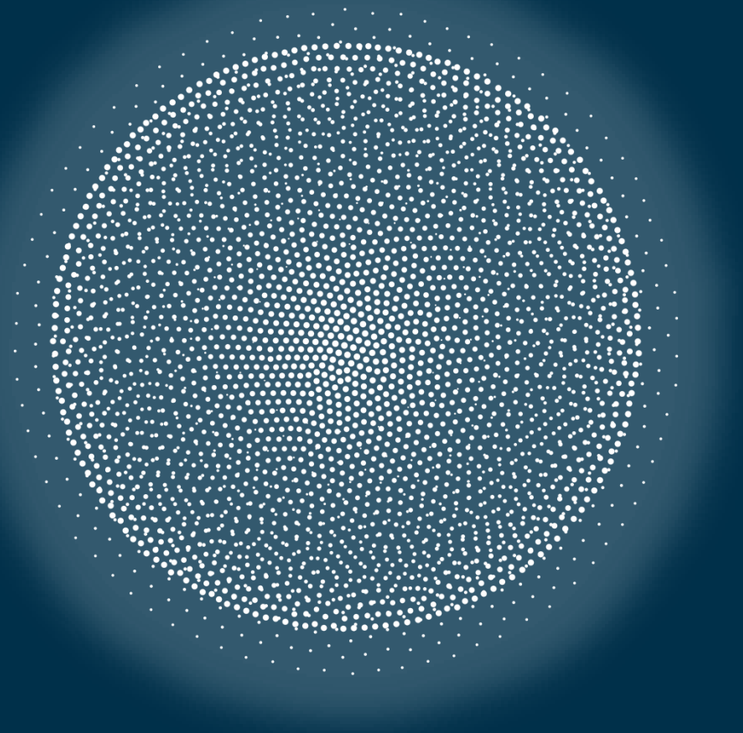


research proposal
prepared for:
ASHB

2025 Smart Buildings Trends Research

Harbor Research

2025 Smart Buildings Trends Research

1. **Introduction to Harbor Research**
2. Proposed Scope of Work, Process, & Budget
3. Appendix

Harbor Research

Harbor Research has 35+ Years Experience in Smart Systems Growth & Analysis

Firm History

Harbor Research was the first firm to focus on Smart Systems, Services and the Internet of Things (IoT) and first to publish groundbreaking research on new business models in the Harvard Business Review in 2004 & 2005.

Clients and Engagements

For over 30 years we have focused on identifying, analyzing and helping clients to develop or adopt emergent technologies. Every relationship we develop is enhanced by the range and depth of these experiences.

