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Financial Proposal For:

# **One Smart Home**

# Design, Installation, and Support for Smart Home Systems and Devices

To Be Submitted to XXX

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#### **EXECUTIVE SUMMARY**

Smart home devices and systems increase the quality of life for people in their homes. Smart home systems improve safety, security, accessibility, mobility, energy efficiency, and access to entertainment and social media for communication with family and friends. Smart home systems have the potential to enhance ways to care for loved ones, even from a distance remotely.

One Smart Home is a proposed small business LLC, performing smart home services including design, installation, setup, and ongoing support. The target market consumers are mid-income, the elderly, the physically challenged, and the non tech-versed customers. Smart systems allow the elderly and physically challenged to live more independently in their homes for a longer period of time potentially with a higher quality of life.

In fall, 2022, a new communication standard of connectivity is expected to be ratified by the Connectivity Standards Alliance (CSA). . It has been backed by companies such as Google, Amazon, Apple, Samsung and many others. As of July 2022, 250 companies had joined the alliance with 50 of them scheduled to bring 130 MATTER compliant devices to the market by fall of 2022. MATTER is the system of commands, or coding language that allows smart devices to 'talk' to each other. MATTER will allow any individual device to communicate with any other device and any system controller (such as Amazon Alexa, Google Home, and Apple Home), giving consumers the ability to now choose any MATTER compliant device for their system. Presently without such a standard, only select devices work with a particular system controller. This makes changes to the controller ecosystem exceedingly difficult and expensive and will not allow multiple controllers from different manufacturers to concurrently control many of the same devices. This new standard is very likely to increase competition, thereby reducing prices, and increasing the rate of evolution for new features in the smart device market.

One Smart Home will take advantage of the falling prices and continually more attractive features to enter the mid- to high-end income consumer market. Falling prices will allow One Smart Home to charge less for hardware while allowing design and install prices to remain similar, reducing total system costs for the customer, maintaining profit for One Smart Home. This will allow smaller and fixed income customers to participate more in this fast growing market. Specifically, the smart home system market is expected to increase by 11% CAGR over the next five years, very strong growth indeed.

In order to establish One Smart Home, a total of \$10,000 will be needed. Phil Mason, owner will self finance \$2000 and a 5 year loan from this bank for \$8000. Of this amount, \$700 will be used to purchase a new PC laptop, \$400 for a new Android phone, and \$3500 to purchase a broad range of smart devices from various manufacturers, including smart locks, smart security devices,

smart thermostats with MATTER designed in as they become available in the marketplace. The purchase of such MATTER-supported devices will occur over an extended period of time as new ones become available. (Supply summary figures from financial section.)

## TABLE OF CONTENTS

**Executive Summary** 

Table of Contents

**Business Description** 

Operations and Location

Products and Services

Market/Industry Analysis

Competition

Marketing Strategy

Management

Financials : Source and Use of Funds

Financials : Income Statement

#### **BUSINESS DESCRIPTION**

One Smart Home offers design, installation, setup, and on-going support for smart devices and smart home systems for customers who desire ease of control of devices in their homes. One Smart home systems increase access, safety, and security in the home.

The current main smart home platforms include Amazon Alexa, Apple Home, Google Home, and Samsung SmartThings. A new, upcoming communications protocol standard, MATTER, as explained by Bernie Deitrick at Consumer Reports,

"will allow consumers to choose device models based on features and price rather than compatibility with a specific system, free from worry that the devices may stop working due to inevitable changes in the industry." (citation date and page?)

MATTER is expected to bring down equipment costs significantly and increase the rate of feature evolution, both due to increased competition. This change in smart home technology could possibly be somewhat disruptive in the industry, and be advantageous for the customer." (citation date and page?)

The legal operating structure of the business will be an LLC. The type of industry is residential construction and renovation, combining both electric aspects and home installation. The necessary licenses, permits, insurance, and tax filing status will be obtained. The business will be registered in Westbrook, Maine, will have 1 employee (owner Philip Mason), and will have a PO Box in the Westbrook 04092 zip code.

