

Shad Valley Waterloo Campus 2002 presents



Business Team:

Emmanuel Elmajian

Cecilia Yu

Arnold Leung

Christine Hung

Gabriel Chan

Faizal Ismail

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# Introduction

Dear Reader:

It is with great pleasure that we at Witloo Inc. have the opportunity of presenting you with a formal business plan of our pending operations. Each section has been completed thoroughly with many ideas shared to finally produce a solid factual testament as to our plan going forward. We have separated this document into major headings which cover different aspects of our business venture in particular. We hope that you will take the time to examine our goals, prospects, and proofs of success through the various aspects of the plan. An “Overall Viability” section at the end provides a short summary of those important points.

The Shad Valley Waterloo 2002 team would like to thank you in advance for your time.

Sincerely,

Witloo Inc.

For further information, contact: Emmanuel Elmajian ([witloo@yahoo.ca](mailto:witloo@yahoo.ca))

(Shad Valley 2002, Waterloo Campus)

## Idea

In 1990, a toilet manufacturer, Kohler, originally developed dual flush systems, primarily for Australian markets. This was due to the government legislation on water resource management. This system was a new version of the toilet that allowed for variable flush that gives the user the option of using a full or half flush depending on the need. This idea was widely successful in Oceania and is approximated at saving 6 570 L of water of each year. However, no such product is available in Canada. Without mandatory legislation, there is no market here due to the expense of replacing entire toilets.

Witloo's solution is to avoid high toilet renovation costs by creating a simple conversion kit for existing Canadian toilets. Extended research and development have created the ideal kit that is the simplest way to achieve variable flush at 10% of the cost of traditional methods. It will not only help save the environment, but also customers' money (for water bills paid based on consumption).

*Flush...more or less* is a unique toilet retrofitting kit that will help ease the high water consumption rates of typical toilet systems. Global warming and ozone layer depletion have caused various parts of the world to suffer from drought. Water, the constituent of all life forms, is crucial to the well-being of humans. In Canada, the Prairies has long felt the effects of water deficiency, and *Flush...more or less* will aid in the efforts of conserving water where it is possible.

A large portion of water consumed in the bathroom is used to flush toilets, and in flushing a toilet, a great amount of water is wasted. Many flushes can be completed effectively using much less water than is actually used. Imagine a toilet system that saves your money and rescues the thirsty environment while maintaining the same level of effectiveness. There is no need to imagine since we are introducing the dual-flush system. By enabling toilet users to select whether they need a regular flush or a mini-flush, a large amount of water is saved. *Flush...more or less* has many advantages over the conventional Australian dual-flush system (described above). Three of these advantages are portability, ease of installation and universality within most toilet models.

These three main advantages together with many others make it possible for *Flush...more or less* to be sold in various mediums and marketed through various channels. We have proposed the following modes of sales:

### 1) Bundling with toilet equipment

Washroom utility suppliers are willing to include the dual-flush kit as part of their product. Pre-packaged, these kits may be distributed easily. Many toilet suppliers still sell non-cost-effective toilets. If the dual-flush kit accompanies the non-effective toilets, the suppliers may sell the toilets at a higher price and at a greater volume. These toilet suppliers would enjoy a wholesale price for the *Flush...more or less* device. To secure a long-term partnership with these

suppliers, these companies will be constantly invited to share their concerns and ideas with us. *Flush...more or less* may also be customized to meet the new design standards of the toilet suppliers.

**2) Licensing design to toilet manufacturers**

The conventional dual flush system is difficult to assemble. In contrast, our dual-flush system is very easily installed. We can license our designs to global toilet manufacturers and allow them to incorporate our design into their toilets. Securing partnerships with these companies will help us to establish a global presence. Licensing limits the implementation cost to marketing and communications.

**3) Supplying “Flush...more or less” to constructors**

Builders are willing to sell the dual-flush kit as part of new house packages. The kit will differentiate the house from others and create a new industrial standard. Other builders will consider including the kit as part of a new house in response to the new standard.

**4) Supplying the “Flush...more or less” to the government at a low price**

Government organizations are always interested in saving water, which is a large part of utility cost. Politicians would like to pour more money into programs that benefit the general public in a more direct way, where the effects are immediate. By supplying these dual-flush kits to the government at a low cost, we may use the government agencies as a beta testing site for obtaining feed-back and input in the early days of business.

**5) Supplying the dual-flush kits to the public through distributors**

*Flush...more or less* may be sold to toilet retailers, plumbers, and small hardware stores for distribution to the general public. These methods of sales will also provide some aspect of promotion as they deal closely with the consumer.

## Scientific and Technological Aspects

### Witloo's Product Design Description

#### Flush...more or less

This product is designed to work with existing technology. It is a creative adaptation of aging technology into a modern device that is more economically and environmentally efficient. It is an evolution of the standard toilet.

*Flush...more or less* has been designed primarily to be easily installed—requiring no tools. It works with the existing parts of the toilet and has been engineered to work with most toilet models. It is also flexible, allowing the user to change the amount of water they want in a mini-flush. This provides better performance, ensuring the user gets an adequate flush and the most water saved as possible.

The *Flush...more or less* device consists of two parts. The first is a flapper chain and flapper valve, or floater. The former connects the toilet handle lever at the top of the tank to the floater that lifts and falls, allowing water to exit the tank and enter the toilet bowl at the bottom of the tank. When the toilet is flushed, the time that the floater takes to close varies the amount of water that can drain. The *Flush...more or less* flapper chain has been redesigned to include a special cylindrical float positioned at the mid-way point of the chain. The add-on float uses its buoyancy to keep the flapper elevated, but when the water level drops below the float, it is no longer buoyant and thus can no longer hold up the floater. Therefore, the flapper closes when only half the water has drained. This amount can be easily adjusted by moving the float further up the chain to use less water or further down to use more.

The second component is the key to the dual flush. It is a new handle that includes a selection slider to choose between the two flushes, mini or full. Before flushing the toilet, users simply select the flush they require.

