BUSINESS PLAN

HOME AUTOMATION AND SECURITY SOLUTION

www.bizzbeesolutions.com

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Contents

INTRODUCTION

The purpose of this market research is to investigate the home automation and security industry in order to see the feasibility of starting a new business in this industry.

The start-up will use OEM hardware & software solution from Smart Solutions Inc. (link) meaning that all the hardware/software improvements will be done by Smart Solutions Inc. The start-up will need to focus on making its own brand and trying to position itself on the market.

EXTERNAL ANALYSIS

INDUSTRY & MARKET ANALYSIS

Home automation systems refer to all such systems, whether used as a single application or as integrated solutions that are used to automate processes. They are electricity powered and are manually controlled (such as turning on the AC, dimming lights, managing entrance gate and cameras, operating smart appliances in a house, and so on).

With technological advancements in several developing countries across the globe, home automation solutions are evolving continuously. Modern day home automation solutions utilize high end digital technology for providing better performance and efficiency.

High degree of internet connectivity and penetration in developed countries such as the U.S., the U.K., France, and Germany are also contributing to the growth of home automation market globally.

The home automation market is primarily driven by growing need for effective solutions in various domestic applications such as lighting, safety and security, energy management, entertainment (audio and video), and HVAC (heating, ventilation, and air conditioning). Even though the concept of home automation has been in existence for a long time, the market has witnessed a profound growth, mainly, during the last five years. The growing awareness about wireless technologies and the various developments related to the integration of wired and wireless technologies is expected to propel the home automation & control market in future.

Currently, the market is in the high growth stage of the industry life cycle, and is expected to remain in this phase till 2020. According to Transparency Market Research global home automation market was valued at $4.41 billion in 2014, growing at a CAGR of 26.3% from

2014 to 2020. Another research shows slightly different numbers but still within the positive trend - According to MarketandMarket, the global home automation and control market was worth $5.77 billion in 2013 and is expected to reach $ 12.81 billion by 2020; the market is projected to grow at an estimated compound annual growth rate (CAGR) of 11.36% between 2014 and 2020.

Home automation technology has been around for many years, but it has only recently begun to enter the mainstream. The reasons for home automations growing popularity include developments on the demand side as well as the supply side. On the **demand side,** rising incomes and standards of living have combined with increased concerns regarding energy and security to increase the attractiveness of technologies that promise to enhance the owners' quality of life, while also making the most efficient use of energy (especially electricity) and providing a sense of security. The drop in construction of new homes as a result of the financial crisis that started in 2008 has dampened the demand for home automation systems, but in the longer term, many would-be homebuyers are younger, technologically savvy people with an affinity for the latest electronic devices, thus creating a favorable market environment for home automation systems.

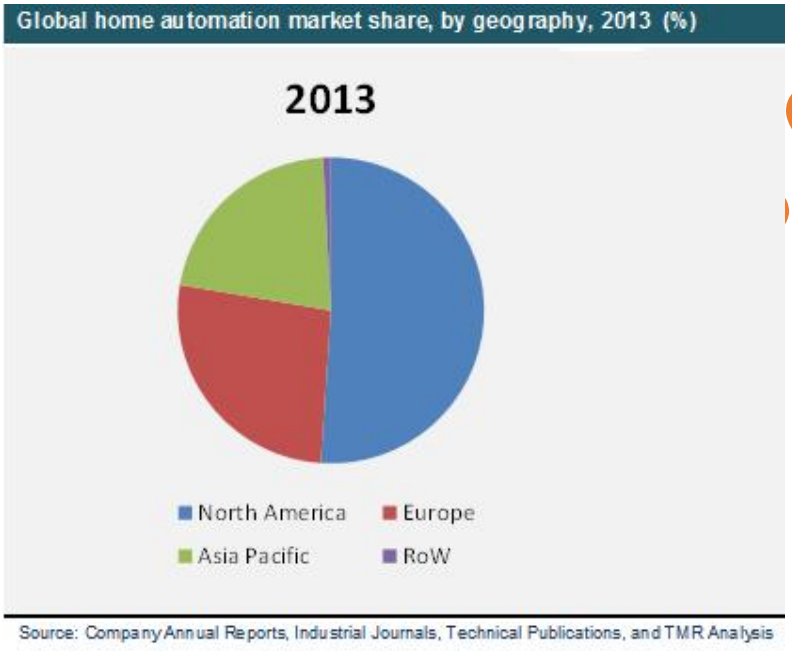
On the **supply side**, the declining cost and complexity of new home automation products is helping to attract new buyers. Until a few years ago, the cost of quality home automation components was prohibitive for all but the enthusiast market, but now prices are dropping. In fact, the cost of installation labor and the expense of educating electricians in this field are becoming the most inhibiting factors. Fortunately, other developments are helping to reduce the difficulty and cost of installation. These developments include the growing use of standards-based wireless technologies that allow home automation devices to integrate seamlessly and minimize the need for special wiring to connect them.

The Home automation market can be divided (segmented) by several criteria: 1) by region, 2) by application, 3) by networking technology.

