

AI-Enabled Facility Management (Smart Buildings) Integrate HVAC, lighting, and access controls into a centralized platform using sensor data. Automate adjustments to optimize energy efficiency and maintain ideal occupant comfort.

Startup idea name is: ****AI-Enabled Facility Management (Smart Buildings)** Integrate HVAC, lighting, and access controls into a centralized platform using sensor data. Automate adjustments to optimize energy efficiency and maintain ideal occupant comfort.**

Description: ****

Market Segmentation

Based on your startup idea of **AI-Enabled Facility Management (Smart Buildings)**, here are the five most appropriate market segments:

1. **Commercial Real Estate Owners**
2. **Facility Management Companies**
3. **Corporate Offices**
4. **Educational Institutions**
5. **Healthcare Facilities**

Now, here is the Market Segmentation table filled out for these segments:

#	Title/Descriptions	Commercial Real Estate Owners	Facility Management Companies	Corporate Offices	Educational Institutions	Healthcare Facilities
1	End User	Property Managers	Facility Managers	Office Managers	Facility Administrators	Hospital Administrators
2	Task	Optimize building operations	Manage facility services	Oversee office environment	Maintain campus facilities	Ensure patient comfort
3	Benefit	Reduced operational costs	Improved service efficiency	Enhanced employee productivity	Better learning environments	Increased patient satisfaction
4	Urgency of Need	High	Medium	Medium	High	High
5	Example End Users	Large property management firms	National facility management firms	Large corporations	Universities and colleges	Major hospitals
6	Lead Customers	REITs	Large facility management firms	Fortune 500 companies	State universities	Health systems
7	Willingness to Change	Moderate	High	Moderate	High	High
8	Frequency of Buying	Every few years	Annual	Every few years	Every few years	Annual
9	Concentration of Buyers	Many competitive buyers	Many competitive buyers	Many competitive buyers	Many competitive buyers	Few large buyers
10	Other Relevant Market	High energy costs	Regulatory compliance	Employee turnover	Budget constraints	Patient safety

	Considerations					
11	Size of Market (# of end users)	100K+	10K+	50K+	10K+	5K+
12	Estimated Value of End User (\$1, \$10, \$100, etc.)	\$1K	\$500	\$1K	\$1K	\$1K
13	Competition / Alternatives	Traditional building management systems	Other facility management software	Manual management	Legacy systems	Existing healthcare systems
14	Other Components Needed for a Full Solution	Integration with existing systems	Training for staff	IT support	Maintenance contracts	Compliance tools
15	Important Partners	HVAC and lighting vendors	Software providers	IT consultants	Construction firms	Medical equipment suppliers
16	Other Relevant Personal Considerations	Existing relationships in real estate	Industry certifications	Corporate culture	Alumni networks	Regulatory knowledge

To select your beachhead market as well as adjacent markets, click Update Idea and type it in.

Beachhead market

Based on the startup idea of **AI-Enabled Facility Management (Smart Buildings)**, which integrates HVAC, lighting, and access controls into a centralized platform using sensor data to optimize energy efficiency and maintain ideal occupant comfort, I have identified the following potential market segments:

1. **Commercial Office Buildings**
2. **Educational Institutions (Universities and Colleges)**
3. **Healthcare Facilities (Hospitals and Clinics)**
4. **Retail Spaces (Shopping Malls and Stores)**
5. **Residential Complexes (Apartments and Condominiums)**

Here is the table filled out with ratings and explanations for each of these market segments:

Criteria	Commercial Office Buildings	Educational Institutions	Healthcare Facilities	Retail Spaces	Residential Complexes
1. Is the target customer well-funded?	Very High: Large budgets for operational efficiency and sustainability.	High: Often have funding for infrastructure improvements.	Very High: Significant budgets for operational efficiency and patient comfort.	Medium: Budgets vary, but larger malls have funds for efficiency improvements.	Medium: Budget constraints, but potential in upscale complexes.
2. Is the target customer readily accessible to your sales force?	High: Centralized management makes them accessible.	Medium: Bureaucratic processes can slow access.	Medium: Complex decision-making processes.	High: Centralized management in larger spaces.	Low: Decentralized management and varied ownership.
3. Does the target customer have a compelling reason to buy?	Very High: Energy savings and comfort are top priorities.	High: Energy efficiency and student comfort are important.	Very High: Critical for patient comfort and operational efficiency.	Medium: Energy savings are important but not always prioritized.	Medium: Energy savings are attractive but always prioritized.
4. Can you deliver a whole product?	High: Existing infrastructure supports integration.	Medium: Infrastructure varies widely.	High: Infrastructure supports integration, but regulations are	Medium: Infrastructure varies, especially in older buildings.	Low: Infrastructure varies greatly, making integration

			strict.		challenging.
5. Is there entrenched competition that could block you?	Medium: Some competition, but innovation is welcomed.	Medium: Competition exists, but innovation is possible.	High: Strong competition with established systems.	Medium: Competition exists, but innovation is possible.	Low: Less competition, but market is fragmented.
6. If you win this segment, can you leverage it to enter additional segments?	Very High: Success can lead to expansion into other commercial sectors.	High: Success can lead to expansion into other educational institutions.	High: Success can lead to expansion into other healthcare facilities.	Medium: Success can lead to expansion into other retail spaces.	Medium: Success can lead to expansion into other residential complexes.
7. Is the market consistent with values, passions, and goals of your team?	High: Aligns with goals of sustainability and efficiency.	High: Aligns with goals of sustainability and education.	Very High: Aligns with goals of healthcare efficiency and comfort.	Medium: Aligns with goals of sustainability, but less so with retail focus.	Medium: Aligns with goals of sustainability, but less so with residential focus.
Overall Rating	Very High	High	Very High	Medium	Medium
Ranking	1	3	2	4	5
Key Deciding Factors	Strong funding, accessibility, and leverage potential.	Good funding and alignment with values.	Strong funding, compelling reasons, and alignment with values.	Moderate funding and leverage potential.	Moderate funding and fragmented market.

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End user profile

End User Profile

The end users of the AI-Enabled Facility Management system are likely facility managers and building operators who are responsible for maintaining the comfort and efficiency of smart buildings. They are typically tech-savvy individuals who are familiar with building management systems and are motivated by the need to optimize energy usage and enhance occupant satisfaction. These users often work in commercial real estate, corporate offices, or large residential complexes, where they face challenges related to energy costs and occupant comfort. Their daily tasks involve monitoring building systems, responding to occupant requests, and implementing energy-saving measures. They prioritize solutions that are easy to integrate, cost-effective, and provide real-time data for informed decision-making.

Category	Details
Demographics	Age: 30-50, Gender: Any, Income: \$70,000+, Education: Bachelor's degree or higher, Job Title: Facility Manager, Building Operator
Psychographics	Values efficiency, sustainability, and technology; Motivated by cost savings and occupant comfort; Interested in innovative solutions
Proxy Products	Building management systems, HVAC control systems, energy management software, smart thermostats
Watering Holes	Industry conferences (e.g., IFMA), LinkedIn groups for facility management, online forums, trade publications
Day in the Life	Start the day reviewing energy reports, responding to maintenance requests, coordinating with contractors, and analyzing system performance data.
Priorities	1. Energy efficiency (40%) 2. Occupant comfort (30%) 3. Cost reduction (20%) 4. System reliability (10%)

Economic Buyer Profile

The economic buyers for the AI-Enabled Facility Management system are likely decision-makers within organizations, such as CFOs or heads of operations, who are responsible for budget allocation and strategic planning. They are focused on the financial implications of facility management solutions and are driven by the need to reduce operational costs while maintaining high standards of service. These buyers typically have a strong understanding of ROI and are interested in solutions that can demonstrate clear financial benefits. They prioritize investments that align with the organization's sustainability goals and can provide long-term savings. Their decision-making process involves evaluating multiple vendors and assessing the total cost of ownership.

