

FINAL REPORT

StoolMate Pty. Ltd.

'Seating Furniture Business'

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1 Executive Summary

The content of this report discusses the various factors and considerations that have significant impact upon businesses and organisations. The objective of this report was to develop an understanding of the major activities that are involved with setting up and running a business entity in the real world.

For this group project conducted by four engineering students, we fictitiously created a Business named StoolMate, which is an Australian corporation that specialises in the design, manufacture and distribution of seating products. The report discusses how the small product range during the early stages will grow simultaneously with the business. We have applied our understanding of marketing and strategic management, process and product design to evaluate and discuss the economic viability of our products and business.

The products have been analysed to ensure that our target customers would find our products appealing and purchasable. The report entails how integral creativity and innovation are when introducing and new product line and business into the market. By defining constraints within the Marketing Segmentation we were able to tailor and adjust certain aspects in our business model to ensure that we accommodate the needs and appease the desires of our potential consumers.

Research tools and strategies were conducted to effectively anticipate what pros and cons would likely be encountered. SWOT and PEST analysis were conducted to obtain key findings in regards to the competitor market and to understand factors that will affect our business.

StoolMate is projected to be a successful business due to the detailed planning and preparedness for encountering turmoils. As the business develops and revenue grows we plan to continually invest the net profits into the business in various areas to increase the stability of the entity. This research project has been beneficial as it encourages students to be creative and innovative when starting up a company to make it a successful company in the industry. By working as a team we collaborated to solve problems and thinking rigorously as individuals would in the real world when forming partnerships to create businesses.

2 Background

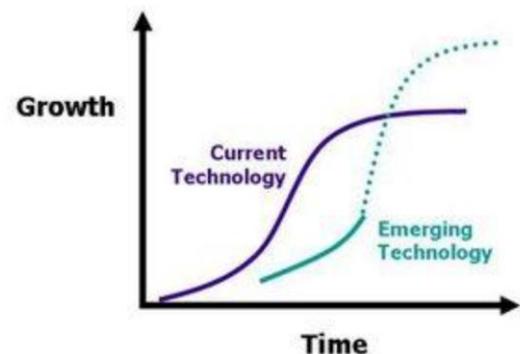
'Creative opportunities in product and business/production process'

2.1 Creativity and Opportunity

It has been identified within the group that the Australian market does not currently have many competitors in the plastics furniture sector. Businesses exist for corporate and educational fit outs with desks and chairs, but there are few options for plastic stools and seatings for casual spaces in these contexts. Additionally, most of this furniture is manufactured overseas. For the socially conscious, and businesses vying for government grants, Australian manufactured furniture is ideal, and furniture that has been designed in Australia is of greater value still.

As aspiring engineering designers, the group believes the capability exists to start a successful business catering to these environments. Using talent in creative thinking and problem solving, the business plan is to develop a large range of Australian designed and manufactured furniture products at an affordable price with the utmost quality.

The product design engineers in the group are all trained and experienced in plastic injection moulding, as well as a myriad of other manufacturing techniques in order to realistically develop each idea. Three stool concepts have been identified as the starting products for the business, as they enter the market at three different price points and cater to different settings.



2.2 Customer Analysis and Market Segmentation

The target market segments chosen include large corporations, universities and libraries. These can be defined by the users of the furniture product and also those who will be purchasing and maintaining the product from retailers or suppliers, the end user and purchaser will have separate sets of needs and wants.

The potential end users, such as the library patron, student or employee will require good ergonomic design of the chairs as the furniture's primary use will be that of a chair for sitting in while reading, talking or relaxing. A wide range of demographics will need to be covered, ranging from the very young, to very old in the case of a library, while the corporate and university end-users will be an adult population. Multiple chairs targeted at different demographics will need to be designed to accommodate this. The end user will also require the chair to be strong and designed with safety in mind. Desirable traits of the chairs include the ability to move the chairs around into a communal space and for the chairs to fit under tables.

The purchaser will require the furniture to be durable, chemically resistant, easy to clean, strong, easy to pack away and to be competitively priced. The ability to stack is highly desirable as the chairs will need to be packed away in cases of large corporate functions, or when being moved to a new building or location. The purchaser will also require a maintenance and replacement service when a chair must be replaced or fixed for the most cost efficient amount. For the business to be successful processes must be put in place to easily communicate with clients and provide them with a quick, simple and easy purchasing experience.

3 Business Structure & Legal issues

3.1 Business Structure

StoolMate Pty Ltd will be run as a company, the advantages of this are that we will have limited liability. This means that the shareholders and directors are not personally responsible for business debts and obligations, therefore, only the business assets are at risk instead of personal assets such as houses or cars. If contracts are in the name of the company, then only the company is responsible for those obligations, even if negotiations have been made between the directors or managers. Property in the name of the company is separate from the property of the shareholders and does not create ownership rights. Other advantages include maintaining rights and obligations when a new director is appointed and new members being able to join shareholders.

The disadvantages of running a company include higher set up and annual costs as there are greater legal regulations on financial reporting. Directors can also be liable for the company's debts, especially if found to be trading insolvent, given that the law provides a high level of duties and failure through the corporations act.

3.2 Other Legal Requirements

Apart from the legalities of the business structure, as discussed above, the business will also need to conform to state and consumer laws. As the initial business will be set up in Victoria, it will fall under the laws of the state, but also federal laws pertaining to consumer goods, such as return policies. The chairs will have to conform to Australian Standards (AS/NZS 3813:1998) for plastic seating, being of the correct height and able to sustain a prescribed weight. The business' office space and factory floor will conform to all Occupational Health and Safety requirements.

3.3 Ethical Requirements

The business' Australian location is such in order to provide more jobs for the Australian market, as well as reducing the energy cost involved with shipping and transport. Manufacturing in Australia is also more closely regulated than in other nations such as The People's Republic of China, where pollution and waste are often released directly into the environment. As detailed in the section on sustainability, every effort has been made to produce these products with the least environmental impact as possible.