By sliding the selector away from the handle pivot, the weight on the handle provides a downward force, which raises the lever for a longer period of time. The buoyancy force of the float is thus counteracted exactly, and the flapper does not fall early. This creates a full flush — all the water drains out of the tank. By sliding the selector toward the handle pivot, no force is applied and therefore a mini flush is created. This design was created using knowledge of physics concepts such as levers and mechanical advantage. Values for force required were calculated using models for buoyancy force.

The materials used in the design have all been specially chosen to be the most economical and also most able to sustain the harsh environment inside a toilet. They are materials that last in cold (less than 5 degrees Celsius) water and are also completely corrosion proof.

## Manufacturing Methods

The *Flush...More or Less* has two main parts; an adapted flapper valve that has been made to close early (in a mini-flush) and a new handle that incorporates a sliding knob for the user to select between the two flush options.

The first step in handle construction is to use a drill press and band saw to create a 10cm notch in the 3cm by 16cm aluminum angle bar. Next a hole is drilled on the far left of the handle 2cm from edge. The screws are then slid through 7mm sprockets. One nut and bolt pair goes through the left hole and acts as a counter weight. The second pair is screwed into the notch, and the nuts are fastened on both. This second pair acts as a sliding knob that moves left to right and is used to select between full and mini flush. A toilet lever (the part of a toilet handle that goes inside the tank) and tank attachment are then connected. This lever is manufactured by another company and can be bought cheaply ready for installation. It is easily attached to the aluminum bar by metal-plastic epoxy.

The second phase of construction is the flapper. A standard universal model flapper valve that is manufactured by another company is modified. A small hole along the flapper bulb, directly under the chain attachment is punched using a single paper hole-punch. Next, a foam float is cut into a 3cm by 3cm block and a hole is punched through. A ball-chain is fed through this hole. Fastening clips (pre-manufactured) are attached to hold the float in place along the chain. The ball chain and flapper are then connected by with a light metal hook.

Simple attachment of the handle and flapper mechanisms occurs during user-installation.

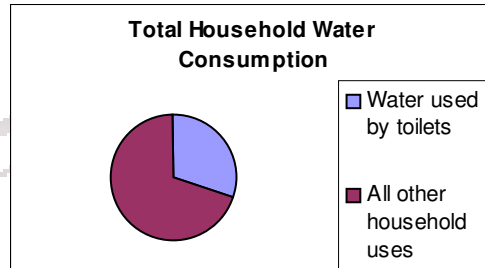
## Future Patent

In recognizing the technological and scientific thought that went into *Flush...more of less*, Witloo will eventually consider obtaining a Canadian and U.S. patent. This is likely to occur near the start of the second fiscal year. Obtaining this patent will be a major priority for Witloo as we begin to plan further expansion at that time. It will also protect our technology from being reproduced by other companies.

## Marketing Plan

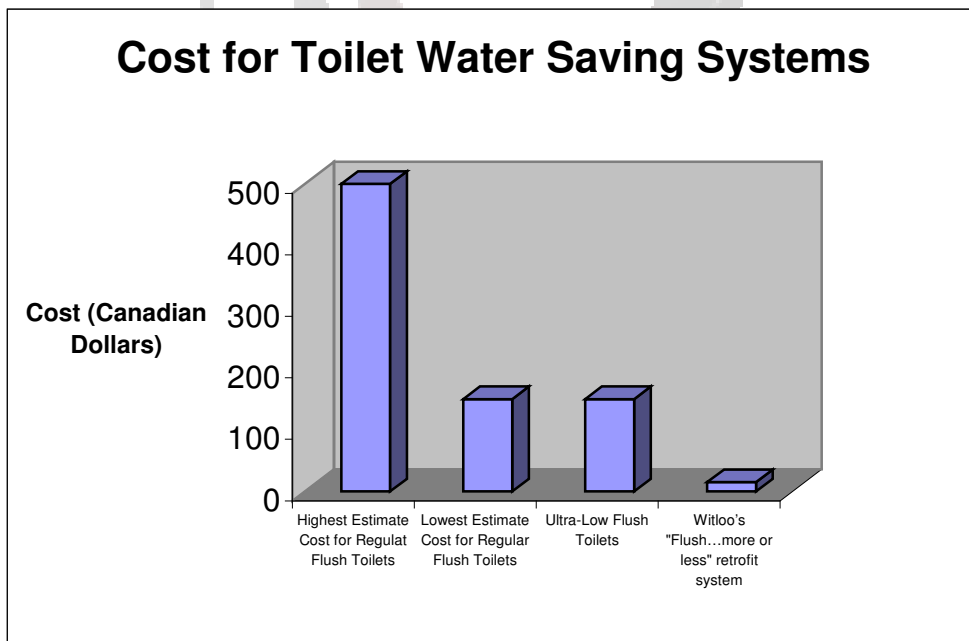
### Market Research

Water consumption in the household is a major environmental issue. A significant 30% of domestic water is consumed in toilet flushing (figure 1). 13 000 gallons are used per year by a single 5.5 gallon toilet. An estimated 40% of all toilets leak, wasting in total, over 200 000 litres of water per year. Canada is the second largest consumer of water in the world, using 326 litres per person per day.



(Figure 1)

Today, a regular full flush toilet certified by the CSA or Warnock Hersey costs between \$150 and \$500 CDN, depending on the model. These are conventional toilets that consume between 18 to 22 litres per flush and were manufactured until 10 years ago. All toilet models manufactured after 1995 must use 6 litres or water or less in flushing according to the Ontario Building Code. This restriction qualifies them as the new Ultra-Low Flush (ULF) toilets. These toilets cost approximately \$150. On top of that, toilet installation generally costs between \$50 to \$70. (See figure 2.)