Technology Developers & Suppliers

100+ clients

400+ engagements

OEMs and Service Providers

150+ clients

600+ engagements

Offices

Denver, Colorado - USA

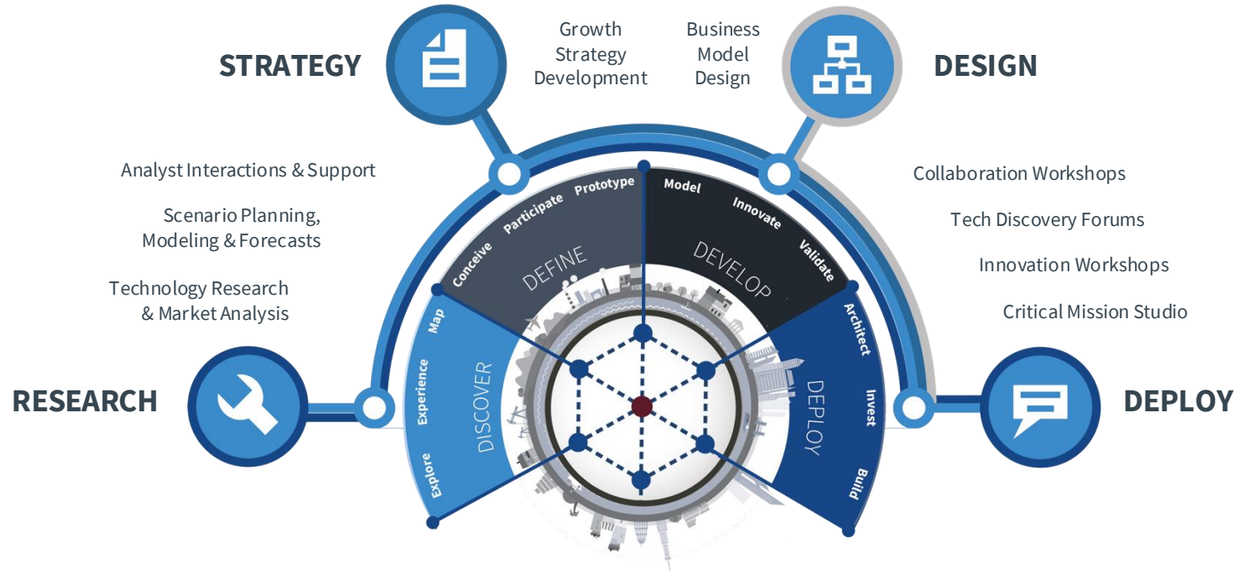
Berlin, Germany - Europe

Overview of Harbor's Services

Opportunity Identification
Research, market intelligence and Smart Systems market sizing and forecast model to ID tech-driven growth opportunities

Growth Strategy Development
Business model development & growth strategy consulting services

Venture Advisory
Venture development studio and advisory for mission-critical industries and tech



We work and facilitate strategy across corporate functions

Corporate Development

Business Development

Market Intelligence

Strategic Marketing

New Growth

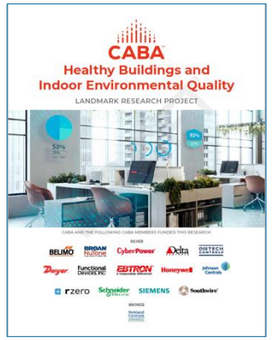
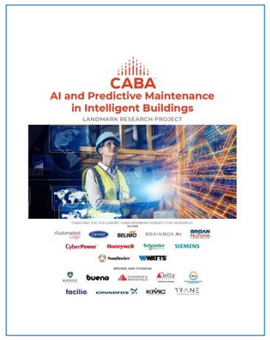
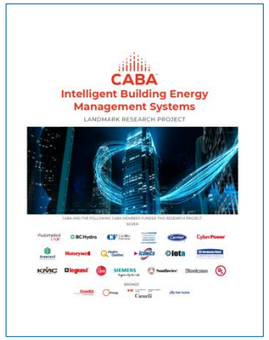
Research & Development

Harbor is Pleased to Have Served ASHB Several Times in Recent Years

Harbor's long-standing support for the Association for Smarter Homes & Buildings

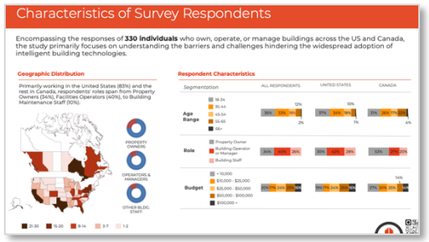
- Harbor has developed a sustaining relationship with ASHB and its constituent members conducting research and analysis into new building, facility and residential technologies
- ASHB Landmark Research Projects include a combination of quantitative surveys and qualitative interviews that inform a comprehensive report on the market opportunity for smart systems-related technologies and related digital services, including:
  - Healthy Buildings & Indoor Environmental Quality (2023) analyzed equipment, software, and service opportunities to improve indoor environmental quality in commercial buildings, as well as how to make buildings more health for occupants.
  - AI and Predictive Maintenance in Intelligent Buildings (2022) defined and developed business opportunities within predictive maintenance and artificial intelligence technologies as they relate to intelligent buildings
  - Intelligent Building Energy Management Systems (2021) provided a framework, market requirements, ecosystem analysis and market sizing for the building automation systems, energy storage, and other energy management hardware, software, and service solutions including services, security, data analytics, systems.

Harbor/ASHB IBC Collaboration Examples

2023	2022	2021	2018	2017
				
Healthy Buildings & Indoor Environmental Quality	**AI & Predictive Maintenance For Intelligent Buildings**	**Energy Mgmt. Systems For Intelligent Buildings**	**Monetization of Intelligent Buildings**	**Connected Multi-Dwelling Units and the IoT**

2023 & 2024 IBC Research Services, including:

Annual Building Operator Survey



Quarterly Market Trend Tracking

Configured Research Projects

- Smart Buildings Market Size
- AI in Intelligent Buildings
- Impact of Sustainability in Intelligent Buildings
- Ecosystems & Interoperability in Intelligent Buildings
- Data Analytics & Predictive Maint.
- Building as a Service Models

Project Team Overview

Each member of the team has led or assisted on multiple intelligent buildings-related engagements, including at least one previous ASHB Landmark Research project.