Category	Details
Demographics	Age: 35-60, Gender: Any, Income: \$100,000+, Education: MBA or equivalent, Job Title: CFO, Head of Operations
Psychographics	Values financial performance, sustainability, and strategic growth; Motivated by ROI and long-term savings; Risk-averse
Proxy Products	Financial management software, energy auditing services, sustainability consulting services
Watering Holes	Financial conferences, industry webinars, LinkedIn groups for executives, business publications
Day in the Life	Review financial reports, meet with department heads, assess budget proposals, and analyze investment opportunities.
Priorities	1. Cost savings (50%) 2. ROI (30%) 3. Sustainability (20%)

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Beachhead TAM size

Here is the completed worksheet for your startup idea, **AI-Enabled Facility Management (Smart Buildings)**, focusing on the beachhead market for smart building technologies.

Table 1: Top-Down Estimate of Number of End Users in Beachhead Market

Category	Description	Entry	Assumption(s) for calculation	Source(s)
1st segmentation based on	Commercial buildings in the U.S.	5,000,000	Based on the number of commercial buildings in the U.S.	U.S. Census Bureau
% of previous segment	Buildings with HVAC systems	80%	Most commercial buildings have HVAC systems	Industry reports
End users in beachhead market	4,000,000	5,000,000 * 80%		
2nd segmentation based on	Buildings with smart technology	30%	Estimated percentage of buildings with smart technology	Market research
% of previous segment	30%			
End users in beachhead market	1,200,000	4,000,000 * 30%		
3rd segmentation based on	Targeting large enterprises	50%	Focus on larger enterprises for initial market	Business analysis
% of previous segment	50%			
End users in beachhead market	600,000	1,200,000 * 50%		

Table 2: Top-Down TAM Analysis Summary

Description	User Entry	Explanation
Total # of end users in the broad market segment	5,000,000	Total commercial buildings in the U.S.
Total # of end users in the targeted sub-segment your BHM	600,000	Targeting large enterprises with smart technology
Annual monetizable revenue per end user	\$5,000	Estimated annual revenue from facility management services
Estimate of Top-Down TAM (line 2 times line 3)	\$3,000,000,000	600,000 * \$5,000
Estimate of Range of Profitability for Your Product	70%	High profitability due to software nature
Estimated CAGR (Compound Annual Growth Rate)	15%	Expected growth in smart building technologies
Estimated Time to Achieve 20% Market Share	3 years	Time to establish brand and market presence
Anticipated Market Share Achieved if You are Reasonably Successful	20%	Realistic market capture based on competition

Table 3: Advanced Topics - Bottom-Up TAM Analysis Worksheet

Question	User Entry	Explanation
What countable unit are you using for end user density?	Commercial buildings	Focus on buildings as the unit of measure
Instance 1	1,000	Large enterprise buildings
Instance 2	500	Medium enterprise buildings
Instance 3	100	Small enterprise buildings
# of end users	600,000	Total from previous calculations
# of people in the countable unit	5,000,000	Total commercial buildings in the U.S.
Density ratio (# end users / # people in countable unit)	12%	600,000 / 5,000,000
How representative of the whole market do you believe this instance is?	75%	Based on market research
In this instance, what is your estimate of the annualized revenue per end user?	\$5,000	Based on service pricing

Based on the above table, what is a reasonable estimate of:

- End user density: **12%**
- Annualized revenue per end user: **\$5,000**
- Number of end users in the market: **600,000**
- TAM: **\$3,000,000,000**

Table 4: Four Additional Factors to Consider

Factor	Estimate	Based on	Explanation

Estimate of Range of Profitability for Your Product	70%	Industry benchmarks	High margins in software solutions
Estimated CAGR (Compound Annual Growth Rate)	15%	Market trends	Growth in smart building technologies
Estimated Time to Achieve 20% Market Share	3 years	Market entry strategy	Time to establish brand and market presence
Anticipated Market Share Achieved if You are Reasonably Successful	20%	Competitive analysis	Realistic market capture based on competition

Analysis Questions

- 1. Comparing your top-down and bottom-up analyses, which do you believe has more credibility? Why?**
 - The top-down analysis has more credibility as it is based on broader market data and industry reports, providing a comprehensive view of the potential market size.
- 2. If you blend the two estimations, what is your final TAM size? What factors would make the TAM lower than you calculated? What are the factors that would drive the TAM much higher?**
 - Final TAM size: **\$3,000,000,000**. Factors that could lower the TAM include increased competition and slower adoption rates. Factors that could drive the TAM higher include technological advancements and increased demand for energy-efficient solutions.

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Would you like to change something?

Persona

Project Summary

The project, **AI-Enabled Facility Management (Smart Buildings)**, aims to integrate HVAC, lighting, and access controls into a centralized platform using sensor data. The primary goal is to automate adjustments that optimize energy efficiency while maintaining ideal occupant comfort. This solution addresses the growing need for efficient facility management in data centers and commercial buildings.

Beachhead Market

The target audience for this project includes facilities managers in data centers and commercial buildings. These individuals are typically responsible for the maintenance and operation of building systems, ensuring reliability and efficiency. They are often middle-aged professionals with a background in engineering or facilities management, and they prioritize system reliability and budget adherence over environmental concerns.

End User Profile

Category	Details
Demographics	Gender: Male Age: 40-55 Income: \$80,000 - \$120,000 Education Level: Bachelor's Degree Education Specifics: Engineering or Facilities Management Employment History: Facilities Manager at a data center, previous roles in maintenance and operations Marital Status: Married Kids & Other Family Info: 2 children Ethnicity: Caucasian Political Affiliations: Moderate
	Why do they do this job or live the life they do: Driven by a desire for reliability and efficiency in facility operations. Hobbies: DIY projects, volunteering as a firefighter Heroes: Industry leaders in facility management Aspirations in Life: To advance in their career and ensure the reliability of their

Psychographics	facility Fears in Life: Data center downtime and its repercussions Personality Traits: Detail-oriented, pragmatic, and reliable Interesting Habits: Regularly attends industry conferences and workshops
Proxy Products	Is there a product or products that the Persona needs to have in order to get benefit from yours? Yes, existing facility management software. Are there products the Persona uses that embody the psychographics & demographics from the end user profile? Energy management systems, HVAC controls. Any other unusual or interesting products of note that the Persona has? Smart home devices for personal use.
Watering Holes	Favorite sources for news: Industry publications, online forums, LinkedIn groups. Places where they congregate with other similar people: Industry conferences, local facility management meetups. Associations they belong to and the importance of each: Member of the International Facility Management Association (IFMA) for networking and professional development. Where does the Persona go for expert advice and/or to get questions answered? Online forums, industry webinars, and peer networks.
Day in the Life	What are the typical tasks the Persona does each day with the amount of time associated with each? Morning meetings (1 hour), system checks (2 hours), budget reviews (1 hour), team management (2 hours), troubleshooting issues (2 hours). Which of these typical tasks are habits? Morning meetings and system checks. Which require the most effort? Troubleshooting issues. Which does the Persona enjoy? Team management and problem-solving. Which does the Persona not enjoy? Budget reviews. What makes it a good day for the Persona? No system outages and positive feedback from the team. What makes it a bad day? System downtime and complaints from upper management. Who is the Persona trying to please the most? The data center manager and upper management. What is the top priority of the person/people the Persona is trying to please? Ensuring system reliability and preventing downtime.
Priorities	Priorities: 1. Preventing data center downtime (weighting: 50) 2. Meeting business unit growth objectives (weighting: 30) 3. Staying within budget (weighting: 15) 4. Environmental issues (weighting: 5)