## **OPERATIONS AND LOCATION**

One Smart Home will operate 5 days a week. The normal hours of operation will be 7:00 to 5:00, Monday through Friday. One Smart Home will be managed by Philip Mason who will be the sole employee. The company will have a PO Box in the Westbrook Maine 04092 zip code. This location is 6 miles outside of downtown Portland and central to the bulk of the population of Cumberland County.

#### **PRODUCTS AND SERVICES**

One Smart Home networks in-home devices for ease of use through voice commands or smart phone controls. Devices include voice-activated control of TV systems, locks, doorbell cameras, security systems, heating and cooling systems and thermostats, light bulbs, electrical plugs, smartphones, computers, with more available every day.

The target clientele are 1.) mature adults looking to age in place, adults with physical disabilities to increase the accessibility and safety of their home environment, 3.) non tech-savvy mid-tier income home owners wishing to take part in the smart home revolution, and 4.) property managers desiring to improve renters' comforts along with increased control of apartments/homes by the manager. For seniors and the physically disabled, remote monitoring is available for family members and friends. For seniors, One Smart Home could extend the length of independent stay in their homes, and maintain or even improve their quality of life. Upgrading a home with smart home systems might also make homes more efficient, safe and secure and potentially increase the home value. Additional market segments such as new homeowners, and contractors for new home construction may be explored in the future.

A smart home technology standard being implemented in the fall of 2022 will most likely dramatically reduce prices and increase functionality for smart home devices and systems. With hardware prices falling and functionality increasing, the consumer will likely be more attracted to having smart home systems installed. This could potentially increase the service component of One Smart Home and increase revenue for the company.

The primary offerings will include consulting, design, installation, setup, and on-going support services. The customer will be presented with various options for systems/designs, including cost, performance, functionality, quality of systems, and customer service. Customers will also be provided a list of packages of service where appropriate to make the selection process simpler. Customer service will be of utmost importance, since customers are going to be trusting with One Smart Home the sensitive inside of their homes and networks. Ideally the customer will co-design the system with the designer to best meet their needs.

The installation services provided are to be limited to wireless devices and systems. Where physical connections and associated construction are necessary, partner or affiliated companies will be recommended. Devices that support the MATTER communication protocol (language that certified products can use to communicate with each other soon to be ratified) will be used whenever possible to keep the system from going obsolete. Both app and voice control can be provided based on a customer's request.

For design and consulting services there will be an hourly rate with increments of a quarter hour. The charge for device installation and setup will be roughly \$120 for each simple device and roughly \$180 for more complex devices. Door locks will also need to be a higher price. Troubleshooting charges still need to be worked out. There will be two options for purchasing devices: ones selected by me and ones approved by me and purchased by the customer.

#### MARKET/INDUSTRY ANALYSIS

(Need source) US smart home market size in 2022 is expected to be \$33B and increase to \$51B by 2026. This represents an 11% CAGR. The US has the greatest number of smart homes: 41.3 million with a penetration rate of roughly 32%. Americans favor home automation more than other nations and are interested in products such as cameras, video doorbells, light bulbs, smart locks, thermostats, and smart speakers. The current main smart home platforms include Amazon Alexa, Apple Home, Google Home, and Samsung SmartThings.

Smart home devices used as components for smart home systems have, for the history of such devices, been a fragmented market with regards to their communication method. This has forced consumers to make difficult choices about which subset of devices, limited to one communication protocol, to choose from. Such a choice also has the consumer risk the possibility of their systems going obsolete with rapidly ever-changing technology. Thus the more comprehensive control systems have been difficult to select for and also have been limited to higher income families.