4 Environmental factors

'Sustainability and Environmental related issues on global impact'

4.1 Sustainability of the Products:

As Earth's resources are being depleted, and expenditure of fossil fuels propagates the effects of climate change, it is important for businesses to operate as sustainably as possible. Each of the three stools, therefore, will be moulded from HDPE, which is 100% recyclable. Whilst energy is expended in the process of moulding the product, embodied energy that has been invested into the production of the plastic does not need to be spent again. Whilst some necessary additives in the plastic will decrease its recyclability, such as flame retardants and UV blockers, the chairs can easily be shredded and the plastic reused at the end of their lives.



4.2 Life Cycle Analysis:

In the factory, recycled HDPE will be mixed with pure HDPE in order to reach a stable balance, and then important additives such as flame retardants will be added to create the master batch. At this point coloured dyes can be added in order to create batches of different colours.

The plastic pellets will then be fed into an injection moulding machine where it will be compressed and injected into a cavity to create the stool shape.

Having been shipped to a warehouse, and then direct to the customer the stool will have no further energy impact on the environment.

At the end of its life, stools can be sent to a recycling centre where they will be shredded, melted down, and then extruded and chopped into recycled HDPE pellets, as used at the start of the products life.

4.3 Material Alternatives:

As the business moves forward, the range will extend beyond just plastic products, so it is important to have a future plan for other materials, and the most sustainable choices.

Steel requires large amounts of energy at the beginning of its life, due to mining and refinement operations, but is completely recyclable beyond that point, and requires little energy to melt down and re-form. Aluminium, similarly, requires high energy investment at the beginning of its life, but recycled aluminium requires little energy to melt down and reform. Both metals are good choices for sustainable products, especially as they are both strong and durable and will not easily require replacement parts as weaker metals might. It should be noted that stainless steel should be avoided where possible as it has exceptionally high energy investment, and is very difficult to recycle.

Wood products have low energy expenditure at the beginning of its life, and can look like a deceptively good sustainable material choice, it is important to view the whole picture however. Wood sourced from forests can have immeasurable impact on its environment, and should therefore be avoided, Forestry Stewardship Council (FSC) approved woods should be chosen, and these woods will have low energy expenditure in production and refinement. The issue with wood products is that they cannot be recycled, and at the end of their life the best case scenario is that they are thrown away and biodegrade. Whilst biodegradation is better than plastic products that do not break down, it is still a release of carbon dioxide and methane into the atmosphere.

4.4 PEST Analysis

4.4.1 Political

From a political standpoint the outline and procedures conducted would be safe and legal with total obligation and compliance with Australian Standards in regards to Ergonomics and OHS. The full product range would be entirely manufactured locally in Victorian regions, which will ensure that the business follows all rules and regulation for a legal and political perspective.

4.4.2 Economical

As the products are made from a single piece of injection-moulded plastic, there is no assembly required which keeps that design simple and saves on costing. As all materials would be sourced and manufacture would be carried out in Australia there will be a corresponding increase in cost when compared to products that are made in Asian Countries. However the value that is gained from a product that is purely designed and manufactured in Australia will balance out the high on shore costing when analysing the value proposition.

Also the reliability and quality of being made in Australia will allow us to be certain that correct materials are used to proper specifications which will undoubtedly enable our products to have a longer lifespan due to minimal experiences of fatigue and wear. The Australian made branding will allow us to price our products in a medium-high range in regards to costing, which will reflect the quality and reliability in our products and customer service.

4.4.3 Social

We would like our products to be viewed as high-end consumer products that have a psychological impact on viewers that evoke interest and appeal, followed by desire to buy and use our product. From a marketing standpoint we predict that within the first 10-15 years our product range will grow and there will be a social trend as a result that impacts large companies and organisations by asserting that professional and educational facilities require our high end products that are socially renowned and appreciated for the simplicity, quality and aesthetics.

For the short and long term there will strictly only be fair trade employment where workers are paid a fair wage, unlike thousands of people who work in Asians Factories. By keeping the company contained within Australian shores, it is viable that our business will be socially responsible without the need of global outsourcing. The products are also made from recyclable and biodegradable materials to ensure that all demographics are accepting towards our products in regarding to sustainability factors and fair trade ethics.

4.4.4 Technological

The simplistic design of the three initial stool concepts have do not have a heavy demand from a technological view. The most intense tech required would be the machinery used for manufacturing and mass-producing the high end products within tolerances and ideal quality control. However with our plans to expand a product range progressively as the years go on and the revenue stream continues to flow, we will adapt to advancements in technology.

There will inevitable be improvements in computer tech which will be extremely useful for the quick and easy visualisation and development in design phases. New material will be created or discovered, as well as improvements in machinery and manufacturing technology will be encountered - which will impact our business and industry, hence force us to adapt and apply or implement contemporary technology wherever possible to improve the efficiency of the business and quality of our products.

Looking at our first three stools and considering that we are targeting a mid-high market, the estimated price range would be from \$75 - \$220 AUD. During the starting up years of the business we would expect to sell between 1,500 - 2,300 units which would provide sufficient revenue to allow the company to grow.

5 Marketing Analysis

5.1 Market Trends

While there are no specific industry reports on commercial plastic injection moulded chairs, IBIS World provides reports on the Furniture Retailing, Furniture and Floor Covering Wholesale, Education and Training, Metal Furniture Making and Plastic Injection Moulded Product Manufacturing sectors.