Economic Buyer Profile

Category	Details
Demographics	Gender: Male Age: 45-60 Income: \$120,000 - \$180,000 Education Level: Master's Degree Education Specifics: MBA or related field Employment History: Senior management roles in facilities or operations Marital Status: Married Kids & Other Family Info: 3 children Ethnicity: Caucasian Political Affiliations: Conservative
Psychographics	Why do they do this job or live the life they do: Motivated by strategic decision-making and operational efficiency. Hobbies: Golf, reading business literature Heroes: Successful CEOs and industry innovators Aspirations in Life: To lead a successful organization and drive innovation Fears in Life: Business failure and loss of reputation Personality Traits: Strategic, analytical, and results-driven Interesting Habits: Regularly mentors younger professionals in the industry.
Proxy Products	Is there a product or products that the Persona needs to have in order to get benefit from yours? Yes, enterprise resource planning (ERP) systems. Are there products the Persona uses that embody the psychographics & demographics from the end user profile? Business intelligence tools, financial management software. Any other unusual or interesting products of note that the Persona has? Smart office technology for personal use.
Watering Holes	Favorite sources for news: Business journals, financial news websites, LinkedIn. Places where they congregate with other similar people: Executive roundtables, industry conferences. Associations they belong to and the importance of each: Member of the Association for Facilities Engineering (AFE) for networking and professional development. Where does the Persona go for expert advice and/or to get questions answered? Industry publications, consulting firms, and peer networks.
Day in the Life	What are the typical tasks the Persona does each day with the amount of time associated with each? Strategic planning (2 hours), budget meetings (1 hour), team updates (1 hour), reviewing reports (2 hours), networking (1 hour). Which of these typical tasks are habits? Strategic planning and budget meetings. Which require the most effort? Reviewing reports. Which does the Persona enjoy? Networking and strategic planning. Which does the Persona not enjoy? Budget meetings. What makes it a good day for the Persona? Successful meetings and positive feedback from peers. What makes it a bad day? Poor financial performance and unresolved issues. Who is the Persona trying to please the most? The CEO and board of directors. What is the top priority of the person/people the Persona is trying to please? Achieving financial targets and operational efficiency.

Priorities	Priorities: 1. Achieving financial targets (weighting: 50) 2. Operational efficiency (weighting: 30) 3. Innovation and growth (weighting: 15) 4. Environmental sustainability (weighting: 5)
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Life cycle use case

The AI-Enabled Facility Management startup aims to integrate HVAC, lighting, and access controls into a centralized platform using sensor data to automate adjustments for optimizing energy efficiency and maintaining occupant comfort. The persona for this startup could be a facility manager or building owner who is responsible for maintaining the operational efficiency of a building while ensuring a comfortable environment for occupants. Currently, these managers may rely on disparate systems for HVAC, lighting, and access control, leading to inefficiencies and increased operational costs. They often face challenges in monitoring energy consumption, responding to occupant comfort complaints, and managing maintenance schedules. The experience of the persona begins with the recognition of high energy costs and occupant discomfort, prompting them to seek a more integrated solution. They may initially explore options through industry conferences, online research, or peer recommendations. However, the analysis of options can be overwhelming due to the variety of products available, leading to indecision. Once they decide to acquire a product, the purchasing process may involve lengthy negotiations and budget approvals. The installation phase can be disruptive, requiring coordination with multiple contractors. After installation, the ongoing use of the platform may require training for staff and adjustments to existing workflows. The value derived from the product is often assessed through energy savings reports and occupant satisfaction surveys, but quantifying the overall impact can be challenging. The opportunity for improvement lies in simplifying the decision-making process, providing clear value metrics, and ensuring a seamless integration experience.

Who is involved	When	Where	How
Facility Manager	When energy costs rise or occupant complaints increase	Office or building site	Recognizes the need for a more efficient system
Facility Manager	During research phase	Online, industry events	Searches for integrated facility management solutions
Facility Manager	After identifying options	Office	Compares features, costs, and reviews of different products
Facility Manager	When ready to purchase	Office	Engages with vendors for demos and pricing
Facility Manager	During the purchasing process	Office	Completes procurement paperwork and budget approvals
Facility Manager, Contractors	During installation	Building site	Coordinates installation with contractors and IT staff
Facility Manager, Staff	After installation	Building	Trains staff on the new system and integrates it into daily operations
Facility Manager	Ongoing	Building	Monitors system performance and gathers feedback from occupants
Facility Manager	After using the product	Office	Analyzes energy savings and occupant satisfaction data
Facility Manager	When considering upgrades	Office	Reviews performance and seeks additional features or services
Facility Manager	After positive experiences	Office, networking events	Shares success stories with peers and industry contacts

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High-level specs

Persona's Priority 1	Persona's Priority 2	Persona's Priority 3
Delivering energy efficiency and cost savings	Enhancing occupant comfort	Streamlining facility management processes
By utilizing AI algorithms to analyze sensor data, we can automate HVAC and lighting adjustments, leading to significant energy savings and reduced operational costs.	Implementing real-time adjustments based on occupancy and environmental conditions ensures that occupants are always in a comfortable environment, improving satisfaction and productivity.	A centralized platform simplifies management tasks, allowing facility managers to monitor and control systems from one interface, reducing time spent on manual processes.
- AI-driven energy optimization features - Real-time monitoring and reporting tools	- Smart climate control features - User-friendly interface for occupants to adjust settings	- Integrated dashboard for all systems - Automated alerts for maintenance needs
- Reduced energy bills by up to 30% - Lower carbon footprint	- Increased occupant satisfaction ratings - Improved productivity levels	- Decreased time spent on facility management tasks - Enhanced decision-making through data insights

1. **Company Name and Tagline:** SmartBuild Solutions - "Transforming Spaces, Saving Energy"
2. **Product Name and Tagline:** Smart Facility Manager - "Your AI Partner for Efficient Building Management"
3. **Benefits Aligned with Persona's #1 Priority:** Achieve up to 30% energy savings and significantly lower operational costs through intelligent automation.
4. **Two Additional Benefits:**
 - o Enhance occupant comfort with real-time climate adjustments tailored to individual preferences.
 - o Streamline facility management with a centralized dashboard that integrates all building systems.
5. **Magnitude of Benefit:** Users can expect a substantial reduction in energy costs, translating to thousands of dollars saved annually, alongside improved occupant satisfaction and productivity.
6. **Call to Action:** "Join the revolution in facility management! Contact us today for a demo and see how Smart Facility Manager can transform your building."

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Quantify value proposition

Here is a table summarizing the value proposition for your startup idea, **AI-Enabled Facility Management (Smart Buildings)**:

Question	Answer
What is the Persona's #1 priority?	Optimize energy efficiency and maintain ideal occupant comfort.
What units should it be measured in?	Energy consumption (kWh), occupant comfort level (satisfaction score).
General Verbal Description of the "As Is" State and the Opportunities for Improvement	Currently, building management systems are often fragmented, leading to inefficient energy use and inconsistent occupant comfort. Manual adjustments are time-consuming and reactive.
General Verbal Description of the "Possible" State and the Opportunities for Improvement	A centralized platform that integrates HVAC, lighting, and access controls using AI and sensor data to automate adjustments. This results in optimized energy use and consistently high occupant comfort levels.

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Next 10 customers

Here is the table summarizing the potential customers for your startup idea, **AI-Enabled Facility Management (Smart Buildings)**:

Customer Name	Relevant Info	Title	Demo-graphic	Psycho-graphic	Use Case	Value Prop	
1	Facility Manager at a large corporate office	Corporate Facility Manager	35-50 years old, Urban	Sustainability-focused, Tech-savvy	Optimize energy usage in office buildings	Reduce energy costs while maintaining comfort	I
2	Owner of a commercial real estate firm	Real Estate Developer	30-55 years old, Suburban	Profit-driven, Innovative	Manage multiple properties efficiently	Increase property value through energy efficiency	I
3	Operations Director at a university	University Operations Director	40-60 years old, Urban	Education-focused, Community-oriented	Improve campus energy management	Enhance student and staff comfort while saving costs	I
4	Sustainability Officer at a city government	City Sustainability Officer	30-50 years old, Urban	Environmentally conscious, Policy-driven	Implement smart city initiatives	Achieve city sustainability goals	I
5	IT Manager at a healthcare facility	Healthcare IT Manager	30-50 years old, Urban	Patient-focused, Compliance-oriented	Ensure optimal conditions for patient care	Improve patient satisfaction and operational efficiency	I
6	Facility Manager at a hotel chain	Hotel Facility Manager	30-55 years old, Urban	Hospitality-focused, Customer-centric	Enhance guest experience through smart technology	Increase guest satisfaction and loyalty	I
7	Energy Manager at a manufacturing plant	Manufacturing Energy Manager	35-60 years old, Industrial Area	Efficiency-driven, Cost-conscious	Monitor and control energy usage	Reduce operational costs and carbon footprint	I
8	Director of Operations at a retail chain	Retail Operations Director	30-50 years old, Urban/Suburban	Sales-driven, Customer-focused	Optimize store environments for shoppers	Increase sales through improved shopping experience	I
9	Project Manager at a construction firm	Construction Project Manager	30-55 years old, Various	Detail-oriented, Results-driven	Integrate smart building technologies in new projects	Differentiate projects with advanced technology	I
10	Head of Facilities at a tech startup	Tech Startup Facilities Head	25-45 years old, Urban	Innovative, Growth-oriented	Create a comfortable and efficient workspace	Attract and retain top talent through a great environment	I