SEGMENTATION BY REGION

The global home automation market is segmented by region into North America, Europe, Asia-Pacific (APAC) and Rest of the World (RoW). Geographically, North America led the home automation market in 2014 and the region is expected to continue its dominance by 2020. The region's dominance is due to advancement in technology in countries such as the U.S. and Canada. The revival of construction activities, especially with regards to new

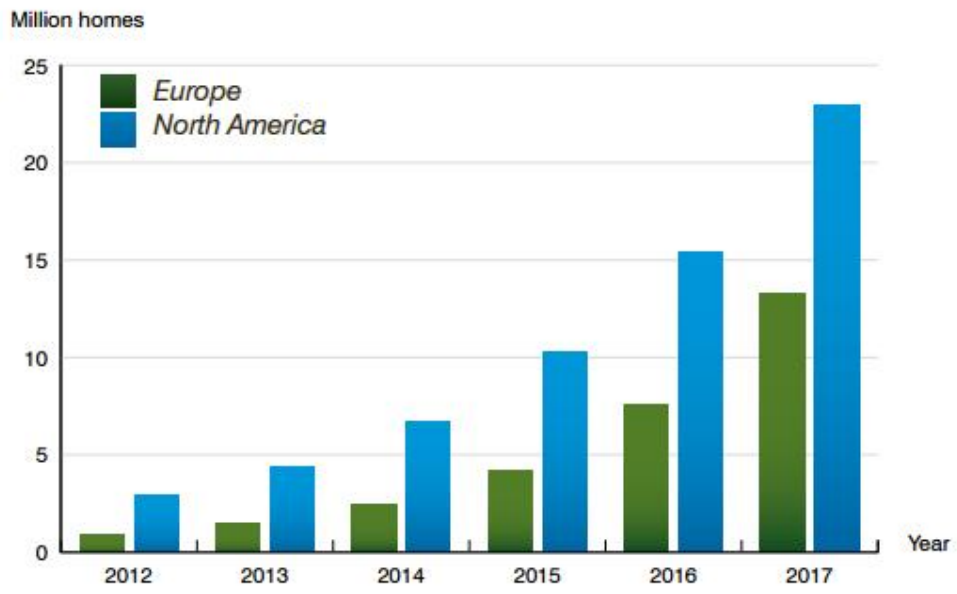
residential buildings and renovations, is expected to support the growth of the said market, in this region. The increasing preference of consumers for convenience, connectivity, safety & security, and demand for energy efficient and green product solutions are expected to drive the growth of this market. Europe and Asia Pacific followed North America in the global home automation market to collectively account for more than forty percent of the global market revenue share.



As it can be seen from the chart above, North America has the largest market share followed by EU, Asia Pacific and RoW (Rest of World).

North America and EU

Looking further into North America and EU, below is a chart with numbers of Smart homes and their forecast.



Total number of smart homes
(Europe and North America 2012–2017)

According to Berg Insight, North America is the most advanced region in the world for smart home solutions with an installed base of 3.5 million systems at the end of 2012. An estimated 0.7 million of these were multifunction or whole-home systems whereas 2.8 million were point solutions designed for one specific function such as climate control or security. As some homes have more than one smart system in use, the installed base represents a total of around 2.9 million smart homes. Market growth has been very strong during the first three quarters of 2013 and North America is on track to reach an installed base of 5.5 million smart home systems by the end of the year. Between 2012 and 2017 the installed base is forecasted to grow at a compound annual growth rate (CAGR) of 55.0 percent to reach 31.4 million smart home systems. Berg Insight estimates that the North American market was worth US$ 1.6 billion in 2012, including revenues from hardware, services and installation. The market is expected to grow at a CAGR of 42 percent between 2012 and 2017, reaching US$ 9.4 billion in yearly revenues at the end of the forecast period.

The European market for smart home systems is still in an early stage and approximately three years behind North America in terms of penetration and market maturity. At the end of 2012, there were a total of 1.06 million smart home systems in use in the EU27+2 countries. Around 0.15 million of these systems were multifunction or whole-home

systems whereas 0.91 million were point solutions. This corresponds to around 0.93 million smart homes when overlaps are taken into account.

Market growth has been solid during the first three quarters of 2013 and Europe is on track to reach 1.45 million smart home systems by the end of the year. Berg Insight forecasts that the installed base of smart home systems in EU27+2 will grow at a CAGR of 56.0 percent in the next five years to reach 17.4 million systems by 2017. Smart home solution revenues in EU27+2 reached an estimated US$ 0.52 billion in 2012. The market is expected to grow at a CAGR of 46.0 percent between 2012 and 2017 to reach US$ 3.4 billion at the end of the forecast period.