As shown in figures below the industry outlook for Furniture Retailing is expected to have an average annual growth of 1.4% due to the volatility of the domestic housing market (IBIS World, 2014). However, the IBIS report on the education sector in Australia shows that funding for tertiary education, one of the market segments identified to target by this business study, will have a steady increase in public funding. As tertiary establishments receive more funding and grow the need for new furniture will grow and the use of

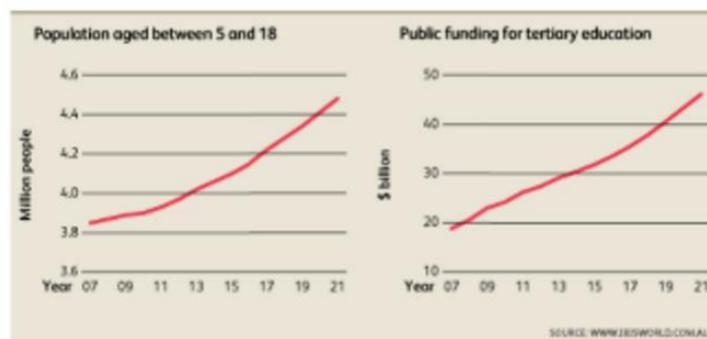


Figure 1- Education and Training Funding IBIS World

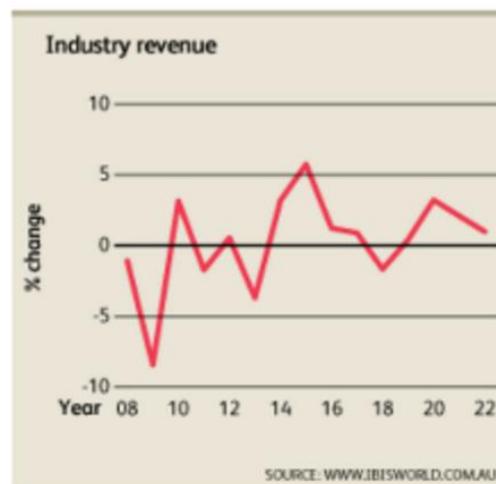


Figure 2: Furniture Retail revenue change IBIS World

Australian products would help the image of Australian Universities. Metal furniture manufacturing represents a close association with the goals of this business study as they target the same target markets of tertiary and commercial business. In their report, IBIS World attribute the decline in the metal furniture industry revenue to the growth of cheap imports and the change of industry from metal goods to plastic or other goods. At the same time IBIS World also state that the Plastic Injection Moulded Products sector is in decline. While this could be seen in a low light it could also mean there is an opportunity for the appropriation of equipment and/or services of an injection moulding business directly into the business of chair manufacture at a lower cost due to the lower increasingly unprofitability of the sector to existing contract manufacturers.

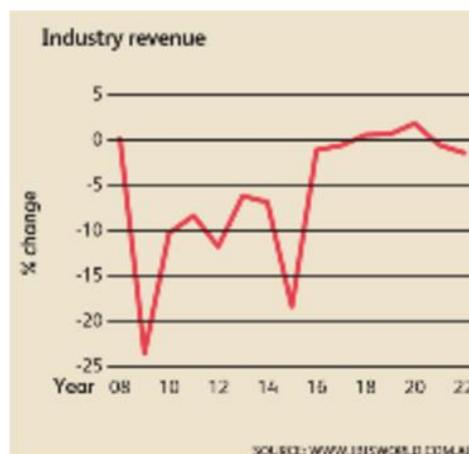


Figure 3: Metal Furniture Manufacturing IBIS World



Figure 4: Wholesale Furniture and Floor Covering % Change IBIS World

5.2 Market Definition, Potential Demand

The major markets that we would target would be large retail stores and educational and corporate facilities for successful commercialisation. Items from our product range are designed to be purchased in sets or bulk quantities. When marketing the products to large retail stores they would purchase items in bulk quantities and therefore become the supplier to other companies or consumers. We would also market the products so that the user can purchase directly, which would most likely result in a transaction where a set of stools would be sold.

As there is a range of products that have been designed for different users and environments, there would overall be a high demand from our companies' perspective. The demand of items from our product range would drive our supply chain, hence by providing several designs that accommodate for a broad audience and different needs, features and ergonomics, we can meet the demand with our low cost, Australian manufactured and designed stool range.

In the seating-furniture industry there are a few mechanisms in place for the exchange of products that fall under this category. In the specialized scope of single-piece injection moulded stools and seat chairs, items are usually mass produced in Asian countries for lower costs, then transported to warehouses in Western countries. From there the products are distributed to furniture and seating stores in large quantities. Consumers can also purchase the products directly with online transactions, which result in the products being distributed straight from the warehouse to an end user.

5.3 Competitor Analysis

5.3.1 Major Competitors

The companies below are all major competitors that specialise in the Seating and Furniture industry for the global market.

Clearlake Capital Group

Estimated market share: 6.0%

Clearlake Capital Group began operations in 1990 and listed on the ASX in 1999. Operating as a vertically integrated furniture manufacturer, importer and retailer, Fantastic manufactures about 60% of the furniture it retails, importing the remainder.



UCI Pty Ltd

Estimated market share: 2.8%

UCI (formerly known as Interlink Commercial Furniture) is one of Australia's leading commercial furniture suppliers with domestic and international manufacturing facilities. The company produces workstations, chairs, desks and filing furniture. UCI was incorporated in 1987 and remains privately owned. UCI's main workstation factory employs 50 staff and is based in Adelaide. The factory services all eight of UCI's offices located in all states and territories of Australia. UCI's designs are licensed to manufacturers in Europe and India. IBIS World estimates UCI generates annual revenue in this industry of \$60 million.

DIM Furniture Pty Ltd

Estimated market share: 2.0%

DIM Furniture is a family owned business with its own board-manufacturing and melamine plant. The company has manufacturing and sales offices in Brisbane, Sydney, Melbourne, Perth and Devonport (TAS). DIM generates revenue of \$40 million to \$50 million annually.