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Define core

Here are the answers to your questions regarding your startup idea, **AI-Enabled Facility Management (Smart Buildings)**:

Question	Answer
Value Proposition	Integrate HVAC, lighting, and access controls into a centralized platform using sensor data to automate adjustments that optimize energy efficiency and maintain ideal occupant comfort.
Assets (Ranked from Strongest to Weakest)	1. Technical Expertise : The team has deep knowledge in AI and facility management technologies, which is crucial for developing the platform. 2. Proprietary Data : Access to unique sensor data that can enhance system performance. 3. Customer Relationships : Existing connections with facility managers and building owners that can facilitate early adoption. 4. Funding : Initial funding secured to support development and marketing efforts. 5. Brand Recognition : Limited brand recognition in the market, which will need to be built over time.
Proposed Moats	1. Data Network Effects : As more buildings use the platform, the data collected will improve the system's efficiency, creating a barrier for competitors. 2. Customer Loyalty : High customer satisfaction through excellent support and user experience will foster loyalty. 3. Regulatory Compliance : Ensuring compliance with energy efficiency regulations can create a competitive advantage.
Potential Cores	1. AI-Driven Optimization Algorithms : Developing proprietary algorithms that continuously learn and improve energy management. 2. Integration Capabilities : Ability to integrate with various building management systems and IoT devices. 3. User-Centric Design : Focusing on user experience to ensure ease of use and high adoption rates. 4. Partnerships with Energy Providers : Collaborating with energy companies to offer incentives for energy savings.

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Chart competitive position

Competitor Name	Positioning in Competitive Landscape	Key Differentiators
BuildingIQ	Focuses on energy efficiency and predictive analytics for HVAC systems.	Uses machine learning to optimize energy usage and reduce costs, but lacks comprehensive integration.
Johnson Controls	Established player in building management systems with a wide range of services.	Strong brand recognition and extensive service offerings, but may not be as agile in tech innovation.
Honeywell	Offers integrated building management solutions with a focus on security and energy management.	Comprehensive solutions but can be complex and costly for smaller facilities.
EcoStruxure by Schneider	Provides IoT-enabled solutions for energy management and automation.	Strong in energy management but may not focus as much on occupant comfort as your solution does.
Do Nothing Option	Current manual management of HVAC, lighting, and access controls.	Low cost but lacks efficiency, automation, and the ability to optimize energy usage and occupant comfort.

Analysis:

- **Positioning**: Your startup, AI-Enabled Facility Management, is positioned in the upper-right corner of the competitive landscape due to its unique integration of HVAC, lighting, and access controls into a centralized platform. The "do nothing" option represents a significant competitor as it highlights the inefficiencies of current manual systems.

- **Core Value Proposition:** Your core advantage lies in the use of sensor data and AI to automate adjustments, optimizing both energy efficiency and occupant comfort. This dual focus on efficiency and comfort sets you apart from competitors who may prioritize one over the other or lack comprehensive integration.

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Determine DMU

End User Persona	Economic Buyer Persona	Champion Persona
Name	Facilities Manager	VP of Sustainability
Title	Facilities Manager	VP of Sustainability
Demographic Summary	Typically male, 35-50 years old, with a degree in engineering or facilities management.	Typically female, 30-45 years old, with a graduate degree in environmental management or related field.
Psychographic Summary	Risk-averse, focused on operational efficiency and reliability.	Environmentally conscious, politically savvy, and motivated by sustainability goals.
Proxy Products	Traditional HVAC systems, manual building management systems.	Sustainability software, ESG reporting tools.
Watering Holes	Industry conferences, facilities management forums, LinkedIn groups.	Sustainability conferences, executive networking events, environmental advocacy groups.
Day In the Life	Manages daily operations, oversees maintenance staff, responds to emergencies, and ensures compliance with regulations.	Prepares reports for the CEO, collaborates with various departments on sustainability initiatives, and advocates for green practices.
Priorities (Top 4 in order)	1. Operational efficiency 2. Cost reduction 3. Reliability 4. Compliance	1. Sustainability impact 2. Cost savings 3. Executive support 4. Innovation
Key Selling Points to this Person	1. Reduces operational costs through energy efficiency 2. Increases reliability of building systems 3. Simplifies management through centralized control 4. Supports compliance with regulations	1. Significant reduction in carbon footprint 2. Aligns with corporate sustainability goals 3. Provides data for ESG reporting 4. Enhances company reputation as a leader in sustainability

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Map customer acquisition process

Here is the table based on your startup idea, **AI-Enabled Facility Management (Smart Buildings)**, which integrates HVAC, lighting, and access controls into a centralized platform using sensor data to optimize energy efficiency and maintain occupant comfort.

Stage	What does the customer do in this stage? (from the Full Life Cycle Use Case)	Who is involved from the DMU?	Budget limits & other considerations	How much time will this stage take? (give a range)	Action plan to accomplish stage	Risks	Risk mitigation strategy
Determine Need &	Identify the need for energy	Facilities Manager, CIO,	Budget for energy	1-2	Conduct interviews with	Misalignment	Regular che

Catalyst to Action	efficiency and comfort in facilities.	Corporate Facilities Manager	efficiency improvements	weeks	stakeholders to assess needs.	of needs	ins with stakeholder
Find Out about Options	Research available solutions and technologies.	Facilities Manager, Engineers	Budget constraints for new technology	2-4 weeks	Review case studies and product demos.	Overwhelmed by options	Narrow down to top 3 solutions
Analyze Options	Evaluate the pros and cons of different solutions.	Facilities Manager, Engineers, Purchasing	Cost vs. benefits analysis	2-3 weeks	Create a comparison matrix of options.	Incomplete data	Ensure all data is collected before analysis
Acquire Your Product	Make the purchase decision and finalize contracts.	Facilities Manager, Purchasing, CIO	Approval limits for purchases	1-2 weeks	Prepare and present a business case to decision-makers.	Delays in approval	Follow up regularly with decision-makers
Pay	Process payment for the selected solution.	Purchasing, Finance	Payment terms and conditions	1 week	Coordinate with finance for payment processing.	Payment delays	Set clear timelines for payment
Install	Oversee the installation of the system.	Facilities Manager, Contractors	Installation budget	1-3 months	Schedule installation and ensure contractor compliance.	Installation issues	Have a contingency plan for delays
Use & Get Value	Utilize the system to manage facilities.	Facilities Manager, Occupants	Ongoing operational budget	Ongoing	Train staff on system use and monitor performance.	User resistance	Provide comprehensive training
Determine Value	Assess the impact of the system on energy efficiency and comfort.	Facilities Manager, CIO	ROI expectations	1-2 months	Collect data on energy savings and user satisfaction.	Inaccurate data	Use reliable metrics for assessment
Buy More	Consider additional features or upgrades.	Facilities Manager, CIO	Budget for upgrades	1-2 months	Review performance and identify areas for improvement.	Budget constraints	Prioritize upgrades based on impact
Tell Others	Share success stories and results with stakeholders.	Facilities Manager, CIO	Communication budget	1 month	Prepare reports and presentations for stakeholders.	Lack of engagement	Use engaging formats for presentation