SEGMENTATION BY APPLICATION

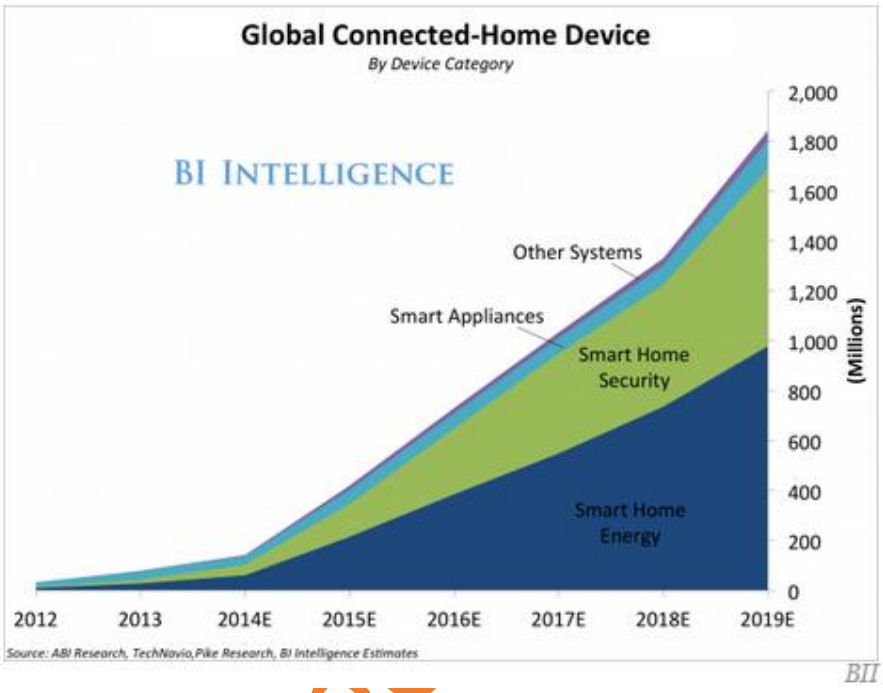
The home automation market is segmented on the basis of application into 6 main categories: 1) Energy management and climate control systems also known as HVAC (Heating, Ventilation and Air-Conditioning), 2) Security and access control systems, 3) lighting, window and appliance control systems, 4) home appliances, 5) audio-visual and entertainment systems and 6) healthcare and assisted living systems.

The entertainment segment which held a major market share in the early stage is now surpassed by safety and security segment, which is expected to continue to be the largest market. Demand for safety and security home automation systems is attributed to growing need for remote home monitoring solutions and increasing risk of criminal activities such as theft and robbery. Safety and security segment is followed by entertainment and lightening segment.

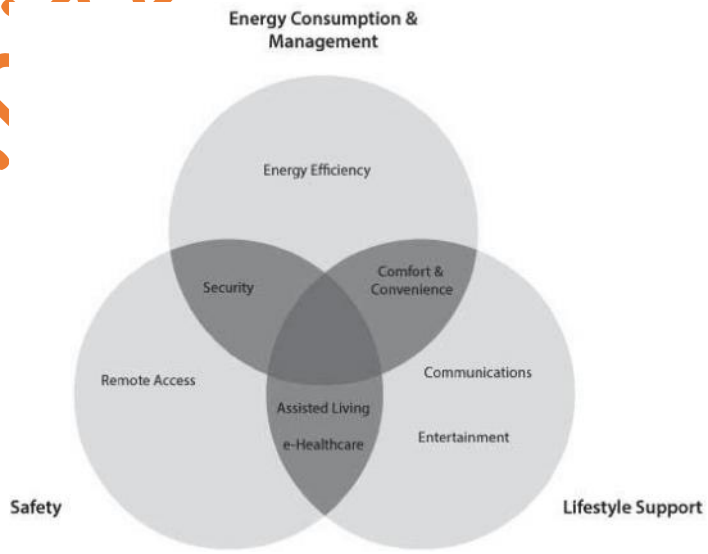
According to a report from Business Insider, here are few key points that should be considered for home automation industry:

- **Connected-home device will grow at a compound annual rate of 67% over the next five years**, much faster than smartphone or tablet device growth, and hit 1.8 billion units shipped in 2019, according to BI Intelligence estimates. Connected-home devices include all smart appliances (washers, dryers, refrigerators, etc.), safety and security systems (internet-connected sensors, monitors, cameras, and alarm systems), and energy equipment like smart thermostats and smart lighting.
- **The connected-home category will make up about 25% of shipments within the broader Internet of Things category this year**, but that share will increase gradually to roughly 27% in 2019 based on our forecast, as growth in other IoT areas picks up.

- **Connected-home device sales will drive over $61 billion in revenue this year**. That number will climb at a 52% compound annual growth rate to reach $490 billion in 2019.
- **Home-energy equipment and safety and security systems, including devices like connected thermostats and smoke detectors, will become popular first,** leading the way to broader consumer adoption.



Another graphical presentation was made by Balta-Ozkan, Davidson, Bicket, & Whitmarsh, 2013 representing the spectrum of offerings for Smart Home Areas



SEGMENTATION BY NETWORKING TECHNOLOGY

The home automation market is further segmented by networking technology into wired systems, power-line systems, computing networks, and wireless systems. Wireless system segment of home automation technology held the highest revenue share accounting for more than fifty percent of the overall market in 2013. With the increase in number of products equipped with WiFi technology, the demand for wireless technology enabled home automation solutions are observing substantial growth globally. Power-line systems is analyzed to be the second fastest growing networking technology segment after wireless systems and is expected to attain a significant growth in the recent future.