Moran of Melbourne Pty Ltd

Estimated market share: 2.0%

Moran of Melbourne directly employs about 350 people and has revenue totalling \$45 million annually with manufacturing plants in Melbourne and Shanghai. Moran produces lounge suites and sofas in a higher price range, and for many years has had exclusive arrangements with major retailers to sell selected lines through those outlets

G James Australia Pty Ltd

Estimated market share: Less than 1.0%

G James Australia Pty has diversified manufacturing and installation activities across a broad range of markets, and is a leading manufacturer of stackable chairs and tables for the commercial and hospitality markets; it also produces wall units and occasional furniture for the retail market. The firm's furniture manufacturing activities include steel-framed tables with a wide range of table tops. G James generates about \$10 million to \$20 million annually from its furniture-making operations.

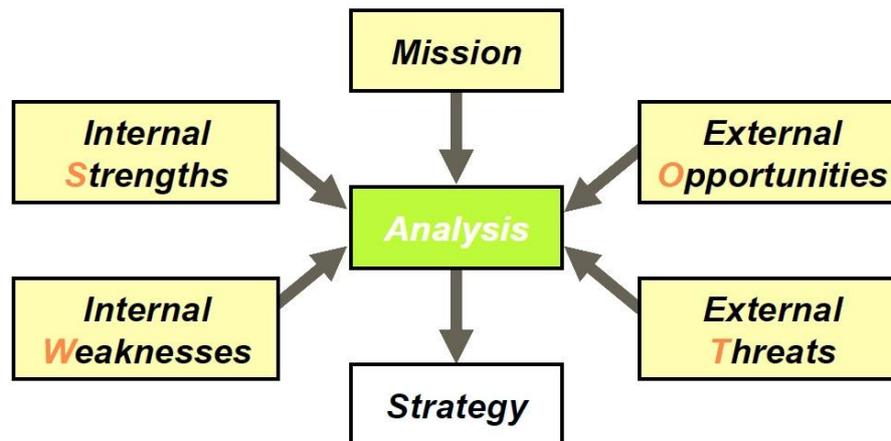
King Furniture

Estimated market share: Less than 1.0%

King Furniture is a leading designer, manufacturer and retailer of up-market fabric and leather furniture based in Sydney. King Furniture maintains showrooms in high-profile inner city retail complexes in Sydney, Melbourne and Brisbane and exports to South-East Asia. King Furniture's manufacturing activities generate about \$10 million to \$15 million annually (excluding retail and wholesale revenue).



5.3.2 SWOT Analysis



5.3.2.1 Strengths

- Simplistic designs that are easy to manufacture
- Made from readily sourceable materials that are environmentally sustainable
- Does not require any Assembly or extra parts
- Stack for easy storage and usability
- Branded with Australian designed and manufactured for high quality recognition
- Long life span of products due to quality, with a good LCA considered for products end of life phase
- Can be sold in sets that are appropriate it for direct purchase by end user
- Can be sold in bulk quantities that are appropriate for large scale suppliers and retail stores
- Can be purchased online, via phone or face-to-face transactions.

5.3.2.2 Weaknesses

- Made in Australia where material, manufacture and labour are expensive.
- Designs are limited due to the 'Single Piece Plastic' constraint (as time goes on and company grows we may have to override this business ethic)
- No official store to display only the items from our product range and not anything from external competitor companies.
- In many of the environments targeted, there are existing seats that will be more appealing due to the ergonomics and comfortability.

5.3.2.3 Opportunities

- Increase the complexity in some designs to move away from stools and approach ergonomic seating (eg office chairs) which will allow us to accommodate for a broader audience to increase our demand.
- Increase the product range
- Outsource manufacture to other companies or countries that can maintain our standard of quality which can reduce costs dramatically
- Utilise and implement new technology and equipment or strategies to increase efficiency as well as revenue flow and profits

5.3.2.4 Threats

- Cheaper stools and seats are available from competitor companies due to offshore manufacture
- Our quality and standards equate to those of other companies that aim to target low-end markets.
- The ergonomics and comfort in our chairs and stools are not as good as competitor products.
- 'Australian design and manufactured' branding does not justify the high prices which will result in low demand.
- Online transactions can look misleading and untrustworthy if not done properly, which could have a negative effect on our reputation.

5.3.3 Objective Development

To be able to succeed, the product will be manufactured in Australia and will be made out of different plastics such as polypropylene and polyethylene. These sorts of materials are easy to obtain in Australia and are also good for injection moulding. These stools will be cheap to design and manufacture and will also be made from sustainable material.

The price will vary depending on the quality and expected life span of the products. The Stack-a-Stool will be manufactured and sold at a lower cost. This product will be designed to be used in schools and libraries where it will be appropriate for children and easy to pack away. The metric stool will be used in bigger businesses and corporations and will therefore be sold at a higher price.

The stools will be manufactured in factories around Australia and can be sold to businesses in retail or directly to schools, libraries and corporations. This business will benefit given that the Australian market does not have many businesses that manufacture furniture. Retailers will easily be able to purchase these products in bulk and sell them to other consumers. These products can also be sold to regular customers through online purchase.

Our products will be promoted and advertised through television and social media. Promotional offers will be available to schools and libraries and also to retail businesses through purchase of bulk items. Consumers will be able to view our furniture online or in retail stores and will have the option of buying directly from us and having it delivered from our factories.

6 Product-Process

6.1 Product Definition and Quality Consideration

To begin with, the business will have three products on the market, the 'Stack-A-Stool', 'Tri-Stool', and 'Metric'. Each has a different price point and each is tailored to a different market, as described below. All three stools are injection moulded which will lower the cost of each product when manufactured with mass production while still maintaining high quality.

6.1.1 Stack-A-Stool

The Stack-A-Stool is 400mm in diameter and is 450mm high. As with all of the stools in the current range, it is made from Injection Moulded High-Density Polyethylene (HDPE), which is a common, cheap, and strong plastic. It weighs only 789grams, and is easily stacked to ensure that shipping and storage costs are kept at a minimum, as well as adding functionality to the user.

As it will be the cheapest to manufacture, and is fairly simplistic in design, it is aimed at schools, libraries, and the domestic market. As it will be sold at a lower price and has a generally 'lightweight' feel, it will have a lower perceived quality than the other two products.