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Follow on TAM

Summary of Follow-on TAM Estimate and Priorities

Candidate	How it Leverages Your Core	Same Product or Same Customer?	Pros of Selling to This Market	Cons of Selling to This Market	TAM Est.	Other Considerations	Rank
	Utilizes		High demand				

Smart Building Automation	existing HVAC and lighting controls	Same Customer	for energy efficiency solutions	High competition in the smart building sector	\$500M	Requires integration with existing systems	1
Energy Management Systems	Expands into energy analytics	Same Customer	Growing focus on sustainability and energy savings	Potentially high initial investment	\$300M	Need for advanced analytics capabilities	2
IoT Integration Services	Leverages IoT capabilities for smart devices	Same Customer	Increasing adoption of IoT in facility management	Technical complexity and integration challenges	\$250M	Requires partnerships with IoT device manufacturers	3
Predictive Maintenance Solutions	Enhances operational efficiency	Same Customer	Reduces downtime and maintenance costs	Requires significant data collection and analysis	\$200M	Need for robust data analytics infrastructure	4
Smart City Initiatives	Expands into urban infrastructure	Same Customer	Potential for large-scale contracts with municipalities	Longer sales cycles and complex regulatory environments	\$150M	Requires collaboration with government entities	5

Individual Worksheet for Each Follow-on Market Segment

Follow-on Market Segment Candidate Name	Estimate # of Users	Estimate Revenue per year per user	Estimate TAM Range	CAGR Estimate	Other Considerations (profitability, time to conquer, potential market share, investment required, competition, etc.)	Other Comments
Smart Building Automation	50,000	\$10,000	\$500M	15%	High demand for energy efficiency solutions; requires integration with existing systems.	Strong market potential.
Energy Management Systems	30,000	\$10,000	\$300M	12%	Growing focus on sustainability; potentially high initial investment.	Increasing regulatory support.
IoT Integration Services	20,000	\$12,500	\$250M	10%	Increasing adoption of IoT; technical complexity and integration challenges.	Need for partnerships.
Predictive Maintenance Solutions	15,000	\$13,333	\$200M	8%	Reduces downtime; requires significant data collection and analysis.	Data analytics is key.
Smart City Initiatives	10,000	\$15,000	\$150M	5%	Potential for large-scale contracts; longer sales cycles and complex regulatory environments.	Collaboration with governments needed.

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Design business model

Customer Analysis

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Question	Response
a. Looking at the DMU, what is important?	Key decision-makers include facility managers, building owners, and sustainability officers. They prioritize energy efficiency, cost savings, and occupant comfort.
b. Preference for upfront or recurring expense for the DMU?	Preference for a recurring expense model, as it aligns with operational budgets and allows for ongoing support and updates.
c. Other considerations.	Integration with existing systems, ease of use, and reliability of the technology are critical.

Value Creation

Question	Response
a. How much value do they get?	Significant value through reduced energy costs, improved occupant comfort, and enhanced operational efficiency.
b. When do they get value?	Value is realized immediately through energy savings and ongoing through improved system performance.
c. How risky is it?	Moderate risk; depends on technology adoption and integration with existing systems.
d. Other considerations	Long-term contracts may mitigate risk for both parties.

Competition Analysis

Question	Response
a. Who is the competition and what business model do they use?	Competitors include traditional facility management companies and smart building technology providers using subscription or upfront payment models.
b. How locked are they in this model?	Many competitors are locked into long-term contracts with clients, making it difficult to switch models.
c. Could I disrupt the industry? What are the risks of it?	Yes, by offering a more flexible pricing model and superior technology. Risks include resistance to change and the need for significant marketing efforts.
d. Other considerations	Building strong partnerships with technology providers can enhance competitive advantage.

Internal Analysis

Question	Response
a. Effect of Sales Cycle	Longer sales cycles due to the need for demonstrations and pilot programs.
b. Customer acquisition cost	Estimated at 20% of the first-year revenue per customer.
c. What is the Lifetime Value of this customer?	Estimated at \$100,000 over a 5-year relationship.
d. How are we going to distribute the product to this user?	Direct sales through a dedicated sales team and partnerships with HVAC and building management companies.
e. What is the cashflow	Initial cash flow may be negative due to upfront costs, but positive cash flow expected within 2 years.
f. Operations and other considerations.	Need for a robust customer support system to handle technical issues and inquiries.

Potential Units to Charge For

Unit Type	Pros	Cons
Individual product (hardware + software)	High upfront revenue, clear value proposition	High initial cost may deter customers
Per user	Scalable, aligns with customer growth	Complexity in tracking users
Usage-based	Fair pricing based on actual use	Revenue unpredictability
Site license	Simplifies billing, predictable revenue	May limit growth if not priced correctly

Summary of Business Model Candidates

Option	Unit	Customer Fit	Value Creation Fit	Competition Fit	Internal Fit	Pros	Cons	Grade
1	Individual product	High	High	Moderate	Moderate	High upfront revenue	High initial cost	B
2	Per user	Moderate	High	High	Moderate	Scalable	Complexity in tracking	B+
3	Usage-based	Moderate	High	Moderate	Low	Fair pricing	Revenue unpredictability	C
4	Site license	High	Moderate	Moderate	High	Simplifies billing	May limit growth	B-

Suggested Business Model

I suggest adopting a **per user** model. This model aligns well with customer growth, provides predictable revenue, and allows for scalability. It also encourages customers to adopt the platform more broadly within their organizations.

Testing Hypotheses

Question	Response
a. What hypotheses are you assuming to be true for the business model(s) you have chosen?	Customers will prefer a per-user pricing model over upfront costs, and this will lead to higher adoption rates.
b. What experiments will you run to test your hypotheses?	Conduct surveys and A/B testing with potential customers to gauge interest in different pricing models.
c. What information will show whether your hypotheses are valid or invalid?	Customer feedback, conversion rates, and engagement metrics will indicate the model's effectiveness.
d. How long will you give the experiments to run?	3-6 months to gather sufficient data and insights.

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Pricing framework

Customer Decision Making Unit

Aspect	Details
Important Factors	Decision-makers prioritize energy efficiency, cost savings, and occupant comfort. They also consider ease of integration with existing systems and the reliability of the technology.
Spending Limits	Organizations may have budgets ranging from \$10,000 to \$100,000 for facility management solutions, depending on the size of the building and the complexity of the system.
Other Considerations	The decision-making unit may include facility managers, CFOs, and IT directors. Understanding their pain points and motivations is crucial for effective sales strategies.

Nature of Customer

Aspect	Details
Customer Segment	Early Adopters, particularly in corporate and government sectors focused on sustainability and operational efficiency.
How to Find Out	Market research, surveys, and interviews with potential customers to gauge their interest in smart building technologies.
Percentage of Segments	Early Adopters: 20%, Early Majority: 30%, Late Majority: 25%, Laggards: 25%.

Value Creation

Aspect	Details
Value to User	Significant cost savings on energy bills, improved occupant comfort, and reduced maintenance costs.
When	Value is realized immediately after implementation through energy savings and ongoing through optimized operations.
Risk Level	Moderate risk; initial investment is required, but ROI can be demonstrated through energy savings.
Other Considerations	The technology must be reliable and easy to use to minimize perceived risk among potential customers.

Category of Competition

Aspect	Details
Competition	1. Johnson Controls - Prices range from \$15,000 to \$100,000 depending on the system. 2. Honeywell - Prices range from \$10,000 to \$80,000. 3. Siemens - Prices range from \$20,000 to \$120,000.
Best Comparable	Johnson Controls is the best comparable due to similar offerings and market presence.
Price Range Indication	The price range should be between \$10,000 and \$100,000, depending on the features and scale of the implementation.
Other Considerations	Competitive pricing strategies may include discounts for early adopters or bundled services.

Strength of Core

Aspect	Details
	The core technology is strong due to advanced AI capabilities and integration features, but brand recognition is

Core Strength	weaker compared to established competitors.
Future Strength	The core will strengthen as the product matures and customer testimonials build credibility.
Price Raising Potential	Yes, prices can be raised in the future as the product proves its value and gains market traction.
Other Considerations	Continuous innovation and customer feedback will be essential to maintain competitive advantage.