The demand for energy efficient solutions coupled with the rising concerns for enhanced security has spurred the market for home automation & security control. This market, which initially started with wired technologies, has now entered the era of wireless technologies with the emergence of technologies such as ZigBee, Z-Wave, EnOcean, and others.

COMPETITOR ANALYSIS

Smart home solutions consist of a wide range of hardware and software technologies. As a result a complex ecosystem is emerging comprising whole-home solution vendors, product OEMs and smart home platform vendors. Traditional whole-home solution vendors such as Crestron, Control4, Gira and Jung are facing new competition as telecom operators, security service providers, energy companies and other vendors are entering the industry. This is leading to a rapid increase in consumer awareness which is benefitting all players. At the same time, the market is undergoing a major transformation. New entrants such as Vivint, ADT, Comcast and Vera Controls in North America as well as eQ-3 and SFR in Europe have already managed to establish themselves among the top five whole-home solution vendors in their respective regions. The product OEM category consists primarily of incumbents with decades of experience such as Honeywell, Whirlpool, ASSA ABLOY, Somfy, Philips and Sony. However, connectivity is giving birth to new device categories and redefined value propositions in several application areas such as interactive security and smart thermostats, enabling companies such as D-Link, Sonos, Belkin, Ecobee, Nest, and Numera to enter the market. The smart home software platform category is today led

by specialized technology vendors such as iControl, Alarm.com and AlertMe. These vendors have primarily competed against in-house development efforts from smart home solution vendors, but are now also starting to face competition from large technology companies such as Arris, Amdocs and Technicolor that have entered the smart home platform market.

PESTE ANALYSIS

In order to understand the external factors affecting the current smart home market, a PESTLE analysis was conducted. This provides a more holistic view and identifies where strengths, weaknesses and opportunities and threats lie in the smart home industry.

POLITICAL ANALYSIS

Policy - Governments are realizing the need to act and make provisions for the future by facilitating electric-grid modernization, bringing about the rise of the 'smart-grid'. An overview of policies in pioneering countries shows that governments are realizing the need to accommodate the distribution of renewable energy, increasing demands of a digital society, threats to infrastructure security and concerns over global climate disruption. Smart-grid policies and improvements to infrastructure as a result are facilitating the development and ease of implementation of smart home technologies.

Energy depletion, climate change and the greenhouse effect have become worldwide problems. Gradually more countries are putting increasing importance on sustainable issues and in order to solve these problems, governments around the world have launched a range of corresponding policy. Many of the policies affect residential homes, such as, executive order S-20-04 in America (California Executive Order S-20-04, 2014). It strongly encourages energy saving, to build green homes, update heating systems as well as the use of energy-saving lamps.

With the issues of data privacy and security also being taken very seriously and addressed by new legislation being drawn, for example in the U.S Consumer Privacy Bill of Rights (The White House, 2012) is being established to protect the consumer and keep them safe.

ECONOMIC ANALYSIS

In the past, the term “smart home” conjured up images of expensive home improvements and high-tech gadgets that were exclusively for people who could afford them. However, with the emergence of wireless technology and the maturity of ‘smart’ technology, accessibility has increased. Additionally, the new smart home technologies are ‘plug and play’ or easily installed, which means they do not require any major renovations to the home.

The monetary savings made by the user will eventually mean the system pays for itself (e.g. insurance, monitoring, air conditioning, heating, and lighting) the long term effect becomes significant. For example, smart homes are dry year round, decreasing moisture and mold damage. This will reduce the amount of maintenance required, saving time and money

SOCIAL ANALYSIS

Today the biggest challenge is to help people not only to live longer, but also ensuring their health and a good life quality are maintained. According to the SIEMENS Synco living report (Siemens, 2014), they showed the social benefits as following:

Increasing Comfort - Smart home living can create the optimal cozy room climate and flexible system, such as controlling individual rooms, control of heating/cooling/air conditioning, long range control etc.

Enhancing Convenience - The user can integrate electrical installations and devices to make daily life conveniently operate everything more easily, such as control of lights and blinds, switching electrical appliances etc.

Improving Security - Integrating safety and security components into the home system will improve safety and efficiency, such as smoke detection, window/door monitoring etc.

A socially sustainable system must achieve distributional equity, adequate provision of social services including health and education, gender equity, and political accountability and participation.

We spend 90% of our time indoors (OECD, 2002). As such, the indoor environment is directly related to well-being; the happiness and health of the occupant. Controlling factors including air quality, temperature and daylight inside a building all play a significant role

in maintaining the indoor environment With the increasing pressure of busy lifestyles, factors such as comfort and convenience are becoming increasingly important to people. The buildings we inhabit should therefore be able to meet our changing needs and requirements. They should be ready for the future, adaptable to 'new drivers' such as climate change, the change towards a multifunctional and diverse society in order to help ensure productive, comfortable and healthy societies.