6.1.2 Tri-Stool

The Tri-Stool is the midrange product of the range, and measures 483mm by 483mm at the base, and is 420mm high. It is also made from HDPE, and weighs 1.68kg. This design is also stackable, but will not nest quite as well as the Stack-A-Stool.

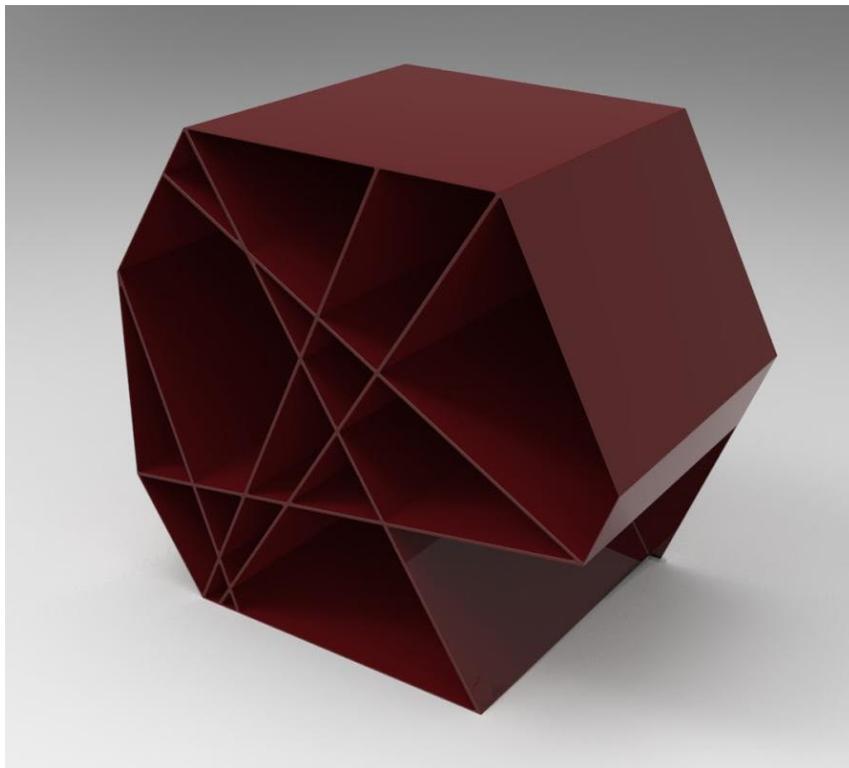
The triangular design on the side is fun and will appeal most to schools and libraries, but the greater material usage will situate the product at a higher price point than the Stack-A-Stool. The sturdier and more stable construction will add to the perceived quality of the product.



6.1.3 Metric

Metric is the most expensive stool in the range as it is the most difficult to manufacture, but may also have the highest perceived quality depending on the customer. It measures 500mm in length and is 300mm deep, and sits 450mm high. It is made from HDPE, and is the heaviest of the three stools as well, weighing 5.54kg.

Being larger, heavier, more expensive, and having a very unique design, this product will be targeted towards businesses who will see buying an expensive product such as this as an asset rather than an expense. As well as appearing visually striking, the feel of the product will be very sturdy as it is heavy, and these factors will add to the product's perceived quality.