Glen Allmendinger - President and Founder (40+ years experience)

Glen is the founder and president of Harbor Research, a strategy consulting firm with offices in Boulder, Colorado and Berlin, Germany. Since the firm's inception in 1983, Allmendinger has worked closely with a broad spectrum of telecommunications, information systems, security, electronics, and automation and equipment manufacturing companies in North America, Europe, and the Far East. These companies range in scope from small, entrepreneurial start-ups to major multi-national corporations. His project direction and consulting has assisted these firms in the development of corporate and business unit strategies, new product, market and service opportunities, and new core capabilities. Glen has consulted to the National Research Council on technology and competitiveness as well as emerging technologies for social wellbeing. He is a member of IEEE, ASME, and ACM and has worked closely with several industry trade associations including ASHB. He has worked on DARPA-funded research focused on advanced analytics and sensing systems technology and was a key participant in the planning and development of the National Center for Manufacturing Sciences. Allmendinger received his BA from New York University, and completed graduate studies at MIT's Center for Advanced Media Studies.

Harry Pascarella – Vice President (10+ years experience)

Harry specializes in Industrial and Commercial IoT with a focus on manufacturing, natural resources, and mission critical B2B markets. Harry works with clients across a variety of industries to validate and dimension their growth strategies and advise on industry segment and application target selections. Recently, Harry conducted several studies in smart buildings including a deep dive into energy management as well as a market study on the larger market that looked at usage behavior. Harry also worked with the largest LED lighting manufacturer in the United States to develop a business case for connected lighting platforms. Harry received his bachelor's degree in Economics with Honors from the University of Colorado – Boulder.

Daniel Intolubbe-Chmil – Research Director (10+ years experience)

As Harbor's Research Director, Daniel has led research initiatives shaping critical insight around the evolution of high-performance networks across industrial, commercial and enterprise verticals. Daniel also helps keep a pulse on the market, providing curated content and updates to Harbor's real-time market tracking across all sectors of the economy. Dan has helped lead two previous ASHB Council engagements, and has deep expertise across networking technologies within buildings and homes. Prior to Harbor, Daniel has conducted economic research to complete his Honors thesis regarding Education Policy, entailing policy/market research and econometric analysis. He graduated from CU Boulder with a degree in Economics with Honors and a minor in Humanities.

Harbor's Research Team

In addition to the management and support from key Harbor Research leaders, Harbor will leverage a team of researchers to support each aspect of the project. Each member of the team has experience conducting research and analysis of Smart Systems, IoT, AI and other emerging technology opportunities in the smart buildings space.

2025 Smart Buildings Trends Research

1. Introduction to Harbor Research
2. **Proposed Scope of Work, Process, & Budget**
3. Appendix

Harbor Research

2025 Smart Buildings Trends & Technology Adoption: Overview of Approach

Instead of one, long-form written landmark research report each year, ASHB would like to pursue a more configured set of research activities that focuses on multiple topics of interest to funders. With significant experience in providing such services and supporting ASHB over the years, Harbor can support ASHB and the Board of Directors well in this endeavor.

Smart Buildings Trends & Technology Adoption: Overview of Components

1 Annual Building Operator Trends Survey & Market Sizing Update

- Survey covering key topics/opportunities to gain annual perspective of operator needs/outlook
- Survey data analysis and highlights (charts, graphs and analysis in powerpoint)
- Updates to 2024 smart buildings market size and forecast
- Raw data in Excel
- 2-3-page executive summary in Word
- Summary infographic

2 Smart Buildings Trend Analysis (x5-7 topics)

- Based on initial discussions with the steering committee, determine 5-7 trends to research and analyze
- Incorporate topics into the survey to ensure quantitative data availability for analysis
- Agree on scope of analysis for each topic with steering committee
- Market sizing for each topic as appropriate
- 7-12-page PowerPoint “chapter” in final report for each topic
- 2-3 summary infographics based on topics of interest

Updated approach to cover more topics/trends and provide the steering committee greater flexibility

See more detail on page 11.