Social Barriers

Usability - In order for smart home technology to functionally satisfy the user there is a harmony that needs to be established between the level of automation and difficulty of operability. Currently systems are either too complex (hard to understand, manage and use) or do not have the required level of automation. Therefore 'smart home' technology can be inhibiting to the user as they are required to adapt to the technology (rather than the other way around).

Inference in the presence of ambiguity - The level of inference required is highly difficult to predict as such the systems often lacks the ability to know its own level of control and involvement in the users' life. The 'smart home' promise of intelligence requires decisions to be made on behalf of the user, however this often leads to having either too much control or not enough; and currently the technology has not been able to make the leap to deal with unpredictability. This presents challenges for the user in knowing their level of input required, and as such designing the appropriate level of control of the system.

Security and Privacy - While some experts viewed security as a technical problem with simple solutions, others saw privacy as the most challenging risk to smart home development. The smart home needs to collect information about the user in order to function. Therefore, ensuring the security of private data and preventing sensitive information getting into the 'wrong hands' is a priority as the user needs to trust that their personal information is not a threat or being misused. Ambiguity about data privacy has caused a lack of trust in society; it is unclear how much data is being collected and stored, what it is being used for other than its intended purpose and whether it is safe.

With the increasing interconnected landscape of the smart home and the use of cloud computing the risk of being 'hacked' is greater than ever before. As such, concerns about personal security also remain. Having a 'smart home' entails having a system that is

connected to the internet, thus is open to security threats and making the home more vulnerable to unauthorized access and violations of personal data privacy.

Cost and Value - Quantifying the value of a smart home in terms of improved life quality is very hard for the consumer to conceptualize until they actually implement and use the technologies. The value is also often not fully understood by the user as the benefits are variable depending on the individual's ability to realize and maximize on the technology, yet be aware of its current flaws and limitations (e.g. cannot deal well with unpredictability).

The tangible value is often understood through for example monetary savings made from improved energy efficiency and reducing resource usage. However, the smart home currently has several business models and as such a multitude of relative costs, which are often confusing to comprehend and justify the end value to the user. High upfront investments still remain for the smart home and for the majority of society are not attainable.

TECHNOLOGICAL ANALYSIS

Maturity of technology - Technology has becoming cheaper, more reliable and above all more user friendly. The development of technologies and standardized protocols is reducing the complexity of integration. With the wider industries who supply electric home appliances acknowledging a network architecture that is flexible and adaptable to the consumer's changing needs and environment is necessary in order to successfully enable the opportunities presented by the smart home. Also, the cost of storing and managing the vast amounts of data generated continues to decline with the rise of cloud-based data stores

Accessibility – With the accessibility of the high speed internet and the wide adoption of wireless devices such as smart phones have increased the possibility for communications. With the penetration and improvements in speed and reliability only increasing, the added benefits for the smart home being there does not require any costly infrastructure to current buildings and the market is already primed. The improvement and growth of Wireless Internet (Wi-Fi) is connecting a wide range of household items to the internet and as such increasing control, breaking down physical and virtual boundaries, improving remote access and increasing service and.

Internet of Things and Cloud Computing - The Internet of Things (IoT) was formally "born" between 2008/9 when the number of connected devices exceeded the number of humans on the planet. Previously device domains were decoupled, the television was for entertainment, the telephone for communications (see picture below). Through an increased demand for inter-domain interoperability to enable these various different domains to essentially talk to each other, more and more devices have become internet enabled.

The IoT is the network formed by objects with defined identities (e.g. a television), connected via the internet, exchanging data with other objects, users or systems. In the IoT, "things" are expected to become active participants in business, information and social processes. Maurizio Salvi (2012) described it as the 'interaction and communication among products and with the environment, exchanging data and information "sensed" about the environment, while reacting autonomously to "real/physical world" events influencing it, by running processes that trigger actions and create services with or without direct human intervention'. The IoT lays the foundations for the smart home to gather pace, it can have a real impact, empowering the smart home and greatly affecting future value added services (Karnouskos, 2010).

To enable the processing of the mass data generated by IoT is through cloud computing implementation. The concept of cloud computing focuses on maximizing the effectiveness of shared resources by allocating them dynamically based on demand. Devices in the home are connected to the cloud, enabling data to be aggregated and new intelligence to be created, thus enabling the user to derive the most benefits out of a much larger system.

Technological Barriers

Interoperability -Interoperability is the ability of diverse systems to work together, and in the case of the smart home it requires multiple devices to be able to communicate with each other, exchange information and work cooperatively to perform tasks. However with different device manufacturers currently favoring different types of networks and communications protocols an array of ecosystems exist. The lack of standardization for data transmission, collection and storage technologies is thus preventing the emergence of a reliable and consistent ecosystem.

Reliability and Robustness - Technology is not always reliable; technical problems will always exist. Being able to fully rely on the smart home system is therefore currently not possible and this problem is extenuated with different standards and thus different tolerances for technical errors. For example, boiler designers and home computer developers work under different assumptions about the appropriate tolerance level for crashes. Combining the two different products introduces room for complications; otherwise insignificant malfunctions in the home computer could potentially cause dangerous malfunctions in the boiler it is networked up.