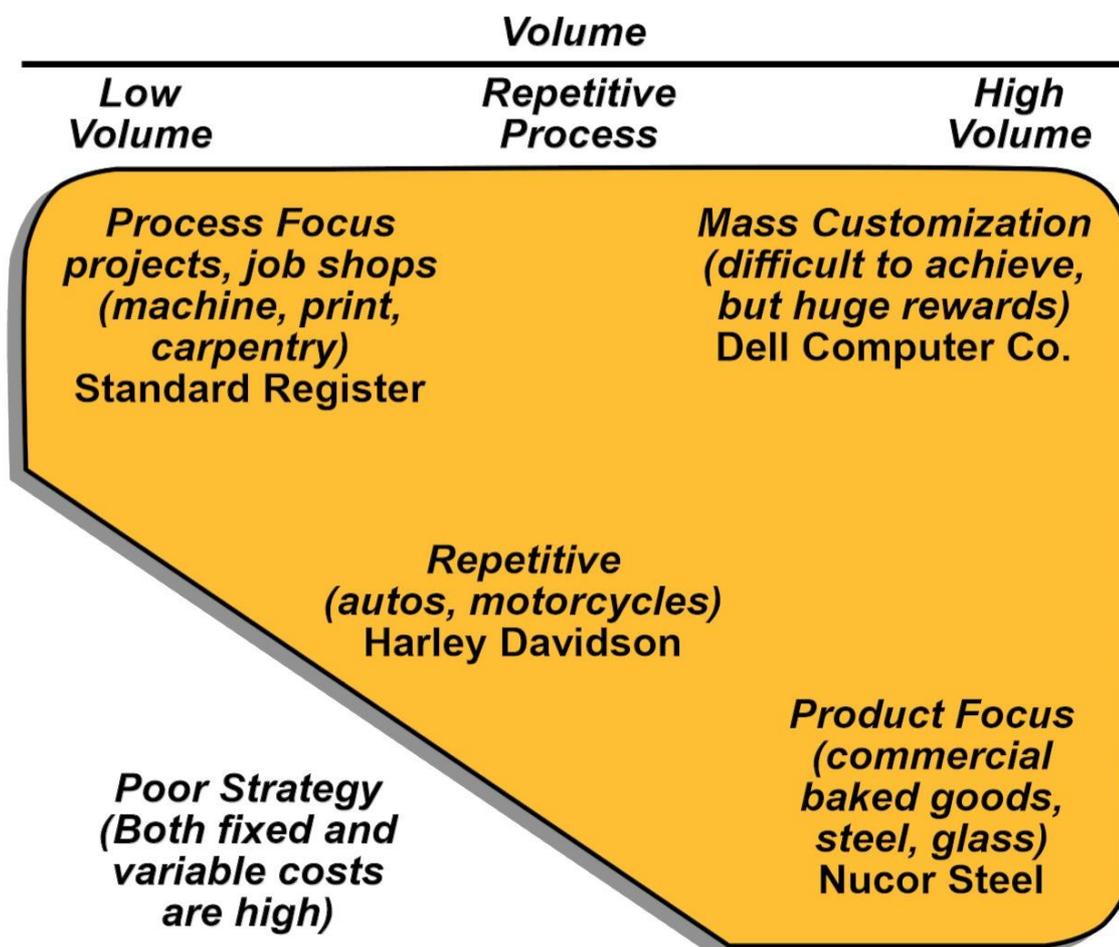
6.1.4 Range Extension

Whilst the business will only start with the three products, as time goes on more and more will be added to the range, utilising the design skills of the team. In the future the business will have many different products, not only injection moulded stools but all kinds of furniture for schools, libraries, offices, and the home.

The team already has many designs for library furniture that has been developed at university, which can be utilised as soon as the business has capital to invest in further products.

6.2 Process Selection

To compete effectively and reduce costs in the long term a Product focussed process will be utilised by the business. Production volume will be high with customisation happening rarely, when a new stool is required or when the company is a position of high enough capital to expand its product range. The initial product range will consist of three injection moulded stools focussing on different market segments as spoken of earlier in this report in Section 2.1. Initial setup costs will be high for the tooling and equipment required but the combination of high volume production and low material and minimised labour costs will allow the company to achieve and maintain profitability.



6.3 Identification of Relevant Supply Chain

6.3.1 3.4.1 Upstream Suppliers

As our initial and future concepts within the company's product range are designed to be made from injection-moulded polymers, we will need to consider who and what organisations can supply us with the essentials. Suppliers of raw materials (such as PP and HDPE pellets) will need to be found where business relationships can be made, as frequent transactions would occur throughout the year when raw stock levels begin to deplete. Machinery and manufacturing equipment suppliers will need to be contacted to provide us with the necessary equipment to drive production.



Suppliers of packaging and transport materials and equipment will enable the products to be sealed and ready to distribute. The cash flow will be derived from the marketing of our product range; hence our supply levels will be based on the customer demands. In the initial stages of starting the business, adequate amounts of finances will need to be invested into the business in order to start of the cycle. Hence the amount of money that is used to purchase the raw material, manufacturing equipment and other necessities will determine how much revenue will be received.



As we spend money towards materials and processing we will receive a greater amount of money once consumers purchase it, where the differences in costs will equate to the company's profits. Information will consistently flow between our company and its various suppliers as business relationships will be formed to ensure that communication and correspondence is maintained at a professional level to result in efficient production.

6.3.2 3.4.2 Downstream Customers

After the stools have been manufactured and move along the production line they are then will encounter packaging, distributing, shipping and storing processes, which can be considered as downstream phases in the supply chain. The downstream customers from our company's perspective would be wholesalers and retailers. Organisations and shops that can become a wholesale or retail seller of our products will be considered our customer as our business will receive profits by supplying them with our products. Also direct buyers who may purchase a stool or set of seating furniture online or via the phone will be downstream customers to our business.

For wholesalers and retailers, who purchase and commercialise our products, they will receive information in regards to our business and what we provide by our website and communications. Once business relationships are formed regular liaising will take place in order to project for future manufacturing batch cycles and supply levels, which should reflect the customer, demand. For direct purchasers, they will receive information primarily from our marketing platforms (such as website, magazines, flyers and adverts), and once they have made a purchase from our company we would regularly email the special offers to keep them updated and interested in our company and its product range.

The wholesalers and retailers will buy our product in bulk quantities so that they receive a reduced unit price on each item which can be beneficial for them, yet it is beneficial for our company as we would more stock quickly a receive a large total sum for bulk orders placed. When a direct purchaser buys items from our company upfront (via website/PayPal/phone) we will receive a high return profit for the item, but will not be the driving force that enables our company to grow financially.