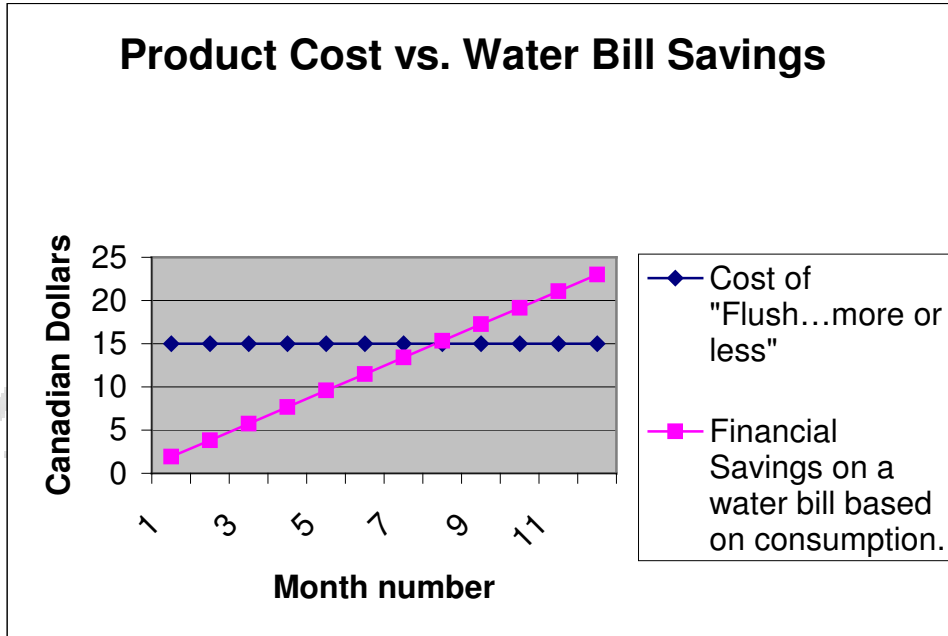


(figure 2)

The average household (four people) uses 300 cubic metres of water per year. That makes the average water bill between \$200 to \$250 per year. A toilet water



conservation device such as *Flush...more or less* saves a conservatively estimated 11.7% of total household consumption. On a water bill that is based on consumption, the user would save at least \$23 a year. This is significantly more than the suggested retail cost of the device of \$14.99. The financial benefits would surpass the costs on the eighth month, (figure 3).

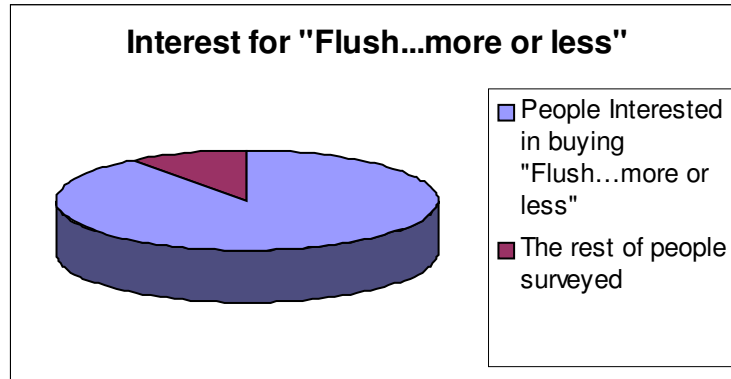


(figure 3)

Witloo conducted a recent survey consisting of fifty people on and around the University of Waterloo campus in southern Ontario. The majority of the people surveyed were under 30 years of age, and most were male (80%). About 73% of the people surveyed live on their own without their parents, while 90% of the people live with less than 3 roommates.

About 67% of the people surveyed said they were concerned about water conservation and many of them (73%) already own water conserving devices such as an attachment shower head. 27% of the people surveyed said they flush the toilet 1-5 times a day, and the same amount of people flush their toilet 6-10 and 11-15 times a day, which shows that there is a great potential for this product to help people save a considerable amount of water every single day.

Approximately 67% of those surveyed said they had never heard of the dual-flush toilet system before, and 90% of the people said they would be interested in purchasing a device such as our retrofit conversion kit, which indicates there is a large potential market within the region. (See figure 4.)



(figure 4)

In terms of the price for this device, 53% of those surveyed said they would pay between \$11 and \$20. With a suggested retail price of \$14.99, *Flush...more or less* will certainly gain pricing approval of a majority of people. With respect to design, more people preferred having a single handle device (for flushing) by a ratio of almost two to one. Our product design fits the suggestion of the majority.

### Target Market

Witloo's main target markets are individual households, public organisations, construction companies, and government contracts.

- **Individual households:** Though there are many people who want to save the environment through the means of water conservation, a stronger motivation for individual households to use a dual-flush toilet is to save money.
- **Public organizations** (i.e. hospitals, community centers, and corporate towers): These public organizations, like the individual households, want to save money. With the constant and great number of toilet usage, it is only wise and logical for these organizations to have dual-flush toilets. This will set a trend for other organizations and households to use dual-flush toilets. Also, because of the large number of toilets that require Witloo's dual-flush system, the price will be \$11 (wholesale), instead of the retail price of \$14.99.
- **Construction companies:** Since the construction companies are the ones that install toilets in new homes and buildings, it is understandable that they would be a target market. Because of the high demand for toilets, Witloo's dual-flush system is sold wholesale to these construction companies at \$11, instead of at the retail price of \$14.99.
- **Government contracts:** One of Witloo's ultimate goals is to establish a contract with the government that would implement a law that requires the installation of a dual-flush system in toilets in all homes, and in both private and public areas. This would significantly help preserve our delicate environment, as well as save the government's and citizens' money.

## Industry Trends

As the world slowly recognizes the importance of water, many people are trying to find ways to conserve as much water as possible. Also, in many places such as Canada, taxes on water usage are costly. Therefore, many have tried to seek ways to conserve water to save the environment, while saving money. The dual-flush toilet is seen as a solution to the dilemma by many consumers.

## Product Deployment and Distribution

With the prior technical research and experimentation conducted by Witloo, a strong product deployment starting from month one of operations is expected. The manufacturing techniques have already been established and are ready to be implemented. With this, Witloo expects to generate at a rate of roughly fifty-six products per working day with our team of four production employees.