ENVIRONMENTAL ANALYSIS

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This means improving the quality of human life while living within the carrying capacity of supporting ecosystems

An environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems or environmental sink functions, and depleting non-renewable resources only to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources.

Huge direct and indirect environmental impacts are associated with the ways we operate and maintain buildings. Buildings currently account for 40% of primary energy consumption in most countries, and are also a significant source of carbon dioxide emissions (IEA 2014). Growth in population, increasing demand for buildings and better standards of living assure the upward trend in energy demand will. Space heating and

cooling is the most significant component of household energy demand. However, it is also the demand for electricity from appliances that has increased most rapidly in percentage terms in recent years (increase of more than 21 % per dwelling since 1990). Thus, improvement of the environmental aspects of buildings and building activities can make an important contribution to environmental sustainability.

Making ‘smarter’ choices in the home can reduce the pollution and degradation of valuable natural resources, and the amount of waste (e.g. water). Most of today’s electrical energy is produced using CO2 emitting fossil fuels combined with the direct usage of fossil fuels e.g. natural gas in the home, contribute to global warming. The smart home is a solution to reducing all these stresses on the environment by significantly lowering our inputs and making the house more efficient thus having a direct effect on our outputs.

A simulation conducted by Siemens building technology experts in association with Lucerne University of Applied Sciences and Arts showed that:

- Lower utility/service charges and energy savings of up to 30% without reducing the level of comfort.

- A single installed system can save 4 tons of CO2 per year compared to a home without automation (based on the gas heating in 100 m2 apartments)

According to the International Energy Agency, 19% of global electricity generation is taken for lighting. A worldwide switch to efficient lighting systems would reduce the world’s electricity bill by one tenth. If a household installs an occupancy sensor which can turn lights and standby power from electronic appliances off when a person leaves the space that can save up to 20% on lighting electricity (Energy Monitoring, 2014).

PESTE SUMMARY

The result of a PESTE analysis showed the externalities influencing the development of a smart home. Many external factors are positive influencers and should be taken into account by the stakeholders and built upon; the key influencing factors being environmental and energy related policy, the economic drivers to an expanding industry that saves consumers money and the social and environmental sustainability advantages resulting from better management of household utilities and increasing quality of life for the user.

The smart home not only gives the customers control of their home, but also can reduce expenses, while enriching the home experience; making it more comfortable and convenient. The user can ensure and regulate their home environment; to be safe, healthy and to meet their own needs e.g. create more free time. Meanwhile, the smart home can contribute to ensure a more sustainable environment, making it easier to conserve resources and reduce the household's impact on the environment.

INTERNAL ANALYSIS

COMPANY BACKGROUND

ABC is a newly established company in Ghana, with main focus on home automation and security solutions.

The founder has already passed several trainings in the area of home automation, and has installed successfully 5 houses with the home automation systems as a pilot program. The feedback was positive which lead to the establishment of ABC.

ABC will be offering end-to-end solution on 3 main markets:

- The first market is end-user individuals who want to automate their homes
- The second market is companies that work with people and want to be more efficient (like hotels, offices, banks, etc.).
- The third market is companies that are in the home automation industries and want to have OEM solution they can further resell.

For these 3 markets ABC will have an educational web site in order to educate the customers in order to make an informative decision. It will offer many advices and tips & tricks for home automation in order to ensure highest customer satisfaction. From our web site any potential customer can select what he needs and ask for a quote.

In addition to the web site, ABC will have a demo house. The demo house will have all the solutions that our company offers installed. It will enable potential customers to come and see how the home automation works in practice, see how it can be used in different rooms – and choose which modules they are interested in.

Before any official quote, our team will visit the potential customer house/building in order to do assessment of the layout and what is needed. After this a formal quote will be issued

to the customer and after payment we are making the installation. Our company will offer post-sales support and 1 year warranty on the solution.

PRODUCT/SERVICE SPECIFICATION

Our solutions are mostly combination of hardware and software and mobile apps that jointly are making the automation feasible.

On the **hardware** side, we will use external supplier. After research of several companies, we've decided to partner with XYZ for the hardware components. Our company will have sole distribution rights for their hardware for Ghana, so any company from Ghana that wants to buy the hardware will be redirected to us. This will ensure some protection from new competitors that will offer the same hardware.

On the **software** side, we want to have our own solution, but as it will take a lot of time and resources, for start we use external supplier and later develop our own. For software we use commandfusion.com, a company that have a platform for controlling any home automation product, and with a bit of tweaks it perfectly suit our design.

The main advantage of having the hardware and software from external suppliers is that they will continue building and adding new features and components which will be available to us without any additional investments in time and resources.

ORGANIZATIONAL STRUCTURE

As it is a start-up and small company, E-home/S-home will employee only few people. The founder will be acting as a CEO and leader of the company. 3

In addition to the CEO, the company will recruit:

- Electrician – person responsible for the wiring of cables and connecting the devices. This person should have at least 2 years of relevant experience.
- Sales & Marketing person – person responsible for the online/offline marketing, creating initial and final quotes, lead generation and talking to potential customers. It should have at least 5 years of field experience.
- Office Manager – person responsible for to give the demo-house tours and presentations. It should have some sale experience and fluency in English.