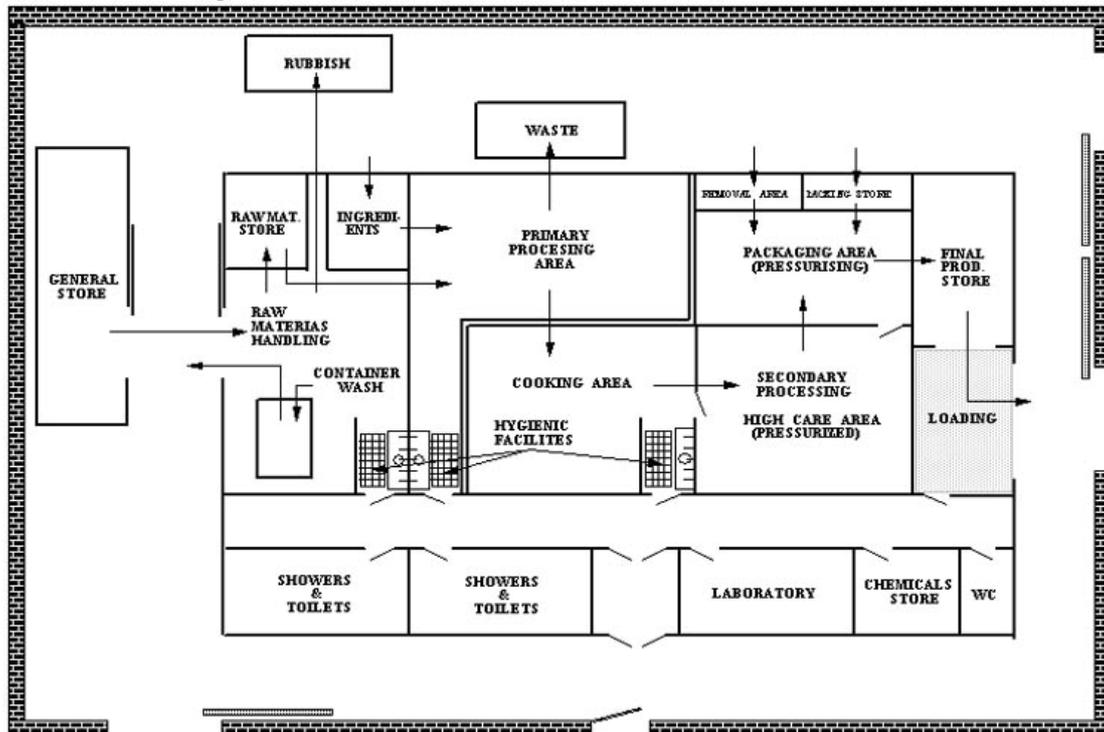
7 Operations Plan & Required Resources

7.1 Location

The business will need to be located in areas close to retail companies that will most likely purchase our products. Delivery will be required, as these companies will purchase items in bulk orders. The distance of travel will affect the cost of transportation and the time taken to deliver these items. Nearby companies will be more satisfied and will therefore build a better partnership between two businesses. Being located near retail stores will also give customers the option of purchasing items straight from a local factory.

Proximity to suppliers is also important, as material is required to manufacture these stools. Our products will be designed out of natural resources that are easy to obtain in Australia and will therefore reduce the cost of transportation. As most furniture businesses purchase their products from overseas, we will have an advantage by selling to markets without the use of shipping.

All these factors must be considered, as the location will affect the ongoing costs of running this business.



7.2 Layout

Customers will be able to visit our factories to purchase stools but must not be exposed to the equipment used to manufacture them. A small area that customers will easily be able to access will be used to display items.

Customers will also be able to pick up items from storage if they choose not to have it delivered.

Material handling is important and will affect the cost of production if done properly. Materials should be stored properly so it can be found and moved easily to speed up the rate of production. Once our products are manufactured, they will be stored in an area where trucks are able to gather them with ease. Proper storage will minimise any damage that can occur around the warehouse.

Layout of the workplace is important when it comes to occupational health and safety. Workers who are qualified and supervisors should only access the area where the stools are manufactured. The equipment must be properly maintained and should be located in safe areas.



7.3 Required Resources

Resources required will range from raw materials to personnel and the outsourcing of specialised tasks to external companies. Raw materials will consist primarily of new and recycled plastic pellets for use in the injection moulding process. The material will be sourced from local plastics wholesalers initially and move to a direct sourcing of material from international suppliers once production reaches an equitable mark.

Both design and manufacture of the stools will require different sets of equipment. Research and development will require tools for design and prototyping such as computers and prototyping materials. Manufacture will require injection moulding machines, tooling for each product and the associated tools required for treatment, finishing and packaging of the final products.

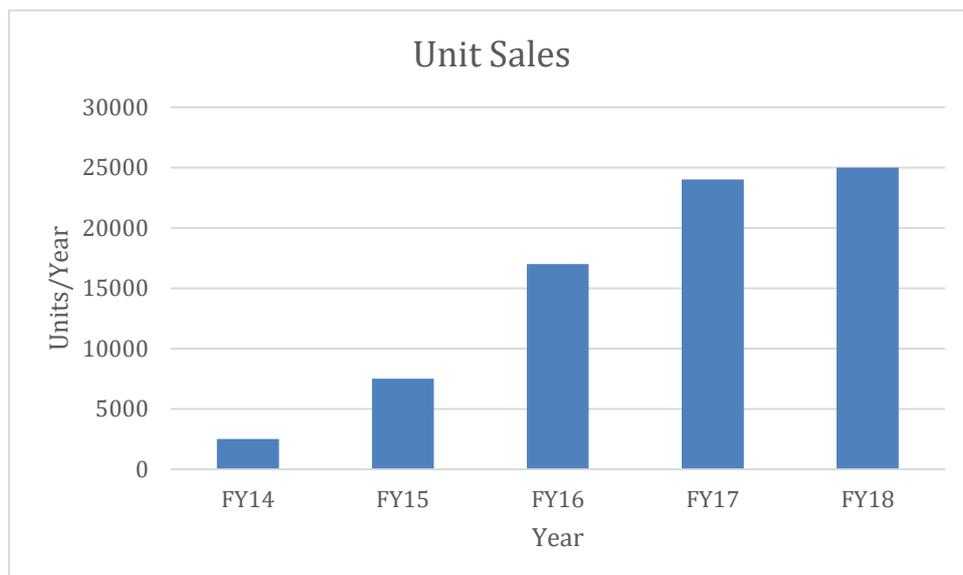
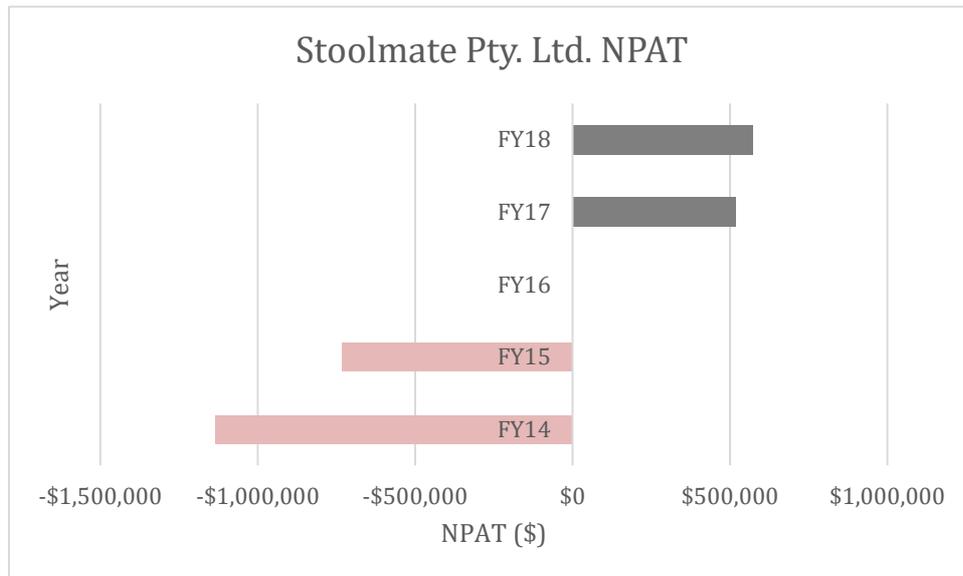
Various levels of expertise will be required throughout the process of design and manufacture of the stools. For the research and development a high level of expertise will be required for the design and engineering of the stools. Manufacture will require a low level of expertise but training will need to be provided to ensure workers are up to the job of manufacture and general maintenance of the machines. A high level of expertise will be required for specific maintenance of the injection moulding machines and for tool design of the injection moulding tools, however as this would occur only a few times per year or less this will be outsourced to experienced companies in those fields.