The deployment of product leads to external distribution. Witloo will sell the *Flush...more or less* device to plumbers, toilet retailers, as well as small hardware stores. Our product, based on the specific mechanical technology used, will be sold wholesale at eleven dollars each. It will also be distributed to public organizations and construction companies at that price. Described in the “Scientific and Technological Aspects” section, much thought and creativity went into the dual-flush system. We are very pleased that, once funding is available, we will have the delivery and distribution capabilities of supplying this quality product to small stores and retailers throughout southern Ontario.

The *Flush...more or less* will be sold packaged in a recycled cardboard box. The contents will be secured to prevent damage. An instruction package will also be included for details on how to install the device. The installation procedure is simple, but detailed instructions will ensure that every customer is successful on the first attempt of installation.

## Pricing

*Flush...more or less* will be sold at very reasonable prices. The purpose of this pricing strategy is to show that it is possible to help the environment with small contributions being made by a variety of people. At the price of \$14.99, we firmly believe that many people will be interested in purchasing the product. This belief is confirmed in the survey, as stated in Market Research portion of this report, where over half of the people surveyed said they would pay between eleven and twenty dollars for such a device. The market research performed was on people who had not been fully educated as to the benefits of the dual-flush system. It is our assumption that, with proper promotion of the product and of its benefits to the environment, more people will be willing to pay the retail price. Because *Flush...more or less* works with toilets (common

to most households), customers can easily identify with the idea. With this common connection, people will not be afraid to purchase the dual-flush; the low price adds to that effect.

Additionally, many people pay water bills based on consumption. Toilets contribute to approximately thirty percent of the total volume of household water consumed. *Flush...more or less* saves about sixty-five percent of water for every mini-flush, which is estimated to occur sixty percent of the time. With those conservative assumptions, well over eleven percent will be saved on total household water consumption. When observing those facts, the cost of purchasing the *Flush...more or less* device will seem insignificant compared to the future financial savings of lower water consumption.

### Promotion

Promotion is vital to any product's success in the marketplace. For the mini-flush, promotion is of even greater importance due to its uniqueness in function and design. As a result, different promotional concepts have been put in place to inform our future customers of this new device. Using those concepts, we hope to fully educate the Canadian society of the importance of environmental responsibility and that simply using the mini-flush option is a major step toward implanting that idea on various other levels. People are deeply concerned about the environment, and our team at Witloo will strive to meet their concerns by promoting a product and system that can be used to help the environment.

In order to reach greater demographical and geographical depth as well as cover a diversity of interests, a variety of promotional mediums will be used for the marketing process. Advertising banners will be placed at selected retailers that sell *Flush...more or less*. These ventures are typically low in cost and sometimes done in collaboration with the retailer to increase their own sales by promoting this specialty product. Promotion and advertising costs for Witloo are expected to be approximately \$300 per month. With any remaining money in our advertising budget, ads will be placed in local newspapers and possibly on the radio.

The main promotional idea used will be to stress the simplicity for the user of implementing a product with such great environmental benefits. Installation of the mini-flush is very simple. With proper promotion of the product, future customers will soon realize how much they can actually do to help the environment. It is Witloo's belief that this sense of self-satisfaction and importance will drive public interest in *Flush...more or less*.

The secondary promotional idea will involve stressing the cost savings on home and business water bills. As discussed in the Pricing section of this report, *Flush...more or less* is estimated to reduce overall water consumption by 11.7%. If the user's water bill is based on consumption, they will experience financial savings of that same percentage. Based on the associated savings, the purchase price of *Flush...more or less* will be

regenerated in eight months. This can serve as a powerful marketing idea, and Witloo is committed to informing the public of these savings if your water bill is based on consumption. If the user's water bill is not based on consumption, they can still realize the personal benefit of helping the environment as well as being prepared for possible government legislations mandating that toilets consume less water with the use of dual flush systems.

Another major component of our promotion will be government-oriented. Out of our large group of partners, a team will be assigned with the role of educating and lobbying the government for stricter laws pertaining to water consumption. Water is an extremely valuable resource, and this fact is becoming more evident daily. Excessive water consumption is beginning to have a great impact on society. The world relies very heavily on clean water, and as fresh water levels deplete, it will become increasingly difficult to fulfill that need. In order to prevent such a dramatic future issue, less water consumption is needed immediately. The team at Witloo hopes to reinforce this idea with government officials, hoping that they will react quickly to such a concern. To deal with this problem, the government may have to implement laws regarding water consumption for different devices. The passing of such laws would represent a tremendous growth factor for Witloo revenues.

### Competition

In 1989, Australia became the first country to make it mandatory for all new toilets installed to have a 4.5/9.0 litre dual-flush cistern. Since then, many other countries have attempted to follow Australia's footsteps. For example, the United States, in 1994, implemented compulsory legislation to reduce water consumption in the bathroom. The American government made it mandatory for all new toilets to be fitted with a "low-flush" cistern using no more than 7.2 litres, which is significantly lower compared to the old flush of 10 to 12 litres. However, the U.S. could not compare when in 1996, Australia reduced the dual-flush requirements to 3.0/6.0 litres. Today, many people call these "environmentally-friendly" toilets. However, after much thorough research, it was discovered that companies only sold the toilets as a whole. In other words, old toilets had to be replaced, and the cost of such a new toilet sits astonishingly high in the range between \$250 to \$500. Witloo's mini-flush system can be easily installed by the customer into toilet, both old and new, for \$14.99.

Witloo's mini-flush system is unique to all existing toilets and retrofit devices. There are companies that make products that are similar to *Flush...more or less*, but none offer the all of the same benefits. There are companies that manufacture entire toilets that consume less water; these do not offer the option of a full-flush or mini-flush. Others offer toilets which have the dual-flush option, but these are again, entire toilets, which are costly. As discovered in market research, most people are not willing to pay the price of a new toilet to reduce their water consumption.

In terms of retrofit devices, companies do exist that make mini-flush retrofit systems. In such cases, however, the device simply slightly lowers consumption on all

flushes without giving an option for a full or mini flush. There are also companies that manufacture systems very similar to Witloo's mini-flush, but these do not offer the simplicity of installation that accompanies our unique design. Even such, these companies do not have strong representation in Canada and therefore do not affect Witloo's market.