3 Quarterly Market & Technology Tracking (x3)

- Intelligent buildings-related M&A, key funding rounds, and similar maneuvers from each quarter, beginning with 1Q 2025 and ending with 3Q 2025
- Other key tech/market news, such as policy and regulatory updates from prior quarter
- Outputs are organized by trend/opportunity category, with key event highlights in PowerPoint

4 Steering Committee Meetings and Other Interactions

- 6-7x Steering Committee Meetings
- 1:1 introduction calls with each Steering Committee org
- Final webinar (2 hours)
- Organization webinars for each SC organization covering summary of all research following final webinar
- Think Tank for ASHB community

Smart Building Trends & Technology Adoption Key Deliverables

Harbor will share work-in-progress deliverables and meet regularly with the steering committee to review progress, ask questions, discuss feedback, and adjust our approach.

Overview of Key Deliverables

Summary of Complete Research Findings (PPT)

- 20-30-page summary presentation of findings and recommendations from research and analysis, covering:
  - 1-2-page executive summary bulleted write-up with narrative analysis of smart buildings trends and technology adoption
  - Annual survey highlights and analysis, including summary charts, graphs and takeaways
  - Updates to the 2024 smart buildings market sizing analysis based on the research and analysis of survey and trend data
  - Analysis of the selected 5-7 trends, based on the scope agreed to with the steering committee
  - Overview of key market activity from the year, including M&A, investments, product announcements and ecosystem activity
  - Key takeaways and recommendations for the companies on the steering committee based on the full scope of the analysis
  - Additional analysis and findings slides as necessary
- Additional appendix slides with reference information and frameworks as needed (typically ~60+ slides in length)

Presentation Appendix (PPT)

- Additional survey highlights and analysis
- 7-12 slides per smart building trend analysis
- Quarterly market trend tracking summaries highlighting key events by trend and quarter
- Additional market sizing and forecast data and analysis
- Additional analyses and portrayals as necessary and agreed to with steering committee

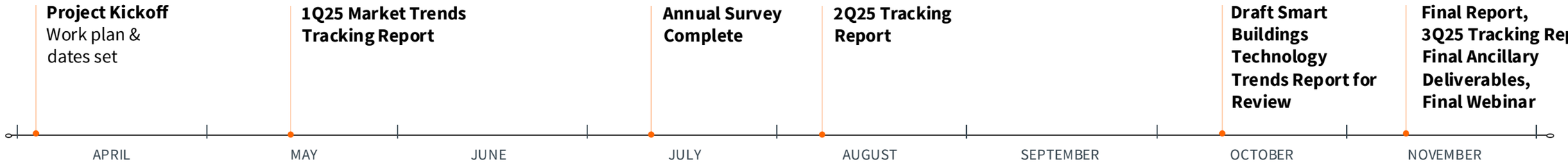
Other Deliverables

- Regular steering committee interactions, including 1:1 calls at the beginning of the work to inform focus areas and scope, monthly steering committee meetings, final webinar to the steering committee and individual company read-outs of the summary report, and other ad-hoc interactions,
- Survey questionnaire and raw data in Excel
- Market sizing and forecast Excel
- Weekly interactions with the Harman team to
- Other deliverables as identified and mutually agreed on as in-scope
- Facilitated ASHB Think Tank following the completion of the work

Proposed Research Timeline: March Through October 2024

Harbor will support ASHB and the funders over the course of 8 months in 2024, from March through October. The work steps will be executed in parallel, with regular steering committee meetings to update on progress and interim outputs

Key Deliverables



Key Interactions

4 Project Kickoff | 1:1 Funder Intro Calls | ~ Monthly Steering Committee Meetings | Final Webinar | Think Tank | Org. Review Webinars

Work Steps

1 Building Operator Trends Survey

Survey is designed and reviewed in collaboration with steering committee. Key topics are identified for further analysis and incorporated into the survey questionnaire.

2 Smart Buildings Trends Analysis (x5-7)

Steering committee identifies and prioritizes key topics to cover during the development of the survey. Harbor analyzes each trend individually.