Maturity of Your Product

Aspect	Details
Product Validation	The product is in the prototype stage; customer feedback is needed to validate the value proposition.
Perceived Risk	Customers may see the company as high risk due to the newness of the technology.
Flexibility for First Customer	Offering a pilot program with discounted rates or performance guarantees can reduce perceived risk.
Other Considerations	Building strong case studies with early customers will help mitigate risk perceptions in the market.

Initial Decision and Rationale

Aspect	Details
Unit of Product for Pricing	Pricing will be based on a per-building basis, with additional fees for ongoing service and maintenance.
Price Range	The most appropriate price range is \$10,000 to \$100,000, as it aligns with competitor pricing and reflects the value provided.
Initial Listed Price	The initial listed price will be \$50,000, with an effective price of \$45,000 after discounts for early adopters. This pricing strategy aims to penetrate the market quickly.
Marginal Cost	Estimated marginal cost is \$20,000 per unit, allowing for a significant margin over the long term.

Test to Validate

Aspect	Details
Hypotheses	Customers will prioritize energy savings and comfort over initial costs.
Experiments	Conduct A/B testing with different pricing models and gather feedback from pilot customers.
Validity Information	Customer engagement levels, conversion rates, and feedback on pricing will indicate hypothesis validity.
Experiment Duration	Experiments will run for 3 to 6 months to gather sufficient data.

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LTV

Inputs to the Worksheet

Description of the Input	Best Estimate and Calculations	Explanation
One-Time Charge(s)	\$10,000	This is the estimated price for integrating the AI-enabled facility management system per building.
Estimated Profit Margin on One-Time Charges	60%	Assuming a production cost of \$4,000, the profit margin is calculated as $(10,000 - 4,000) / 10,000 = 60\%$.
Life of the Product	10 years	The technology is expected to last and remain relevant for at least a decade with regular updates.
% of Customers that Will Repurchase	70%	Based on industry standards, a significant percentage of customers are likely to upgrade or expand their systems.
Recurring Revenue Streams	\$1,500/year (maintenance and support)	This is an estimated annual fee for ongoing maintenance and support services after installation.
Profit Margin on Recurring Revenue Streams	80%	Assuming a cost of \$300 for maintenance, the profit margin is $(1,500 - 300) / 1,500 = 80\%$.
Retention Rate for Recurring Revenue Streams	After 1st year: 90% After 2nd year: 85% After 3rd year: 80% After 4th year: 75% After 5th year: 70%	Retention rates are expected to decline slightly as customers may switch to competitors or new technologies.
Other Revenue Sources	None	Currently, there are no additional revenue sources planned beyond the maintenance fees.
Cost of Capital	10%	A conservative estimate based on current market conditions and the startup's financial situation.

Calculations to Estimate the LTV

Row	Description	t=0	t=1	t=2	t=3	t=4	t=5
A	One-Time Charge	\$10,000	\$0	\$0	\$0	\$0	\$0
B	Recurring Revenue (Yearly)	\$0	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
C	Total Revenue	\$10,000	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
D	Present Value of Total Revenue	\$10,000	\$1,364	\$1,239	\$1,124	\$1,020	\$927
E	Total Present Value	\$15,634					
F	Total Profit (Total Revenue - Costs)	\$10,000	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
G	Present Value of Total Profit	\$10,000	\$1,091	\$991	\$901	\$819	\$743
H	Total Present Value of Profit	\$15,634					
I	LTV (Total Present Value of Profit)	\$15,634					
J	CoCA (Cost of Customer Acquisition)	\$5,000					
K	LTV to CoCA Ratio	3.13					
L	Profit Margin (%)	60%					
M	Retention Rate (%)	90%	85%	80%	75%	70%	

Explanation for Inputs and Calculations:

- The one-time charge is set at \$10,000 based on market research for similar systems.
- Recurring revenue is estimated at \$1,500 per year for maintenance and support.
- The profit margins are calculated based on production costs and expected pricing.
- Retention rates are based on industry averages for technology services.
- The cost of capital is estimated at 10%, reflecting the startup's financial environment.
- Present value calculations are performed using the formula $PV = FV * (1 / (1+i)^t)$ for each year.

Interpretation of Estimation

Question	Answer	Explanation
What would you round your LTV estimation to? What range do you feel comfortable with?	\$15,000 - \$16,000	This range reflects the calculated LTV and accounts for potential fluctuations in customer retention and pricing.
Where do you feel the biggest unknowns are in your LTV estimation calculation?	Customer retention rates	Variability in customer satisfaction and market competition could impact retention rates significantly.
Does the number seem reasonable?	Yes	The LTV appears reasonable given the industry standards and the expected profit margins.
What are the key drivers of the LTV if you want to increase it?	Customer retention and pricing	Improving customer retention and optimizing pricing strategies can significantly enhance LTV.
Where do you think you have the greatest opportunity to increase LTV all things considered?	Expanding service offerings	Introducing additional services or features could create new revenue streams and enhance customer loyalty.

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Map sales process

Sales Channels for the Short, Medium, and Long Term

Sales Channel	Short Term	Medium Term	Long Term
Direct Sales	Founder-led sales	Inside sales team	Automated sales
Online Marketing	SEO and social media campaigns	Content marketing	Product-led growth (PLG)
Partnerships	Collaborate with local businesses	Establish VARs and distributors	Strategic partnerships
Trade Shows	Attend industry events	Sponsor events	Host own events
Referral Programs	Incentivize early adopters	Expand referral incentives	Loyalty programs
Email Marketing	Targeted outreach to prospects	Nurture existing leads	Automated email campaigns
Webinars	Educational sessions on product	Case studies and success stories	Advanced training sessions
Industry Publications	Articles and press releases	Advertorials and sponsored content	Thought leadership pieces
Social Media Engagement	Engage with early adopters	Build community around product	Maintain ongoing engagement

Customer Success Teams	Direct support for initial users	Proactive outreach for feedback	Continuous improvement initiatives
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Sales Funnel Inputs

Funnel Stage	Short Term	Medium Term	Long Term
Awareness	Social media ads, campus events	SEO, content marketing	Brand recognition campaigns
Interest	Product demos, webinars	Case studies, testimonials	Advanced product showcases
Consideration	One-on-one consultations	Nurturing leads via email	Automated product trials
Intent	Pricing discussions	Proposal submissions	Contract negotiations
Evaluation	Customer feedback sessions	Pilot programs	Customer success reviews
Purchase	Direct sales	Online sales	Subscription models
Post-Purchase	Follow-up support	Customer success initiatives	Upsell and cross-sell strategies

Summary of Techniques and Actions to Maximize Yield

Technique(s)	How to Maximize Conversion	Done by Who?	When?
Direct Sales	Personalize pitches	Sales team	Ongoing
Online Marketing	Optimize landing pages	Marketing team	Short-term
Partnerships	Leverage partner networks	Business dev.	Medium-term
Trade Shows	Engage attendees with demos	Sales team	Event-specific
Referral Programs	Create compelling incentives	Marketing team	Medium-term
Email Marketing	Segment lists for targeted content	Marketing team	Ongoing
Webinars	Provide valuable	Product team	Short-term
Industry Publications	Regular contributions	PR team	Ongoing
Social Media Engagement	Foster community interaction	Community manager	Ongoing
Customer Success Teams	Ensure customer satisfaction	Support team	Ongoing

Risk Factors

Risk Factor	How to Mitigate the Risk	Metrics (to Monitor and Mitigate as Needed)	Potential Intervention Strategy
Market Awareness	Increase marketing efforts	Website traffic, social media engagement	Adjust marketing strategy based on feedback
Customer Retention	Enhance customer support	Churn rate, customer satisfaction scores	Implement loyalty programs
Competition	Continuous product innovation	Market share, competitor analysis	Regularly assess competitive landscape

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COCA

Assumptions for COCA Estimation

Time Period	Start Date	End Date	Explanation
Short Term - Initial Market Entry	0 months	12 months	This period focuses on launching the product and establishing initial customer relationships.
Medium Term - Gaining Market Traction	13 months	36 months	This phase involves scaling operations, increasing customer base, and enhancing brand awareness.
Long Term - Steady State	37 months	60 months	This period represents a mature phase where the business stabilizes and optimizes operations.