Our experts have developed a system that is unique to our competitors, with a retrofit dual-flush set-up that is easy to install. With such a system, and no major competitors to contest our unique design, Witloo is poised to be successful in the product launch and continued manufacturing.



## Finance

### Income Statement (see Appendix A)

Since demand for the product is expected to exceed supply in the first year, sales are based directly on production capacity. As will be discussed later in the Production and Operations section of this report, Witloo will focus on increasing the production rate during the first year. This is evident in the income statement. The assumption is made that the venture will begin with a four person production crew that initially produces at the rate of 8 products per hour (or 56 products per day, assuming a 7 hour work day). Production will take place three days a week to ensure cohesiveness with a three day-a-week delivery schedule. The production rate increases as the months pass and more efficient assembling techniques are implemented. It is expected that in month 10 (October), another production employee will be hired to help increase the production rate. Monthly sales are based on the fact that *Flush...more or less* will be sold wholesale at a price of \$11 each. The suggested retail price will be \$14.99.

The purchase of materials and packaging associated with production of the product amount to between 40% and 57% of sales during the first fiscal year. The goal at the year end is to keep a steady gross margin of 60% (purchases being at 40% of sales). This will ensure high profitability and cash generation. Purchase materials required for multi-product production would be; aluminum angle bars, screws, nuts, toilet levers, epoxy, flapper valves, ball chains, foam floats, fastening clips, and light metal hooks. Once assembled, products will be fastened in cardboard boxes with user-instructions (on paper) included.

Other general expenses amount to between \$7 300 and \$7 900 per month. Most of these costs remain fairly fixed, again indicating that a higher production rate, which is the goal, will yield a greater profit. Costs under general expenses relating to shipping (gas and other minor travel expenses) are included under "Delivery expenses". The geographical range of travelling will remain in southern Ontario for the first year of operations.

The net income for the year is estimated at \$5 493. This is a very realistic target, especially as production rate increases.

### **Break-Even Analysis**

It is expected that break-even status will occur sometime between the months of May and June. It is at that point where our production rate is expected to surpass a hundred units per day. This estimate is based on better employee familiarity with the production system and also a better working relationship among the four employees. Efficiency can be thought of as four products produced per employee per hour. This is realistic considering the workers' five months of acquired experience.

## Cash Flow Statement (see Appendix B)

As detailed in the Cash Flow statement, it is expected that \$28 000 of initial funding will be suffice in building a solid business structure. Each of our thirty investors, discussed later in the Human Resources section, will each provide a capital of \$100. This \$3,000 in combination with a \$25 000 bank loan will ensure a comfortable financial position throughout the year. It is estimated that Witloo becomes cash flow positive during the month of July. At this time of cash generation, along with production increases, the financial position of Witloo will begin to improve dramatically leading into the year end when there will be an estimated cash balance of \$8 370. The assumption throughout the cash flow statement is that accounts payable and receivable will be paid or collected 50% within 30 days and 50% within 60 days. This estimate is deemed to be consistent with most other businesses.

An important ratio to consider is the Accounts Receivable vs. Accounts Payable. At a ratio of 2.49, our receivables due outpace our payables due by a large margin. The fact that more money is owed to Witloo by companies than Witloo owes to companies provides a major financial advantage in addition to our moderate cash generation at the year's end.

## Balance Sheet (see Appendix C)

As a result of one year of operations, the balance sheet will indicate that Witloo will hold a strong financial position at that time. With an estimated total equity of \$8,493 going forward, Witloo will be in a position to consider possible expansion. As company equity increases, shareholders will develop a further interest in brainstorming expansion ideas. The balance sheet will serve as a true testament to the company's overall financial status at the year's end.

It is important to note that our long term debt-equity ratio of 2.35 will decrease dramatically throughout year 2. This is because equity is expected to increase at a substantial rate, and the loan balance will fall at a consistent rate.

### **A note on financing:**

As pointed out above, Witloo is planning to get a five-year \$25 000 bank loan at 6.5% interest per annum. This operating loan will ensure Witloo the cash necessary to pay bills while awaiting payment from our customers. The terms of the loan will include a monthly principal repayment of \$417 in addition to interest on the remaining debt. Of the \$25 000 in bank funding, a relatively small amount of \$1 800 will be used to acquire fixed assets. These include a desk, work tables, and some working tools such as screw-drivers. A computer (used for inventory calculations and book-keeping) will be donated by one of our thirty partners. An additional \$500 will be used for incorporation costs.



## Contingency Plans

As will be stated later in the Production and Operations section, risks are important to consider, and Witloo has a contingency plans in place in the event that a decrease in market demand or an unexpected financial setback occurs. The main plan involves temporarily retracting Witloo into a home-based business environment. This will dramatically decrease many of our fixed expenses enabling for a more sheltered financial environment. Production rate changes will depend on the extent of the market downturn or financial setback. Either way, the fact that Witloo is set up as flexible enterprise will help in re-positioning ourselves during such an event.



## Human Resources

As a manufacturer of toilet products, the Witloo company will have a strong Marketing and Research and Development department. With over thirty initial company partners, the company structure needs to be one dimensional. With only one dimension of structure, all partners will be at the same level of authority. Company decisions are based on majority votes of a group of partners assigned to a specific area. The partners will be divided into five subgroups: Finance, Human Resources, Research and Development, Quality Control and Marketing.

During the start-up stage of the company, there is no need for recruitment, since a large number of partners is available. As business grows in the long term, we will quickly need to expand our operations to other countries where the kit will be in great demand. These overseas operations require foreign employees to oversee the supply chains and marketing.

During this expansion stage, external, experienced management personnel is necessary to restructure the company. New marketing strategies will be developed to meet the expectations of new consumers. The product would need further refinement and improvement to meet international standards. The long term expansion stage will be followed by an emergence stage in which the different subgroups will be further expanded and divided.

Expansion beyond Canada is not forecast anytime within the first two or three fiscal years of the company, although active planning may begin towards the end of the second year. The issues regarding human resources for international expansion will therefore not apply in the initial stages. It is, however, important to have a general plan in place (as discussed above) to which more elaborate studies can be based upon in the latter stages of the second year and into the first stages of the third year.

