



Virtual Reality

BUSINESS PLAN

BUILDING AIDS INC.

123 Main St.
Simpson Grove, CA 37911

July 10, 1993

Building Aids Inc. is a new company formed to take advantage of virtual reality technology in its application to new home design and construction. The company will develop and provide virtual reality tours and "blue prints" of homes in order to assist both architects and prospective purchasers. The following plan outlines the company's structure, present and future goals, and need for capital .

- EXECUTIVE SUMMARY
- PRODUCTS AND SERVICES - FIRST YEAR
- FUTURE PRODUCTS AND SERVICES
- THE MARKET
- THE COMPETITION
- MARKETING OBJECTIVES AND STRATEGIES
- PRODUCTION AND DISTRIBUTION
- COMPANY STRUCTURE

EXECUTIVE SUMMARY

The formation of Building Aids Inc. as a specialized service company is the result of exploration of the high technological advancements of computer graphic design integrated with eighteen years of personal commitment to quality work for, in, and around various areas of the building industry. The initial goal is to provide home owners and builders, architects, designers, and related manufacturers and suppliers with the innovative concept of three-dimensional graphic designs integrated with virtual reality (V.R.) definition. The designs will be made available as real-time animations on computer discs and video cassette tapes. To date, no one has approached the home plan publications market with sales revenues in excess of three billion (\$3,000,000,000) dollars with such a unique and affordable concept. With the assistance of the Hawaii Small Business Development Center, Building Aids Inc. will have the unique opportunity to participate in an Incubator Program, which will provide office space at little or no cost, at their EDIC Center located at 45 Maple Ln.

A major obstacle that exists for architects and builders as well as for the consumer is the difficulty to conceptualize the finished product. It is very difficult, if not impossible, to transfer a two-dimensional perspective into a three-dimensional one. In October of 1991 I began researching alternative solutions to this problem. By integrating computer software programs, I have created an application for three dimensional virtual reality (V.R.) animated movies.

Forecasters project that this technology will take years to become affordable to the public. Virtual Reality

Источник бизнес-плана: <http://www.referenceforbusiness.com>



technologists and multimedia producers state, "within ten years the virtual reality market will be affordable to consumers with home electronic toys, games, and entertainment systems. It will be used in public attractions like rides, movies and exhibits. It will be an extension of the 'human computer' used in training, physical therapy, medical research, and practices of non-invasive surgery, by schools and universities."

The more advanced technology already exists and has been pursued primarily by government agencies (e.g. NASA) and corporations with the investment capital that can afford the high cost of the main frame data banks. Transferring data to video tape eliminates large capital outlays and minimizes resources, resulting in a high quality multimedia product with built-in flexibility for rapid change.

Inexpensive demonstration tapes will allow consumers to explore the three-dimensional realm of virtual reality by viewing custom home designs by "walking" from room to room. Plans would be available for purchase from the Building Aids library. These tapes will also demonstrate the capabilities of scanning a design or 2-D building plan with a computer and transforming them into a 3-D environment. It will allow one to walk around the outside and through the inside of their home before it is actually built.

The company's initial year will largely be an organizational one due to the high growth rates the company will undergo. It is essential that suitable systems and procedures be implemented at the onset to achieve the financial goals that have been established. To experience a successful start-up and ongoing development, funding in the amount of two hundred thousand dollars (\$200,000) is necessary. This will allow for the purchase of equipment; initial operating costs, including but not limited to the consultation and contracting of an attorney, accountants, marketing, and sales; management team salaries; and debt service for the first year of operation.

The management team of Building Aids Inc. consists of highly specialized individuals with training in both the building and computer-aided design technologies. The General Manager will establish the company and its facilities, implement market and sales, and conduct research and design development. The Technical Operations Manager will assist in research, design/developments and production control. The Senior Engineer will make purchase recommendations and maintain and upgrade the equipment, as well as assist in the design and production of home plans. The Administrative Assistant will set up database programs for accounting, sales, and distribution of products, as well as maintain customer relations.

The company will have a limited number of competitors in its target market. Some of these competitors are larger than Building Aids Inc. and have access to more financial resources than the company, but these companies have not developed the interactive process to approach the market with the technical and marketing strategies of our company.