As it is a small team, there will not be a formal organizational structure, as they will all report to the CEO and there will be unlimited communication between them.

In addition to the employees, the company will be using a lot of tools and software that are automating the work – ex. xero.com instead of permanent accountant.

SWOT ANALYSIS

SWOT ANALYSIS

After conducting the external and internal analysis, we can sumarize the available information into a SWOT analysis.

Strengths • Strong technical background of the Founder/CEO • Educational web site • Demo house for presentation purposes • Sole distribution rights for the hardware in Ghana • Usage of many tools and software for company automation	**Weaknesses** • Dependence on the hardware/software supplier • Initially low in human resources • Limited start-up resources
Opportunities • Growing industry (and expected to grow in future) • Homebuyers are young, technologically savvy people with affinity for the latest electronic devices • Increased concerns about the environment • Increased Internet connectivity • Increase in real estate in Ghana	**Threads** • Many new companies entering the industry • Lack of trust in home automation (Security and Privacy issues

RISK MANAGEMENT

From the SWOT we've identified several **weakness** that needs to be taken into consideration and addressed.

- Dependence on the hardware/software supplier – This is considered as weaknesses, as it makes the company dependent on other companies. If the supplier cease to exist, it will be hard to find replacement. One action that our company takes is that in a medium-term will create our own software.
- Initially low in human resources – this is also a weakness, because it limits the amount of work that can be done by the team. This weakness will cease when the company stands on its feet and recruit several more people.

In addition to the weaknesses, the **threads** also needs to be taken into consideration.

- Many new companies entering the industry – This is a thread, as many Entrepreneurs might want to enter the home automation market and try to offer similar solution to ours. In order to minimize this risk, our company has obtained an exclusive sole distribution rights for the hardware from XYZ in Ghana. Companies can find other manufacturers, but at least can't use the exact one – which is a potential unique competitive advantage.
- Lack of trust in home automation (Security and Privacy issues) – This is also a thread, as individuals still don't trust the computers to a point to disclosure sensitive information and be dependent on technology. This can be overcome only with good information and education of the market – which is what we will do via our web site and the demo house.

MARKETING STRATEGY

MISSION & VISION

ABC **mission** is to inform and educate the people in Ghana about the advantages of Home automation and deliver high quality hardware and software solution that will reduce the operational housing costs.

The **vision** of ABC is to improve people's wellbeing by improving the in-house conform at the same time being environmental friendly.

MARKETING MIX (4P/7P)

PRODUCT

ABC main solution is home automation. It is consisted both from hardware and software.

The software side will be sourced from commandfusion.com at the beginning, until the company has enough earning to build up its own software. This is expected to be between first and second year of existence.

The hardware side will be sourced from XYZ. For the solution to work, there are several compulsory hardware components for the automation to work. These are:

- Logic controller (This is the CPU of the home automation)
- IP Link (This is the control platform for connecting the mobile phone/computer)
- Router
- System Power Supply

In addition to the compulsory hardware components, the client can choose modules, depending of what kind of automation is interested in (ex. Controlling the lights, audio, fan, etc.), or can have them all.

In order not to confuse the customer, ABC has created 3,4,5 pre-packaged products each having its own specification, and application.

- Package 1:
- Package 2:
- Package 3:
- Package 4:

In addition to the pre-packaged products our company offers partnership opportunities with companies that are interested in reselling our solution

PRICE

ABC will use cost-based pricing strategy. This means that it will take the cost structure of the products it offers, adds up contribution margin and set up the price.

The pricing can be explained on per-packaged product solution:

- Package 1:
- Package 2:
- Package 3:
- Package 4:

For the reselling partnership, our company will take x% of margin.

PLACE

The distribution in our company can be seen through 2 aspects: distribution from suppliers to ABC and distribution from our company to the customer.

From our hardware supplier there is a delay of 1-2 weeks from order to delivery, while the software distribution is instant (as it is online).

The distribution and installation to our client is done via our Electrician who will deliver the solution to our customer's site, will install it, and ensure that everything is working properly.

PROMOTION

From the external analysis we've did, we've identified the following user needs for home automation:

User Needs	Actions
Easy to install and use	Potential users want products that are easy to install and use
Interoperable	Potential users want products that perform well (function) without requiring too much input from them but allow them to maintain control
Reliable and Robust Operation	Potential users want quality products that are consistently reliable in their functionality and are not easily susceptible to problems

No compromise on Security and Privacy	Potential users expect the same level of security or privacy (if not better) that they had without the smart home
The direct benefits (e.g. cost and energy savings) are explicitly clear	Potential users want clear information about how to maximize and use the products in order to realize the benefits
The experience is enjoyable and does not require adjustment of their daily life	Potential users want the products to enhance their daily life, not impede or adjust it
Services provided when appropriate and required by necessity	Potential users want services which can support them if and when they need it

Knowing this, the marketing efforts should be around promoting this features and functionalities in order to attract more clients. Our company will use both online and offline promotion tools in order to maximize customer acquisition.