As pointed out in the Finance section, the company will start with a four person production crew. This crew will require practical assembling skills along with proper work aptitude. This crew will include a quality control manager who reports to one of two administration officials. The administration officials will oversee production and provide inventory reports and company analysis for presentation when all company partners meet. The production crew, administration officials, as well as one delivery driver will be members from the initial partner base of thirty people to ensure care for company success.

To promote a positive working atmosphere in the company, shares of Witloo will be offered to all partners with the initial investment of one hundred dollars each. Staff may receive bonus compensation based on exceptional work. Shares in the company will be the key reward of partner compensation when the company is at the start-up stage. This form of compensation will slowly decrease in proportion allowing room for a more conventional monetary salary for those that remain active in the company; however, providing employees with shares will still remain as a form of reward.

## Production and Operations

### Stage of Development

To date, we have relied solely on the existing Shad Valley Waterloo Team to design and create the product. With start-up funding, Witloo hopes to gather workers and eventually acquire a larger manufacturing workspace in order for production runs to initiate.

To fulfil our goals of increasing the production rate over the course of the year, the following steps will take place:

- Find a consistent supply of raw material at low costs
- Arrange for discounts on raw materials (contracts)
- Arrange for systematic inventory controls
- Recruit a small staff of production workers
- Find a secure location to manufacture
- Establish a prompt system to process customer orders (telephone orders)
- Arrange for prompt delivery to customers
- Implement a specific advertising and promotional plan that will stimulate demand that parallels our production capacity.

### Operational Risks

The following risks could pose problems to operational capacity:

- Loss of raw materials supplier. Raw materials prices suddenly increase. This will increase our cost of sales.
- Shipping problems may cause delays in fulfilling orders
- Unaccounted legal conflicts initiated by other companies
- Disagreement with possible labour unions and socialist parties

Witloo is aware of the risks stated above, and to offset their potential impacts, the company will take several steps in the establishment phase. To shelter ourselves from sharp material price increases due to the loss of a supplier, Witloo will take the appropriate measures of identifying ourselves with other suppliers before making our

vendor decisions. This will establish small corporate acknowledgement with various companies, possibly leading to beneficial future contracts in the event that a supplier is lost.

Shipping problems will be dealt with on a per case basis; however, to provide a general shelter from such issues, we will research into the possibility of a secondary delivery medium in the form of another delivery company. The costs associated with the use of another delivery company will certainly be increased temporarily, but Witloo will decide whether it is feasible on a case by case basis, possibly depending on size of order.

Although we are confident that no company will have reason to take legal action against Witloo, it is important to foresee the possibility. Keeping all risks in mind, Witloo will keep informed on any signs of a possible conflict. When a conflict appears imminent or becomes a reality, production may be reduced to save costs. The savings will be used for professional legal counsel to represent the legitimacy of our company.

In order to prevent future disagreements with employees and a possible labour union, Witloo will remain committed to caring for worker needs. An employee comment/feedback system will be in place to detect any possible problem points. By doing this, Witloo reduces the likelihood of labour disputes.

### Suppliers

The following companies will be considered as Witloo's suppliers (for tools and related items):

- Canadian Tire
- Home Depot
- Home Hardware
- Lansing Buildall
- The Building Box

We have not negotiated with any of these suppliers, although their business supplies are well known to us. The company believes it may be able to find good deals with them and with smaller, local suppliers.

### Quality Control

A quality control manager (one of the four production workers) will be present at the manufacturing site. In the event of a problem, the quality control manager will notify the administration officials.

## Production Logistics

### **Inventory Control**

To facilitate the task of keeping track of inventory, an administration official will be using computer software. Such software may include Microsoft Excel, Microsoft Access, or any other spreadsheet/database program on the market.

### **Time Frame for Production**

As stated in the Marketing section, we fully intend to have a moderate production rate within the first month. It is estimated that, in the first month, 56 product packages could be manufactured daily by four production workers. This production is scheduled to commence in the new year (2003). The company hopes to establish greater production capacity in monthly increments. The goal is to achieve daily production to 168 products per day by the end of the year, with the help additional employment and greater efficiency.

### **Contingency Plans**

In the event of decreased market demand, we will put in place a contingency plan that involves retreating into the position of a home business until market conditions improve. This can be implemented quickly and will lower total expenses, thus reducing the magnitude of a financial loss during the period. In the event of a prolonged market downturn, more funding may be sought to continue with light promotional activity to slowly regenerate support.

## Service and Warranties

Witloo's product is warranted to be free from defects in material and workmanship for thirty days. Under the warranty, Witloo will repair or replace, whichever it deems appropriate, parts or the whole product within thirty days of purchase.

## **Overall Viability**

Overall viability for Witloo's mini-flush design is proven throughout the contents of the business plan. An intense variety of viewpoints and scenarios has been developed and exploited throughout the document to demonstrate that. Viability is evident in many different areas:

### **Demand**

As stated in the Marketing section, demand for the *Flush...more or less* is expected to be high once promotional activities have been active for about a month. Witloo understands that this product is fairly new and unknown to society, and that's why we are putting emphasis on promotion. Just as low consumption shower heads are currently in demand, our retrofit dual-flush systems will also be in demand in the near future. If government legislation limiting toilet water consumption is put into place, Witloo will see an extremely sharp increase in demand. Even without such a legislation, Witloo has done the research necessary to prove that the dual-flush will be in strong demand.

### **Profitability**

As demonstrated throughout the Finance section and accompanying appendices, profitability is almost a certainty at Witloo. With an expected break-even point between May and June, Witloo will in fact show a year end profit. This is a goal that is certainly achievable, and we are confident of the prospects. Financial planning for Witloo was rigorous and accounts for many business complexities. By putting so much thought into the financial planning, we surly attest to its credibility in profit analysis.

### **Feasibility**

As explained in the Marketing and Finance sections, *Flush...more or less* is quite feasible. Living in an era of deep environmental concern, we are sure that our environmentally responsible design is capable of garnering great public support. The concept is valid both from an operational and financial perspective. That, along with the new emerging market for environmentally friendly devices, Witloo has done the research necessary to prove that this plan is feasible.

