestyle. The show was advertised as Canada's largest showcase of outdoor gear and adventure travel experiences; it took place in Calgary, Vancouver, and Toronto each year. The Toronto show took place for three days at the end of February, and it would cost \$1,500 to exhibit. The show attracted attendees primarily in the 18 to 49 age range.

The partners estimated that they could have a booth produced for a total cost of \$2,000; this booth could be used for all of the trade shows attended over the first three years of operations. Travel, food, and lodging costs would amount to approximately \$700 per show, and promotional materials would equal \$500 per show.

In addition to securing retailer accounts and supporting Drewnowsky and Peet in building relationships, having a tradeshow presence was expected to result in direct sales. It was expected that sales equal to 10 boxes per day at the retail price per stick would be realized if the partners attended the Green Living Show and that sales of eight boxes per day would be realized for any of the other shows identified. The partners were unsure about how many tradeshows to attend each year, but they wanted to start out with a minimum of two in the first year and potentially grow that number in the second and third years of operations.

SALES STRATEGY

The group determined that personal selling efforts by the two partners would be crucial to the success of the company. Promotional selling kits would be required to secure retailer orders. Each kit would contain samples and product information materials that would cost approximately \$5. It was expected that a kit would be mailed out or personally delivered to 200 stores in the first month of each of the first three years.

An online presence through a company website and Facebook page, along with advertising through Facebook ads and Google AdWords, would be required to create awareness and build the brand. The group estimated that it would cost \$2,500 for a professionally designed website that they expected would have a life of four years, and they would budget \$10,000 in the first three years for Internet advertising.²⁵ It was expected that TMC would also reach out to popular environmental product, travel, and camping blogs and send them promotional kits so they could test the product and review it on their blogs. Blog promotion costs were estimated to be \$2,000 per year.

The partners were considering launching the "Brush for Everyone Project." In this campaign to promote oral hygiene in developing countries, for every unit that TMC sold, a miswak product would be sent to a partner organization. This campaign would be another dimension of TMC's social responsibility. The partners were unsure whether this would be a financially viable option for the company right away or whether it would be better to introduce the program once the business had become more established.

PROJECTED SALES

The group estimated that there were a total of 500 specialty stores across Ontario that could potentially carry the miswak product. Based on the results of the consumer survey and discussions with store managers, the partners projected that the company would be able to secure sales from 10 new stores per month in the

²⁵ Advertising expenditures were expected to be spread evenly throughout the year.

first year, starting in the third month. Half of the stores were expected to reorder a box the following month. Once a store reordered, the group expected that the store would continue to place orders for the foreseeable future. Net retailer sales were expected to grow by 10 per cent in the second year and by another 10 per cent in the third year. The wholesale selling price to retailers would be \$2.50 per stick, and the suggested retail price would be \$3.99 per stick.

PROJECTED COSTS

TMC would require a computer and printer at a total cost of \$2,000, an initial inventory supply equal to 25 stores worth of sales, and a \$10,000 cash float. Monthly costs are provided in Exhibit 2.

CONCLUSION

Drewnowsky and Peet knew it was time to get down to work to perform the necessary analysis and complete the financial projections that would allow them to finalize their request to the bank. It was necessary to prepare three years of projected cash budgets, income statements, and balance sheets in addition to assessing the risks and opportunities of launching the business. Drewnowsky and Peet were also interested in the financial results if sales were 25 per cent less than estimated. Even if the financial projections supported the launch of the business, the partners needed to be confident in their decision since they would be required to put their undergraduate educations on hold in order to pursue this venture. They could always cancel the appointment with the bank if necessary.

EXHIBIT 1: SURVEY

1. Are you male or female?

Male	73	33%
Female	150	67%

2. Which category below includes your age?

17 or younger	4	2%
18–20	136	61%
21–29	25	11%
30–39	3	1%
40 plus	54	24%

3. Have you heard of miswak before?

Yes	11	5%
No	211	95%

4. Have you ever used a miswak product before?

Yes	2	1%
No	198	99%

5. If you use miswak products, where do you purchase them?

Grocery Store	0	0%
Specialty Store	0	0%
Health Food Store	0	0%
Online	0	0%
Other	6	100%

6. On average, how often do you use miswak?

Never	33	94%
Tried before	1	3%
Couple of times a year	1	3%

7. Miswak is a stick that, when used properly, is an effective form of dental care. Miswak kills oral bacteria, removes plaque, and fights bad breath. The bristles formed by the miswak are very effective at cleaning in between teeth. While today's toothbrushes are made out of plastics, miswak is an organic, environmentally friendly alternative that is good, if not better, at cleaning teeth compared to traditional brushing. Would you be willing to try a miswak product?

Yes	171	77%
No	51	23%

8. If you answered yes to question 7, for what reasons are you willing to try a miswak product? Pick all that apply.

Dental hygiene benefits	137	81%
Environmentally friendly	90	53%
Convenience	53	31%
Religious reasons	0	0%
Other	8	5%

9. If you answered no to question 7, why are you hesitant to try a miswak product? Pick all that apply.

Not familiar enough	35	65%
Do not trust claims	12	22%
Do not want to brush teeth with a "stick"	21	39%
Other	12	22%

10. How much would you be willing to pay for a miswak?

\$1–2	42	20%
\$3–4	56	26%
\$5–6	53	25%
\$7 and up	38	18%
N/A	26	12%

11. If you currently use miswak products, how satisfied are you with your current product?

Very satisfied	1	14%
Mostly satisfied	3	43%
Somewhat dissatisfied	2	29%
Very dissatisfied	1	14%

Source: Group feasibility study document.

EXHIBIT 2 PROJECTED MONTHLY COSTS

Item	Monthly Cost (\$)
Cell phones (2 required)	60
Insurance	75
Internet and web hosting	100
Office supplies	100
Rental unit	50
Travel	100

Source: Prepared by authors.

APPENDIX 1: MISWAK

Source: Khai9000, "Miswak, Kayu Sugi or Chewing Stick — Stock Image," iStock by Getty Images, accessed February 22, 2016, www.istockphoto.com/photo/miswak-kayu-sugi-or-chewing-stick-gm533010377-56115056?esource=AFF_IS_IR_SP_FreelImages.com_240652&asid=FreelImages.com&cid=IS&irgwc=1.