3 Quarterly Market Tracking (Q1) | Quarterly Market Tracking (Q2) | Quarterly Market Tracking (Q2)

Quarterly market tracking is based on Harbor's frameworks and segmentation. Typically delivered 4-6 weeks after the end of a calendar quarter.

1 Annual Building Owner/Operator Intelligent Buildings Survey

Harbor will develop and conduct an annual survey for intelligent buildings with the goal of staying up to date on owner/operator perceptions, adoption trends, and needs related to intelligent buildings.

Intelligent Buildings Survey & Report

Target Audience

At least 300 Commercial Buildings Owner/Operators in Canada and USA

Proposed Scope

Annual survey to understand current perceptions and future priorities related to intelligent buildings

Key Topics to Cover (starting point):

- Current state of intelligent building adoption
- Key trends impacting investment and priorities
- Next 12 months investment priorities
- Preferred suppliers
- Other topics as appropriate, as informed by initial discussions and configured research selections (e.g., AI, as-a-service models, sustainability, etc.)

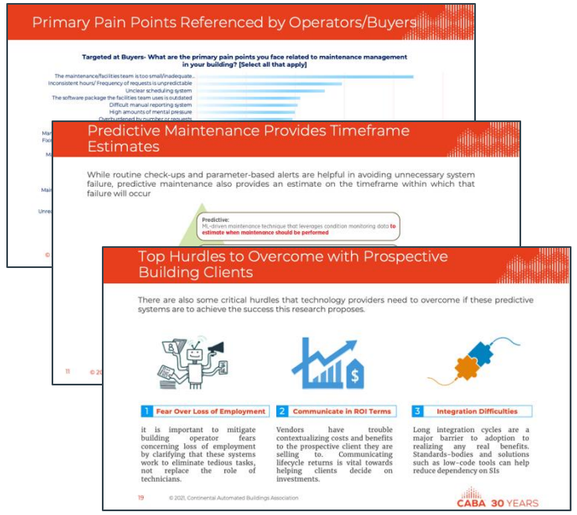
Draft starting point for Annual Survey scope, to be refined via steering committee meetings

Deliverables

- Survey questionnaire
- Raw data and summary charts in Excel and PPT
- 20-30-page PPT analysis of survey highlights
- 2-page long-form executive summary (Word doc)
- 1 summary infographic

Benefits & Values

- Stay up-to-date on customer perceptions, adoption, and needs related to intelligent buildings
- Understand the impact of recent market developments on users
- Leverage graphics and charts from PPT-based trends report in key external presentations
- Focus on topic areas for further research in smart buildings trend analyses 2



2 Smart Buildings Trends Analysis (x5-7 topics)

Through close collaboration with the Steering Committee, Harbor will analyze key topics of interest, producing a PPT-based report that includes re-usable outputs and key takeaways and recommendations for steering committee members

Example Trend Topics to Research

Harbor will work with the steering committee to identify and select key topics of interest to focus on.

- **Artificial Intelligence Trends & Opportunities:** How generative and agentic AI is influencing the building space
- **Sustainability & Energy Efficiency:** Green building practices, sustainability optimization, carbon reporting, and other key trends and tech impacting buildings
- **Enhanced Security & Access Control:** Opportunity for technology-enabled security systems including biometrics, facial recognition and AI video analytics
- **Smart Grid Integration:** Collaboration with local utility grids and smart grid technology to optimize energy consumption, enable demand response, and support the integration of electric vehicle charging infrastructure.
- **Flexible Spaces & Workplace Experience:** Technology-enabled and management of flexible and collaborative workspaces to enhance user experience
- **Digital Twins and Building Simulation:** Implementation of digital twin technology for real-time simulation, monitoring, and management of building operations, allowing for predictive modeling and optimization.
- **Health and Wellness Initiatives**
- **IoT Integration**
- **Adaptive Re-use & Retrofitting**

Deliverables (x5-7 trend topics)

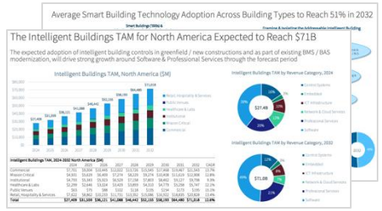
- 7-12-page powerpoint chapter on the topic agreed to and as scoped with the steering committee, which could include the following types of output:
  - Market dynamics, trends and forces
  - Technology architecture & landscape
  - Customer needs and buying behaviors
  - Ecosystem, value chain & competitive landscape
  - Market sizing and forecast
  - Strategy recommendations
- Summary infographic (for 2-3 of the topics)