Finding prospects

The main focus of finding prospects will be online. Through SEO our company will be ranged on the top for home automation searches. So when a prospect from Ghana searches for home automation solutions on Google, our company will be on the top.

We will also put effort on Social Media, to raise the awareness about the home automation, to generate leads of people that are interested in home automation, as well as advertising on social media like Facebook, LinkedIn, etc.

In addition to the online promotion, our company will build offline media's like flyers, brochures, etc. that will target the offline world.

Converting prospects into customers

ABC will have a demo house. The purpose of the demo house is to exhibit all products that we offer, and how they are used in different rooms in the house. It will be the point where a potential customer can "feel" the home automation experience, and see what it can done for him.

In addition to the demo house, our company will have a comprehensive web site, which will inform and educate prospective clients about the benefits of home automation and how our solution can be used.

PEOPLE

ABC will be consisted from these people :

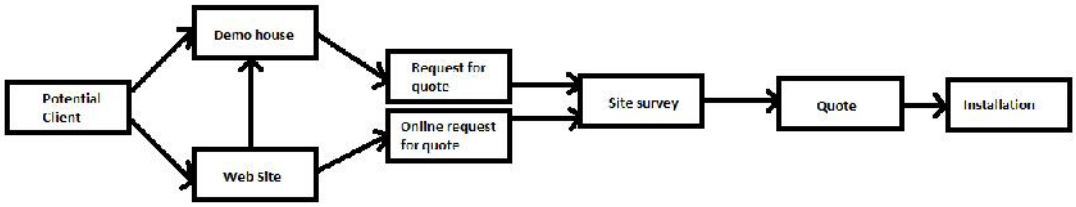
In addition to the CEO, the company will recruit:

- Electrician – wiring of cable and connecting devices
- Sales & Marketing person – marketing and sales activities
- Office Manager – delivery of presentations.

As the sales grow, the team is expected to grow as well.

PROCESSES

The processes can be best described visually as in the picture below.



Potential clients, through our various marketing efforts, will hear about our home automation solution. Some of the clients will call our company and schedule a visit in the demo house, while other will go to our web site to find more information.

In the **demo house,** our office manager will walk through the rooms presenting our products and showing how they can used in various rooms in the house. If there is interested, the potential client will choose his desired modules and will ask for a **quote.**

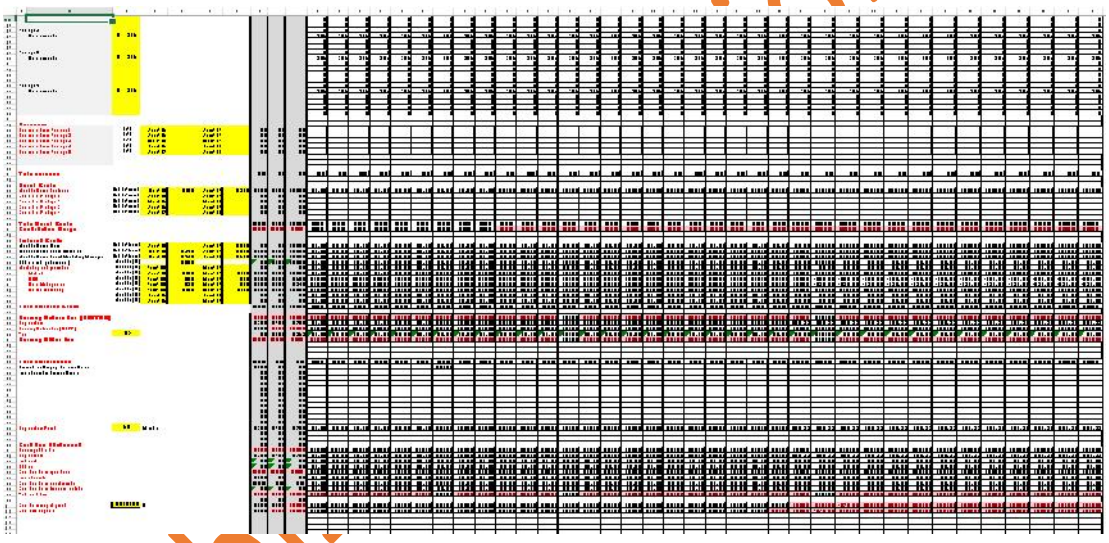
On the **Web site**, the potential client can get some more information about home automation, see some more technical specification on our products and then if still interested, he can chose whether he would want to go to the demo house, or directly make an **online request for quote.**

Once the **quote** has been received (regardless whether it is from the demo house or from our web site), our Electrician will need to do an in-house **site survey**. This will help us identifying the layout of the building (house or commercial site), the electricity, wires layout and measurement.

After the site survey, our company will issue a **formal quote**, that after being accepted and paid, we will send the electrician to do the **installation**.

FINANCIAL PLAN

The financial plan was done in a separate excel sheet. Here is a sample of how it looked.



Some of the information in the business plan has been modified/removed due to confidentiality.

REFERENCE

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