The new communications protocol, MATTER, as explained by Bernie Deitrick at Consumer Reports, "will allow consumers to choose models based on features and price rather than compatibility with a specific system, free from the worry that they may stop working due to inevitable changes in the industry". Also, according to Daniel Wroclawski at Consumer Reports, the wireless mesh networking protocol, Thread, offers a relatively new standard for communication, similar in some aspects to WiFi and different in others. Thread, like WiFi, will be built using open and proven standards. Thread will be very low power and low-latency. It uses the same security technology as bank cryptocurrency, which is very secure, and AES encryption. Privacy may initially be a concern, but as long as the security is strong the privacy aspect can always be improved. MATTER will support devices via WiFi and Thread. In addition, Thread allows local device control, not on a manufacturer's server, which allows full system operation during an internet outage. Also, as mentioned earlier, MATTER is expected to bring down equipment costs considerably. Thread and MATTER could potentially be disruptive in the industry and be very advantageous for the consumer in terms of functionality and cost. This should open up new markets for mid-income homes. When MATTER is ratified and designed into devices and platforms there will be much more competition increasing the number of devices on the market and technology should evolve at a faster pace, so One Smart Home services should have increased value in the marketplace in the future.

The typical startup costs for a voice activated home automation business were \$15,000 to \$25,000 in 2010. A decade later the equipment startup costs have fallen dramatically ( \$3500 for this business plan) for far superior technology, ease of installation, and ease of use.

#### COMPETITION

National Chains:

- 1.) Best Buy: Geek squad: Total Tech; 24/7/365 tech support: 20,000 employees
- 2.) HelloTech (HelloTech.com): Nest, Simplisafe, Xfinity, Amazon, Walmart, Samsung
- 3.) OnTech (Ontechsmartservices.com): direct to consumer smart home services: initially started by DISH.

Local providers:

- Smart Home Solutions (smarthomesolutions.com): Kennebunk, full service residential and commercial, custom design and integration, new construction and existing homes, present focus on high-end homes.
- 2.) DC Home Systems (DCHomeSystems.com): Portland, Operations in Maine, NH, and Mass.
- 3.) TuckerandTucker.com: home theater, music and video systems (Smaht Ideas), Scarborough (32 years)
- 4.) IndependentHomeSystems.com: Portland
- 5.) Individual electrical (including HVAC) contractors starting their own small smart business home like me.
- 6.) Angi's list.

Many competitors will have certifications from organizations like CEDIA, ETAI, Schneider Electric, etc.

#### **MARKETING STRATEGY**

Philip will investigate smart home trade associations and potential advantages to having certificates from them.

Target Market Defined:

- 1.) Elderly people living primarily alone at home. Will stress quality of life, safety and security.
- 2.) Physically challenged. Will stress increased capabilities
- 3.) Non technology savvy. Will stress ease and comfort of control
- 4.) Property managers. Will stress apartment control and monitoring and also resident attractiveness.

Offline strategy:

- 1.) Post with real estate agents
- 2.) Call and establish working relationships with elderly and physically challenged support organizations.
- 3.) Builder and contractor partnerships
- 4.) Establish property manager relationships.
- 5.) Business cards handed out and on bulletin boards.
- 6.) Word of mouth (Need great reviews)

Online Strategy:

- 1.) Company website showing capabilities and reviews.
- 2.) Google search (SEO)
- 3.) Facebook account
- 4.) Linkedin account

#### MANAGEMENT

Philip has a very broad knowledge base with regard to how smart devices and systems work. The highlights include a doctoral degree in physics, developing technologies for silicon chip design, ensuring field reliability for silicon chip products, and broad knowledge of audio, video, electrical and wireless operation of devices from decades of personal use.

Philip will obtain the following services from the following professionals:

- 1.) Banker
- 2.) Accountant
- 3.) Insurance agent
- 4.) Legal
- 5.) Tax Preparer

Philip has worked with an advisor from the Maine Small Business Development Center.

Philip has volunteered at the retirement home, Park Danforth, in Portland for more than 6 months providing computer, tablet, and phone troubleshooting support and training.

Philip enjoys all aspects of the smart home business, including working with clients on design, doing research for determining the specific devices and platforms (ecosystems) to choose/recommend, problem solving, patiently helping customers, continually improving technical knowledge, etc.

His experience base will give Philip a very broad understanding of smart device engineering and how that translates to the end consumer products for a superior design of customers' systems. Philip will be able to easily follow the new communications standards as they are introduced into the market and to optimize component choice and avoid obsolescence. Philip will also subscribe to device company newsletters for updates on the latest technology and checkout smart home courses on Udemy as well as review videos on Youtube.