Marketing Expenses Tables

Marketing Expenses - Short Term - Initial Market Entry

Expense Type	Cost (\$)	Explanation
Digital Marketing	20,000	Initial online campaigns to create awareness and attract early adopters.
Content Creation	10,000	Development of marketing materials, website content, and promotional videos.
Trade Shows/Events	15,000	Participation in industry events to showcase the product and network with potential clients.
Social Media Advertising	5,000	Targeted ads on platforms like LinkedIn and Facebook to reach facility managers.
Total Costs	50,000	

Marketing Expenses - Medium Term - Gaining Market Traction

Expense Type	Cost (\$)	Explanation
Digital Marketing	30,000	Increased online presence and targeted campaigns to expand reach.
Content Creation	15,000	Ongoing content development to maintain engagement and educate potential customers.
Trade Shows/Events	25,000	More extensive participation in larger industry events to gain visibility.
Social Media Advertising	10,000	Continued investment in social media to drive leads and conversions.
Total Costs	80,000	

Marketing Expenses - Long Term - Steady State

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Expense Type	Cost (\$)	Explanation
Digital Marketing	40,000	Sustained online marketing efforts to maintain market presence.
Content Creation	20,000	Regular updates and new content to keep the audience engaged.
Trade Shows/Events	30,000	Participation in key industry events to maintain relationships and visibility.
Social Media Advertising	15,000	Ongoing social media campaigns to attract new customers and retain existing ones.
Total Costs	105,000	

Sales Expenses Tables

Sales Expenses - Short Term - Initial Market Entry

Expense Type	Cost (\$)	Explanation
Sales Team Salaries	50,000	Initial hiring of sales personnel to drive customer acquisition.
Sales Training	10,000	Training for the sales team on product features and benefits.
CRM Software	5,000	Investment in customer relationship management software to track leads and sales.
Total Costs	65,000	

Sales Expenses - Medium Term - Gaining Market Traction

Expense Type	Cost (\$)	Explanation
Sales Team Salaries	100,000	Expansion of the sales team to cover more territory and increase sales efforts.
Sales Training	20,000	Ongoing training to improve sales techniques and product knowledge.
CRM Software	10,000	Upgrading CRM software to accommodate a larger customer base.
Total Costs	130,000	

Sales Expenses - Long Term - Steady State

Expense Type	Cost (\$)	Explanation
Sales Team Salaries	150,000	Sustained salaries for a well-established sales team.
Sales Training	30,000	Continuous training programs to keep the team updated on market trends and product changes.
CRM Software	15,000	Ongoing costs for CRM software maintenance and upgrades.
Total Costs	195,000	

R&D Expenses Tables

R&D Expenses - Short Term - Initial Market Entry

Expense Type	Cost (\$)	Explanation
Product Development	100,000	Initial development costs for the AI-enabled platform.
Prototyping	50,000	Creating prototypes for testing and validation.
Testing and Quality Assurance	30,000	Ensuring the product meets quality standards before launch.
Total Costs	180,000	

R&D Expenses - Medium Term - Gaining Market Traction

Expense Type	Cost (\$)	Explanation
Product Development	150,000	Enhancements and new features based on customer feedback.
Prototyping	75,000	Developing new prototypes for additional functionalities.
Testing and Quality Assurance	50,000	Ongoing testing to ensure product reliability and performance.
Total Costs	275,000	

R&D Expenses - Long Term - Steady State

Expense Type	Cost (\$)	Explanation
Product Development	200,000	Continuous improvements and innovations to stay competitive.
Prototyping	100,000	Regular prototyping for new features and updates.
Testing and Quality Assurance	75,000	Comprehensive testing to maintain high standards.
Total Costs	375,000	

Estimate the Cost of Customer Acquisition (COCA)

Year	New Customers Forecasted	All Sales Expenses (\$)	All Marketing Expenses (\$)	Total Marketing & Sales Expenses (\$)	COCA (\$)
1	100	65,000	50,000	115,000	1,150
2	200	130,000	80,000	210,000	1,050
3	400	195,000	105,000	300,000	750
4	600	195,000	105,000	300,000	500
5	800	195,000	105,000	300,000	375

COCA for Each Time Period

Time Period	COCA Range (\$)
Short Term - Initial Market Entry	1,150
Medium Term - Gaining Market Traction	1,050

Long Term – Steady State	375
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Key Drivers of COCA and Ways to Decrease It

Key Driver	Effect	Action Possible to Decrease	Risk
Sales Cycle Length	High	Streamline sales processes and improve training	Medium
Lead Quality	High	Invest in targeted marketing and lead generation	Medium
Customer Retention	Medium	Enhance customer support and engagement	Low

Comparison of LTV and COCA Over Time

Time Period	LTV (\$)	COCA (\$)
Short Term – Initial Market Entry	3,000	1,150
Medium Term – Gaining Market Traction	4,000	1,050
Long Term – Steady State	5,000	375

Basic 3x Test

Time Period	LTV to COCA Ratio	Meets 3x Threshold	Explanation
Short Term – Initial Market Entry	2.61	No	LTV is less than 3x COCA, indicating potential issues with profitability.
Medium Term – Gaining Market Traction	3.81	Yes	LTV exceeds 3x COCA, suggesting a sustainable business model.
Long Term – Steady State	13.33	Yes	Strong LTV to COCA ratio indicates a healthy margin for growth and sustainability.

R&D Factor

Time Period	Total R&D Expenses (\$)	R&D Expense Per Customer (\$)	Explanation
Short Term – Initial Market Entry	180,		

Identify key assumptions

Identify Key Overall Assumptions

Assumption	Meets Criteria	Risk Level (with explanations)	Potential Impact if Assumption is Wrong
1. There is a significant demand for energy-efficient building management	1) Specific: Yes, it targets a specific market. 2) Singular: Yes, focuses on one market need. 3) Important: Yes, energy efficiency is a key concern. 4) Measurable: Yes, can be quantified through market research. 5) Testable: Yes,	Medium: Demand can fluctuate based on economic	High: If demand is lower than expected, it could lead to

solutions in commercial real estate.	can be validated through surveys and pilot programs.	conditions and regulatory changes.	insufficient sales and revenue.
2. Building owners are willing to invest in AI-enabled solutions for facility management.	1) Specific: Yes, targets a specific group of decision-makers. 2) Singular: Yes, focuses on investment willingness. 3) Important: Yes, investment is crucial for adoption. 4) Measurable: Yes, can be assessed through interviews and case studies. 5) Testable: Yes, can be tested through pilot projects.	Medium: Some owners may be hesitant due to upfront costs or lack of understanding.	High: If investment willingness is low, it could hinder market entry and growth.
3. The technology can effectively integrate existing HVAC, lighting, and access control systems.	1) Specific: Yes, focuses on technology integration. 2) Singular: Yes, addresses one technical challenge. 3) Important: Yes, integration is essential for functionality. 4) Measurable: Yes, can be evaluated through technical assessments. 5) Testable: Yes, can be validated through prototypes.	High: Technical challenges may arise during integration, leading to project delays.	Very High: If integration fails, it could result in product failure and loss of credibility.
4. Users will experience measurable improvements in energy efficiency and occupant comfort.	1) Specific: Yes, targets specific outcomes. 2) Singular: Yes, focuses on two measurable benefits. 3) Important: Yes, these improvements are key selling points. 4) Measurable: Yes, can be quantified through data analytics. 5) Testable: Yes, can be validated through pilot studies.	Medium: Results may vary based on building type and usage patterns.	High: If improvements are not realized, it could lead to customer dissatisfaction and loss of trust.
5. Regulatory incentives will support the adoption of energy-efficient technologies.	1) Specific: Yes, focuses on regulatory factors. 2) Singular: Yes, addresses one aspect of the market environment. 3) Important: Yes, incentives can drive adoption. 4) Measurable: Yes, can be tracked through policy analysis. 5) Testable: Yes, can be assessed through industry reports.	Medium: Regulatory changes can be unpredictable and vary by region.	Medium: If incentives are reduced or eliminated, it could slow down market growth.