### **Environmental Benefits**

The very first restriction introduced in Witloo's business planning was to make a product that was environmentally responsible. Having passed through all of the subsequent stages, we are now proud to say that our product helps the environment in a context that is so important in today's society: water consumption. As a *Time* magazine cover story ("How to Save the Earth") recently points out, "The answer is to get smart

about how we use water.” *Time* cited water level depletion as one of the five major environmental issues that must be dealt with. The Witloo team is pleased to provide a system which helps deal with that problem. We are also excited that by using *Flush...more or less*, our customers will be able to aid the environment on an individual basis. This gives us great pride as we take the proper steps toward educating society, showing that by being open to new ideas, we can make great strides in preserving the Earth.



## Appendix A

### Witloo Inc.

Income Statement for the year ending December 31, 2003

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
<b>Sales</b>	\$ 7,392	\$ 9,240	\$ 11,088	\$ 11,088	\$ 12,936	\$ 14,784	\$ 14,784	\$ 14,784	\$ 14,784	\$ 18,480	\$ 20,328	\$ 22,176	\$ 171,864
<b>Cost of Sales</b>													
Opening Inventory	\$ -	\$ 1,000	\$ 1,000	\$ 1,300	\$ 1,300	\$ 1,000	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,200	\$ 1,200	\$ -
Purchases	5,200	4,712	6,400	5,654	5,400	6,400	6,000	6,000	6,000	7,400	8,200	8,900	76,266
Ending Inventory	(1,000)	(1,000)	(1,300)	(1,300)	(1,000)	(1,100)	(1,100)	(1,100)	(1,100)	(1,200)	(1,200)	(1,200)	(1,200)
	<u>4,200</u>	<u>4,712</u>	<u>6,100</u>	<u>5,654</u>	<u>5,700</u>	<u>6,300</u>	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>	<u>7,300</u>	<u>8,200</u>	<u>8,900</u>	<u>75,066</u>
Gross Profit	3,192	4,528	4,988	5,434	7,236	8,484	8,784	8,784	8,784	11,180	12,128	13,276	96,798
as a %	43%	49%	45%	49%	56%	57%	59%	59%	59%	60%	60%	60%	56%
<b>Expenses</b>													
Production Salaries	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,940	2,940	2,940	29,988
Delivery Wages	588	588	588	588	588	588	588	588	588	588	588	588	7,056
Administration Salaries	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Rent	400	400	400	400	400	400	400	400	400	400	400	400	4,800
Promotion and Advertisement	300	300	300	300	300	300	300	300	300	300	300	300	3,600
Delivery Expenses	720	720	720	720	720	720	720	720	720	720	720	720	8,640
Car Lease	450	450	450	450	450	450	450	450	450	450	450	450	5,400
Office Expenses	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Telephone and utilities	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Insurance	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Depreciation	90	90	90	90	90	90	90	90	90	90	90	90	1,080
Interest	135	135	133	131	129	126	124	122	120	117	115	113	1,500
	<u>7,335</u>	<u>7,335</u>	<u>7,333</u>	<u>7,331</u>	<u>7,329</u>	<u>7,326</u>	<u>7,324</u>	<u>7,322</u>	<u>7,320</u>	<u>7,905</u>	<u>7,903</u>	<u>7,901</u>	<u>89,664</u>
Net Income before income taxes	(4,143)	(2,807)	(2,345)	(1,897)	(93)	1,158	1,460	1,462	1,464	3,275	4,225	5,375	7,134
Income Taxes	(953)	(646)	(539)	(436)	(21)	266	336	336	337	753	972	1,236	1,641
<b>Net Income</b>	<u>\$ (3,190)</u>	<u>\$ (2,161)</u>	<u>\$ (1,806)</u>	<u>\$ (1,461)</u>	<u>\$ (72)</u>	<u>\$ 892</u>	<u>\$ 1,124</u>	<u>\$ 1,126</u>	<u>\$ 1,127</u>	<u>\$ 2,522</u>	<u>\$ 3,253</u>	<u>\$ 4,139</u>	<u>\$ 5,493</u>



## Appendix B

### Witloo Inc.

Cash Flow Statement for the year ending December 31, 2003

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
<b>Inflows</b>													
Collection of Accounts Receivable	-	3,696	8,316	10,164	11,088	12,012	13,860	14,784	14,784	14,784	16,632	19,404	139,524
Investors' Capital	3,000												
Bank Operating Loan	25,000	-	-	-	-	-	-	-	-	-	-	-	25,000
<b>Total Inflows</b>	<b>28,000</b>	<b>3,696</b>	<b>8,316</b>	<b>10,164</b>	<b>11,088</b>	<b>12,012</b>	<b>13,860</b>	<b>14,784</b>	<b>14,784</b>	<b>14,784</b>	<b>16,632</b>	<b>19,404</b>	<b>167,524</b>
<b>Outflows</b>													
Incorporation Costs	500												500
Acquisition of fixed Assets	1,800												1,800
Repayment of Bank Loan	417	417	417	417	417	417	417	417	417	417	417	417	5,004
Payment of Accounts Payable	-	2,600	4,956	5,556	6,027	5,527	5,900	6,200	6,000	6,000	6,700	7,800	63,266
Monthly Expenses (excl. Depreciation)	7,245	7,245	7,243	7,241	7,239	7,236	7,234	7,232	7,230	7,815	7,813	7,811	88,584
<b>Total Outflows</b>	<b>9,962</b>	<b>10,262</b>	<b>12,616</b>	<b>13,214</b>	<b>13,683</b>	<b>13,180</b>	<b>13,551</b>	<b>13,849</b>	<b>13,647</b>	<b>14,232</b>	<b>14,930</b>	<b>16,028</b>	<b>159,154</b>
Increase (Decrease) in cash	18,038	(6,566)	(4,300)	(3,050)	(2,595)	(1,168)	309	935	1,137	552	1,702	3,376	8,370
Cash, beginning	-	18,038	11,472	7,172	4,122	1,527	359	668	1,603	2,740	3,292	4,994	-
<b>Cash, ending</b>	<b>\$ 18,038</b>	<b>\$ 11,472</b>	<b>\$ 7,172</b>	<b>\$ 4,122</b>	<b>\$ 1,527</b>	<b>\$ 359</b>	<b>\$ 668</b>	<b>\$ 1,603</b>	<b>\$ 2,740</b>	<b>\$ 3,292</b>	<b>\$ 4,994</b>	<b>\$ 8,370</b>	<b>\$ 8,370</b>