Marketing Strategy

Building Aids Inc. is a company providing the following services:

- Custom plans and designs to worldwide market of:
 - Do-It-Yourself consumers
 - Residential home owners and builders
 - Commercial developers
 - Industrial suppliers
- The marketing of these services will consist primarily of Computerized directories (e.g. Procurement Automated Source System (PASS))
- Direct mail
 - National Trade Associations of the U.S. and Canada
 - Professional Associations of the U.S. and Canada
- Telemarketing
- Newspapers and Periodicals



- The Babson Entrepreneurial Review
- Small Business Reporter
- Wall Street Journal, New York Times
- Consumer Publications (e.g. Better Homes & Garden)
 - Home Magazine
 - Personal Computing Mac User, Byte
 - AI, Architectural Digest, Victorian Homes
 - Mac World, PC Magazine, PC Computing
 - Home Office, Amiga World
- Trade magazines
 - Builder
 - Fine Home Building
 - Architectural Record
- Newsletters
- Reprints to targeted audiences
- Trade Shows
- Visual Presentations
- Videos
- Computer Bulletin Boards
 - America Online, Inc.
 - GEnie
 - HouseNet & Prodigy Services, Co.
- Exhibit creativity and innovative solutions (not only within design and problem solving areas, but for use with others approach to marketing and client communications)

Management Team

Building Aids Inc. will be established as a Limited Liability Corporation.

- Principal Managers/Staff and their titles:
 - General Manager, Phil Orlando
 - Administrative Assistant, Carrie Green
 - Technical Operations Manager, Susan Selden
 - Senior Engineer, Linda Cardinale
- Objectives of the Management Team:

Building Aids Inc.'s initial year will consist of organizing and developing. Since the company will be providing office facilities, this eliminates one major activity in the company's development. After obtaining the start-up capital, efforts in the first year will be concentrated in the following key areas:

- Legal organization
- Purchasing and installing equipment
- Development of information management and design libraries
- Marketing and sales

Initial sales of the company will consist of demonstration tapes and custom designed homes. These sales will generate cash flow and establish Building Aids in the marketplace.



Financial Considerations

The projected Income Statement has been compiled from the 1991-92 editions of the following: *Industry Norms and Key Business Ratios*, published by Dun and Bradstreet; *Thomas Register*; *Value Line*, and *International Economic Indicators*, and *The State of Small Businesses: A Report of The President*. The sales forecast for the first year is a worse case scenario.

Operating expenses are based on the industry standards with minimum salaries for the management team, independent contractors, marketing and sales, expenses, and repayment of debt service beginning on the seventh month of operation as cash flow is being established. Positive cash flow appears in month ten with year end expenses exceeding total sales.

Second year sales will show a major increase with target market being extended to 80% of potential market. Operating expenses may fluctuate depending on needs and demands. Salary increases, along with other options, will be in proportion to productivity performance and achievement of individual goals.

Third year sales are still forecasted at conservative percentage increases based on actual economic indicators for the industry. Production and sales will increase as additional employees are added to the technical and design staff.

Anticipated profits for the first three years of operations are as follows:

Year 1,\$23,308.00
 Year 2,\$140,505.00
 Year 3,\$150,125.00

Year 1 http://\$23,308.00

Year 2 \$140,505.00

Year 3 \$150,125.00

Funds to be distributed:

Equipment Purchase,\$82,000.00
 Operating Costs,\$26,500.00
 Consultation/Contracting,\$40,000.00
 Salaries,\$60,900.00

Total,\$209,400.00

Equipment Purchase	\$82,000.00
Operating Costs	\$26,500.00
Consultation/Contracting	\$40,000.00
Salaries	\$60,900.00
Total	\$209,400.00

PRODUCT AND SERVICES - FIRST YEAR

Computerized three-dimensional enhancements of home plans with a virtual reality walk-through beginning from the exterior of the home through the front door and into each room of the house. Virtual Reality presentations can be purchased as floppy discs or as a VCR video tape.

Additional Services:

- Energy calculations for specific geographical areas
- Cost analysis for geographical area regarding R-values of insulation, window and door comparisons, heating/air conditioning units and gas appliances by cost and efficiency.
- Interior design - scanned photo images of actual furniture, cabinetry, lighting fixtures etc.
- Material lists.
- Design alterations - change room dimension, etc.

Источник бизнес-плана: <http://www.referenceforbusiness.com>



- Landscaping presentations.

Product Costs (Suggested Retail Price):

- Demonstration Tape - \$20.00 - examples of walkthroughs, three dimensional designs, marketing uses and sales presentations.
- Video/Floppy Discs - Starting at \$250.00.
 - Energy Calculation - \$85.00.
 - Complete Comparative Cost Analysis - \$100.00
 - Design Alterations - \$1.50/sq. ft.
 - Landscapes - \$.75/sq. ft.
 - Scanned Images and Consultation - \$50.00/hr.