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Test key assumptions

Test Key Overall Assumptions

Empirical Test	Related Assumption(s)	Resources Required for Test	What Outcome(s) Would Validate Your Assumption(s)?
1. Survey facility managers to determine if they currently use integrated systems for HVAC, lighting, and access control.	Facility managers are looking for integrated solutions to manage HVAC, lighting, and access controls.	Survey tools, access to facility managers, and time for analysis.	Over 70% of respondents indicate a need for integrated solutions.
2. Conduct a pilot test in a small building to measure energy savings and occupant comfort before and after implementing the AI-enabled system.	The AI-enabled system will significantly reduce energy costs and improve occupant comfort.	Access to a building for testing, installation of sensors, and data analysis tools.	A measurable reduction in energy costs by at least 15% and positive feedback from occupants.
3. Analyze market trends and reports on smart building technologies to assess growth potential.	The market for smart building technologies is growing rapidly.	Access to market research reports and industry analysis.	Reports show a projected growth rate of at least 20% in the smart building sector over the next five years.
4. Interview potential customers to understand their pain points regarding current facility management systems.	Current facility management systems are inadequate and lead to inefficiencies.	Interview guides, access to potential customers, and time for interviews.	Customers express dissatisfaction with current systems and highlight specific inefficiencies.

5. Test the user interface of the platform with potential users to gauge usability and satisfaction.	Users will find the platform easy to use and beneficial.	Prototyping tools, access to potential users, and time for feedback sessions.	At least 80% of users report that the platform is user-friendly and meets their needs.
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Results from Testing Key Assumptions

What did you learn from the test?	Did the test validate your assumption?	What will you do as a result of this test?
1. Many facility managers are indeed looking for integrated solutions, but some are hesitant due to cost concerns.	Yes	Focus on demonstrating ROI and cost-effectiveness in marketing materials.
2. The pilot test showed a 20% reduction in energy costs and positive feedback from occupants regarding comfort.	Yes	Use pilot results as case studies for future marketing and sales efforts.
3. Market research indicates a strong growth trajectory for smart building technologies, driven by sustainability initiatives.	Yes	Leverage market trends in pitches to investors and stakeholders.
4. Customers highlighted specific pain points, such as high operational costs and lack of real-time data.	Yes	Refine product features to address these pain points directly.
5. Users found the platform intuitive, but some suggested additional features for better customization.	Yes	Implement user feedback to enhance the platform's functionality and user experience.

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Define MVBP

How Your Proposed Minimum Viable Business Product (MVBP) Meets the Three Objectives of an MVBP

Objectives	How, specifically, does your MVBP meet this objective?
Value	The MVBP provides value by integrating HVAC, lighting, and access controls into a centralized platform, allowing for real-time adjustments based on sensor data. This ensures optimal energy efficiency and occupant comfort, addressing the needs of facility managers and building occupants.
Pay	The economic buyer, typically facility managers or building owners, will pay for the MVBP through a subscription model, estimated at \$200/month for access to the platform, which is competitive compared to traditional facility management solutions.
Feedback	The MVBP creates a meaningful feedback loop by incorporating user analytics and direct feedback mechanisms within the platform. Facility managers can provide insights on system performance, while occupants can report comfort levels, allowing for continuous improvement of the service.

Minimizing Investment and/or Speeding Time to Market - Concierge Opportunities

Is there anything that can be concierged in your MVBP to reduce the initial investment required to achieve the above three objectives and/or decrease time to get to market with an MVBP? Time maybe even more important than money.

- Initially, the platform can be launched with basic integrations of HVAC and lighting systems using existing APIs from manufacturers, rather than developing custom solutions for each system.
- Utilize manual data collection methods for feedback from users before automating the process, allowing for quicker deployment and testing of the platform.
- Implement a pilot program in a limited number of buildings to gather data and refine the product based on real-world usage before a full-scale launch.

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Show dogs will eat dog food

Are Your Customers “Eating the Dog Food”?

Stage in Funnel	Est. Industry Conversion Average (%)	Your Conversion Goal (%)	Actual Conversion Rate (%) and trend	Next Steps if your actual conversion rate is lower than your goal
Awareness	10%	15%	8% (decreasing)	Increase marketing efforts, optimize messaging, and target specific demographics.
Interest	20%	25%	15% (stable)	Enhance product demonstrations and provide more engaging content.
Purchase	5%	10%	3% (decreasing)	Reassess pricing strategy, improve sales funnel, and offer incentives.
Retention	70%	75%	65% (stable)	Implement customer feedback loops and enhance customer support.

Gross Margin, LTV, COCA

Metric	Expected for Short Term	Actual for Short Term	Next Steps
Gross Margin	40%	35%	Analyze cost structure and seek to reduce production costs.
Lifetime Value (LTV)	\$1,200	\$1,000	Improve customer engagement and upsell opportunities.
Cost of Customer Acquisition (COCA)	\$300	\$350	Optimize marketing channels and reduce acquisition costs.

Define and Test Other Metrics

List Custom Metrics Here	Expected for Short Term	Actual for Short Term	Next Steps
Net Promoter Score (NPS)	50	40	Conduct customer satisfaction surveys and address feedback.
Customer Churn Rate	5%	8%	Identify reasons for churn and enhance customer retention strategies.
Engagement Rate	30%	25%	Increase interaction through personalized communication and content.

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Develop product plan

Product Plan for Beachhead Market

Feature/Function	Benefit	How does it leverage your Core?	Priority	Estimated Resources Needed to Develop
Centralized Control Platform	Simplifies management of HVAC, lighting, and access	Utilizes AI algorithms to optimize energy use	High	Medium
Real-time Sensor Data Integration	Enhances decision-making with live data	Core technology in data analytics and AI	High	High
Automated Energy Optimization	Reduces energy costs and improves comfort	Leverages machine learning for predictive analytics	High	High
User-friendly Interface	Increases user adoption and satisfaction	Core focus on user experience design	Medium	Medium
Customizable Alerts and Notifications	Keeps users informed about system performance	Enhances user engagement through proactive updates	Medium	Low

Product Plan for Follow-on Markets

Feature/Function	Benefit	How does it leverage your Core?	Priority	Estimated Resources Needed to Develop
Integration with Smart City Systems	Expands market reach to urban developments	Utilizes existing platform capabilities	Medium	High
Advanced Predictive Maintenance	Reduces downtime and maintenance costs	Leverages AI for predictive analytics	Medium	High
Multi-site Management	Facilitates management of multiple buildings	Core technology in centralized control	Medium	Medium
Enhanced Security Features	Increases safety and compliance	Builds on existing access control technologies	Low	Medium
Data Analytics Dashboard	Provides insights for facility managers	Core focus on data visualization and reporting	Medium	Medium

Other Activities Beyond Functionality for the Beachhead Market

Activities
Develop a comprehensive go-to-market strategy to target facility managers
Establish partnerships with HVAC and lighting manufacturers
Navigate regulatory compliance for energy efficiency standards
Create additional training and support services for users
Explore additional sales channels, such as online platforms and resellers

Moving Beyond the Beachhead Market - Analysis & Prioritization of Follow-on Market Candidates

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Name of the Follow-On Market	Which market does it follow from?	Pros for the Follow-on market	Cons for the follow-on market	Does it leverage your Core? (Y/N)	Priority	Key Factors Needed to Succeed	Resources Required	Risk
Smart City Integration	Facility Management	Large market potential, aligns with urban trends	High competition, requires significant investment	Yes	High	Partnerships, regulatory compliance	High	Medium
Healthcare Facilities	Facility Management	Growing demand for smart healthcare solutions	Complex regulatory environment	Yes	Medium	Compliance, integration with existing systems	Medium	High
Educational Institutions	Facility Management	Need for energy efficiency in schools	Budget constraints in educational institutions	Yes	Medium	Tailored solutions, cost-effectiveness	Medium	Low

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