Appendix B (2)

**Witloo Inc.**

Schedule Detailing Cash Flow Statement Calculations for the year ending December 31, 2003

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
<b>Loan Balance and Interest Chart</b>												
Opening Balance	25,000	24,583	24,166	23,749	23,332	22,915	22,498	22,081	21,664	21,247	20,830	20,413
Principal Repayment	(417)	(417)	(417)	(417)	(417)	(417)	(417)	(417)	(417)	(417)	(417)	(417)
Ending Balance	<u>\$ 24,583</u>	<u>\$ 24,166</u>	<u>\$ 23,749</u>	<u>\$ 23,332</u>	<u>\$ 22,915</u>	<u>\$ 22,498</u>	<u>\$ 22,081</u>	<u>\$ 21,664</u>	<u>\$ 21,247</u>	<u>\$ 20,830</u>	<u>\$ 20,413</u>	<u>\$ 19,996</u>
<i>Interest Expense @ 6.5% (Included in expense calculation)</i>	135	135	133	131	129	126	124	122	120	117	115	113
<b>Collection of Accounts Receivable</b>												
Balance, beginning	-	7,392	12,936	15,708	16,632	18,480	21,252	22,176	22,176	22,176	25,872	29,568
Sales	7,392	9,240	11,088	11,088	12,936	14,784	14,784	14,784	14,784	18,480	20,328	22,176
Total Accounts Receivable before payment	<u>7,392</u>	<u>16,632</u>	<u>24,024</u>	<u>26,796</u>	<u>29,568</u>	<u>33,264</u>	<u>36,036</u>	<u>36,960</u>	<u>36,960</u>	<u>40,656</u>	<u>46,200</u>	<u>51,744</u>
Collection - 50% of first 30 days (or prior month)	-	3,696	4,620	5,544	5,544	6,468	7,392	7,392	7,392	7,392	9,240	10,164
Collection - 50% of first 30-60 days (or 2 months prior)	-	-	3,696	4,620	5,544	5,544	6,468	7,392	7,392	7,392	7,392	9,240
Total Collection	<u>-</u>	<u>3,696</u>	<u>8,316</u>	<u>10,164</u>	<u>11,088</u>	<u>12,012</u>	<u>13,860</u>	<u>14,784</u>	<u>14,784</u>	<u>14,784</u>	<u>16,632</u>	<u>19,404</u>
Total Accounts Receivable after payment (end of month)	<u>\$ 7,392</u>	<u>\$ 12,936</u>	<u>\$ 15,708</u>	<u>\$ 16,632</u>	<u>\$ 18,480</u>	<u>\$ 21,252</u>	<u>\$ 22,176</u>	<u>\$ 22,176</u>	<u>\$ 22,176</u>	<u>\$ 25,872</u>	<u>\$ 29,568</u>	<u>\$ 32,340</u>
<b>Accounts Payable</b>												
Balance, beginning	-	5,200	7,312	8,756	8,854	8,227	9,100	9,200	9,000	9,000	10,400	11,900
Purchases	5,200	4,712	6,400	5,654	5,400	6,400	6,000	6,000	6,000	7,400	8,200	8,900
Total Accounts Payable before payment	<u>5,200</u>	<u>9,912</u>	<u>13,712</u>	<u>14,410</u>	<u>14,254</u>	<u>14,627</u>	<u>15,100</u>	<u>15,200</u>	<u>15,000</u>	<u>16,400</u>	<u>18,600</u>	<u>20,800</u>
Payments - 50% in first 30 days (prior month purchases)	-	2,600	2,356	3,200	2,827	2,700	3,200	3,000	3,000	3,000	3,700	4,100
Payments - 50% in first 30-60 days (2 months prior purchases)	-	-	2,600	2,356	3,200	2,827	2,700	3,200	3,000	3,000	3,000	3,700
Total Payments	<u>-</u>	<u>2,600</u>	<u>4,956</u>	<u>5,556</u>	<u>6,027</u>	<u>5,527</u>	<u>5,900</u>	<u>6,200</u>	<u>6,000</u>	<u>6,000</u>	<u>6,700</u>	<u>7,800</u>
Total Accounts Payable after payment (end of month)	<u>\$ 5,200</u>	<u>\$ 7,312</u>	<u>\$ 8,756</u>	<u>\$ 8,854</u>	<u>\$ 8,227</u>	<u>\$ 9,100</u>	<u>\$ 9,200</u>	<u>\$ 9,000</u>	<u>\$ 9,000</u>	<u>\$ 10,400</u>	<u>\$ 11,900</u>	<u>\$ 13,000</u>

## Appendix C

### Witloo Inc.

Balance Sheet as at December 31, 2003

#### Assets

##### **Current Assets**

Cash	\$ 8,370
Accounts Receivable	32,340
Inventory	1,200
	<u>41,910</u>

##### **Fixed Assets**

Computer and Tables	1,800
Less: Accumulated Depreciation	(1,080)
	<u>720</u>

Incorporation Costs	500
---------------------	-----

**Total Assets** \$ 43,130

#### Liabilities

##### **Current Liabilities**

Accounts Payable	13,000
Income Taxes Payable	1,641
	<u>14,641</u>

##### **Long Term Liabilities**

Bank Loan	19,996
	<u>19,996</u>

**Total Liabilities** 34,637

##### **Shareholders' Equity**

Shareholders' Investment	3,000
Retained Earnings	5,493
<b>Total Equity</b>	<u><u>8,493</u></u>

**Total Liabilities and Owners' Equity** \$ 43,130