FUTURE PRODUCTS AND SERVICES

- With five employees in the second year and inclusion of additional target market:
 - Design and Concept Development
 - Layouts and Computer Three Dimensional Graphics
 - Illustrations
 - Virtual Reality Presentation Material:
Slides, Videos, Imaging, Posters, Large Scale Displays and Exhibits, Photo Imaging and Elevation, and Sectional Perspectives Renderings
- With seven employees in the third year, including expansion into commercial and industrial markets. Also offering franchises of information management libraries and technical support.
- Proprietary Features—will apply for:
 - Patents
 - Copyrights
 - Trademark

THE MARKET

\$3 Billion Annual Growth

- Individuals
 - Home Owners
 - New Home Buyers
 - Retirees
 - Do It Yourselfers - Adding on or remodeling
- Professionals
 - Builders
 - Developers
 - Architects
 - Designers
 - Resources: American Institute of Building Design (AIBD) Sacramento, CA 95815
- Commercial/Industrial Companies
 - Building Supply
 - Home Improvement Centers



- Industrial Suppliers
- Manufacturers (doors, windows, heating, etc.)

THE COMPETITION

No direct competition exists at the present time.

- Existing Companies
 - Commercial Design\Graphic Corporations - \$5M+
 - CADCAM, Inc - \$5M+, Dayton, Ohio.
 - Circuit CAD Corp. - \$1M+
 - CACI, Inc. - \$50M+, Chesapeake, Virginia.
- CAD Designers
 - Turbo Scan International - \$9M+, Coral Gables, Florida.
 - Willow Peripherals - (NR) \$1M+, Bronx, New York.
- Residential Home Plan Books
 - Home Magazines-\$20.00/plan book, \$330 minimum, Newport Beach, California.
 - Better Homes and Gardens - \$425 minimum, Des Moines, Iowa.
 - Builder (NAHB) - \$350 minimum, Washington, D.C.
 - Custom Builder - \$385 minimum, Yarmouth, Maine.
 - Princeton Plans Press - \$330+, Princeton, New Jersey.
 - W.D. Farmers Homes - Planbooks - \$69.00, Atlanta, Georgia.

Estimate sales and revenues with comparative products and services. No availability of three-dimensional virtual reality technology .

- Architects and Designers - charge on percentage basis of building costs. Average cost to build a 1400 sq. ft. house in 1991 = \$117,000.00. Architect fee @10%-\$11,700.00.
- Design Services (e.g. RCM Corporation, Columbia, Maryland). Three phase design services

Preliminary.....	\$2,000.00
Design Phase.....	\$2,000.00
Complete.....	\$2,000.00
Total services.....	\$6,000.00

Preliminary	\$2,000.00
Design Phase	\$2,000.00
Complete	\$2,000.00
Total services	\$6,000.00

MARKETING OBJECTIVES AND STRATEGIES

After extensively researching the Commercial and Private marketing opportunities, I have concluded that the most effective and efficient approach to initiate the marketing of products and services is by market segmentation and the use of direct as well as indirect methods of advertising.

The direct method will be aggressive. It will entail new product releases in key industrial/commercial as well as consumer publications, computer billboard announcements, together with sending out demonstration tapes to the architectural, design, construction, home improvement, and development industries. In addition, trade show attendance and participation will allow product introduction and overall industry awareness to take place. This extensive exposure with appropriate follow-up will generate an at-large industry demand. The indirect strategy will consist of identifying sales representative agencies, wholesalers, distributors, and retailers in key locations to nationally and internationally represent Building Aids Inc. Specially modified and custom



demonstration videos will be prepared so that the indirect agencies are equipped to target market and be successful in their efforts. Creative and innovative agency training programs as well as compensation packages will be used to motivate the indirect sales force.

Production and Distribution Corporate offices will be located at 123 Main. The first six months will be spent organizing an information management library for immediate and direct access to designs and energy calculations. This will allow Building Aids to generate some "bread and butter" cash flow as it further invests efforts to get the direct and indirect marketing strategies underway. As part of reaching and informing the consumer, a composite demonstration video highlighting capabilities will be produced. Credit toward the customers' order will be made in the event that a custom design order is placed. The equipment required for development and production of virtual reality animations consists of three separate main computers with monitors, scanners, printers, plotters, GVP Impact Controllers, Processor Cards, Video Cameras, VHS & VCR recorders and controllers, modems, copiers, video monitors and relative software programs.

COMPANY STRUCTURE

Building Aids Inc. will be established as a Limited Liability Company incorporated under the laws of the state of Hawaii. The General Manager will be Phil Orlando. The two key management members will be Susan Selden and Linda Cardinale.

A quasi Board of Directors will be set up as an alternative to a formal Board of Advisors and Consultants.