8 Financial Plan & Business Risks

8.1 Financial Plan

StoolMate will achieve break-even point after three years. The tables and figures below describe how with an increase in yearly sales the companies NPAT will reach \$570,000 at the end of five years.



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October 12, 2015

Year	FY14	FY15	FY16	FY17	FY18
Unit Sales	2500	7500	17000	24000	25000
Other Revenue					
Sales Revenue	\$300,000	\$900,000	\$2,040,000	\$2,880,000	\$3,000,000
COGS					
Shifts /Year	125	375	850	1200	1250
Direct COGS	\$ 9,573	\$ 28,720	\$ 65,100	\$ 91,905	\$ 95,735
Direct Labour	\$ 31,250	\$ 93,750	\$ 212,500	\$ 300,000	\$ 312,500
Other Direct	\$ 62,500	\$ 187,500	\$ 425,000	\$ 600,000	\$ 625,000
Total	\$ 103,323	\$ 309,970	\$ 702,600	\$ 991,905	\$ 1,033,235
Gross Profit	\$196,677	\$590,030	\$1,337,400	\$1,888,095	\$1,966,765
Operational Expenses					
Production Salaries	\$187,500	\$193,125	\$198,919	\$204,886	\$211,033
Design & engineering Salaries	\$187,500	\$193,125	\$198,919	\$204,886	\$211,033
Quality Salaries	\$162,500	\$167,375	\$172,396	\$177,568	\$182,895
Repairs & Maintenance	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Training & Development	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Sundries	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Consumerables & Stationary	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Equipment Leases	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Total Operational Expenses	\$592,500	\$608,625	\$625,234	\$642,341	\$659,961
Selling & Admin					
Sales & Marketing Salaries	\$188,750	\$194,413	\$200,245	\$206,252	\$212,440
Travel	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Sundries	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Marketing Expenses & Events	\$25,000	\$25,000	\$10,000	\$5,000	\$5,000
Total S&A Expenses	\$227,750	\$233,413	\$224,245	\$225,252	\$231,440
Overheads & Expenses					
Lease	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000
Insurance	\$12,000	\$12,000	\$12,000	\$15,000	\$15,000
Legal Fees	\$45,000	\$10,000	\$10,000	\$10,000	\$10,000
Accounting	\$30,000	\$30,000	\$30,000	\$35,000	\$30,000
Head office salaries	\$180,000	\$185,400	\$190,962	\$196,691	\$202,592
Total Overheads & Expenses	\$337,000	\$307,400	\$312,962	\$326,691	\$327,592
Total Expenses	\$1,157,250	\$1,149,438	\$1,162,441	\$1,194,284	\$1,218,992
EBITDA	-\$960,573	-\$559,408	\$174,960	\$693,811	\$747,773
Depreciation	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000
Amortisation					
EBIT	-\$1,075,573	-\$674,408	\$59,960	\$578,811	\$632,773
Interest	\$61,000	\$60,000	\$60,000	\$60,000	\$60,000
Earnings Before Tax	-\$1,136,573	-\$734,408	-\$40	\$518,811	\$572,773
Tax	0	0	0	0	0
NPAT	-\$1,136,573	-\$734,408	-\$40	\$518,811	\$572,773

8.2 Business Risks

The main business risks involve the supply and variability of material pricing and product demand. HDPE can fluctuate in price so a pool of funds must be kept to supply funds in the case of a price jump.

Demand for furniture is volatile in Australia, as shown in the IBIS Report on furniture retail the market fluctuate between growth and decline.

The fluctuating Australian Dollar brings the risk of increasing COGS and other services which are outsourced to other companies.

9 Conclusion and Key Findings

From this study we have researched into the business potential and the development of a business plan for seating furniture to be used for casual use in Australian universities, libraries and large corporate and government buildings. The furniture will be designed, manufactured and distributed within Australia by a single company and offer a range of furniture to fit different needs.

A customer analysis is explained which outlines the market segmentation, looking at both the end user and purchaser of the product. Through a PEST analysis the market potential and external factors affecting the startup and ongoing success of a furniture supplier are evaluated. Competitors are analysed with a SWOT analysis and product benchmarking to provide a baseline of product standards and any potential opportunities that could be exploited. The need for the development of an Australian supply chain, marketing network is described with the use of product, place, promotion and price. From our Cost Analysis we have derived that business growth will be more efficient after the third year. Once the business is properly established we will be looking to expand and grow and an even faster rate and target a vast audience with our high quality product range.

Key Findings:

- Market opportunity for Australian produced casual stools and seating
- 3 market segments
- Universities, Large Corporate, Public Government buildings
- 3 initial products
- Low, medium, high pricings
- Product Processed business
- Resources
- Equipment, Material, Labour, Design, Expertise
- Close proximity to customers
- Full supply chain analysed
- Cradle to Cradle sustainable design

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