Specific Experience:

- 1.) 20+ years experience in high-tech semiconductor industry helping design smartphone and WiFi communications chips.
- 2.) Degree in physics which provides a fundamental understanding of physical concepts such as light, current, voltage, temperature, heat, sound, etc. and how engineered devices measure and control them.
- Designing and managing personal home electronics systems in his own house for 20+ years.

- 4.) Very early adopter of WiFi home systems back in 2002. Results in 20 years of experience in WiFi systems.
- 5.) Built desktop computers for personal and family use to maximize functionality at low cost.
- 6.) Experience with home file servers, electronic audio and video systems.
- 7.) Used home video cameras for family videos and digitally archived and produced movies.
- 8.) Member of IEEE association for more than 20 years which is a body that develops some of the engineering electronics communications standards.

#### FINANCIAL: SOURCE AND USE OF FUNDS: ONE SMART HOME

#### Source

Owner (Cash) \$2000

Bank (Loan) \$8000

Use: one time startup expenses:

- 1.) Purchase new business PC laptop \$700
- 2.) Purchase new business Android phone \$400
- 3.) Purchase smart devices pre-MATTER ratification \$1000
- 4.) Purchase smart devices post-MATTER ratification \$2500
  - a.) Depends on when loan is approved
- 5.) Legal: Setup LLC \$200
- 6.) Accountant: Setup account
- 7.) Website design
- 8.) Professional smart home associations, classes, certifications
- 9.) Marketing: Business cards, Flyers, magnet for RAV, email \$400
- 10.) Licenses with town and state (and federal perhaps)
- 11.) Tools
- 12.) Working Capital

#### Notes:

12.) based on need shown in first year cash flow projections

#### FINANCIALS: INCOME STATEMENT: ONE SMART HOME

Income per year:

- 1.) Work days: 230 days (weekend days: 104; vacation days: 31)
- 2.) Hours per day : 10
- 3.) Hours per year: 2300 hours
- 4.) % of hours charged per day : 50%
- 5.) Hours charged per year: 1150 hours
- 6.) Hourly rate on average : \$120
- 7.) Pretax Gross Labor Profit per year: \$138,000

Operating Expenses per month:

- 1.) Inventory
- 2.) Wages
- 3.) Bank Loan interest and Principal
- 4.) Advertising/Marketing
- 5.) Work phone
- 6.) Accounting Software
- 7.) Prototype devices: smart home device purchases post Matter ratification

Operating Expenses per year

- 1.) Website domain
- 2.) PO Box
- 3.) Accountant
- 4.) Tax Preparer and taxes
- 5.) Legal
- 6.) Liability Insurance
- 7.) Professional Associations: IEEE, Sigma Xi, ETAI, etc.
- 8.) Journals and magazines: Consumer reports, PCmag, etc.
- 9.) Auto insurance, registration, mileage

#### FINANCIALS: CASH FLOW STATEMENT: ONE SMART HOME

**Cash Receipts** 

Cash Disbursements per month:

- 1.) Inventory
- 2.) Wages
- 3.) Bank Loan interest and Principal
- 4.) Advertising/Marketing
- 5.) Work phone
- 6.) Accounting Software
- 7.) Prototype devices: smart home device purchases post Matter ratification

Cash Disbursements per year

- 1.) Website domain
- 2.) PO Box
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- 6.) Liability Insurance
- 7.) Professional Associations: IEEE, Sigma Xi, ETAI, etc.
- 8.) Journals and magazines: Consumer reports, PCmag, etc.
- 9.) Auto insurance, registration, mileage

#### **APPENDIX**

List of Materials Included:

- A) Resume of owner
- B) Personal Financial Statement
- C) Last 3 Years Personal Tax Returns
- D) Proposed LLC Filing and Operating Agreement
- E) Copy of Purchase and Sales Agreement
- F) Quotes from Vendors and Suppliers
- G) Proposed Pricing for Services
- H) List of Reference Sources Used in Business Plan