Benefits & Values

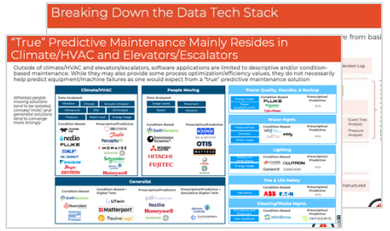
- Receive data and analysis on multiple topics of interest throughout the year
- Focus on the topics and workstreams that matter most, and have the flexibility to decide on each topic before it is analyzed
- Cover more topics than previous projects
- Short time to value—receive research and analysis inputs within ~3-4 weeks after agreeing to scope
- Leverage PPT-based material in external presentations

Topics Covered in 2024

Smart Buildings Market Size



Analytics & Predictive Maint.



Building-as-a-Service Models

3 Quarterly Market & Technology Tracking Overview

Harbor will develop a quarterly tracking report for Smart Buildings focused on news and events of interest from the prior quarter. Each report includes an overview of key events, analysis from Harbor analysts and key opportunity takeaways.

Draft starting point for tracking categories and dimensions, to be refined via steering committee meetings

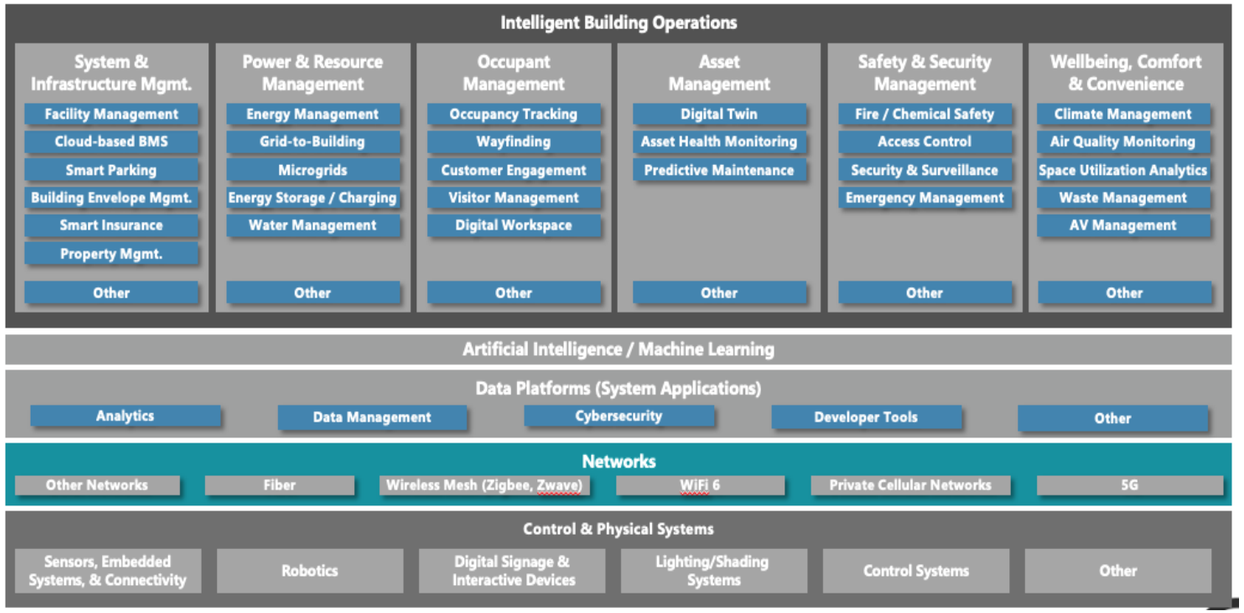
Event Types

- Mergers and acquisitions
- Investment and funding rounds
- Standards, regulations and key policies impacting buildings
- Key product/solution announcements
- Key partnerships/relationships

Supplier Types

- Computing & Connectivity
- Automation & Control
- OEMs/Machine Builders
- Electric/Gas/Water Utilities
- Telecom/Cloud Service Providers
- Independent Software Vendors
- System Integrators
- Property Management

Intelligent Buildings Opportunities



Key Deliverables

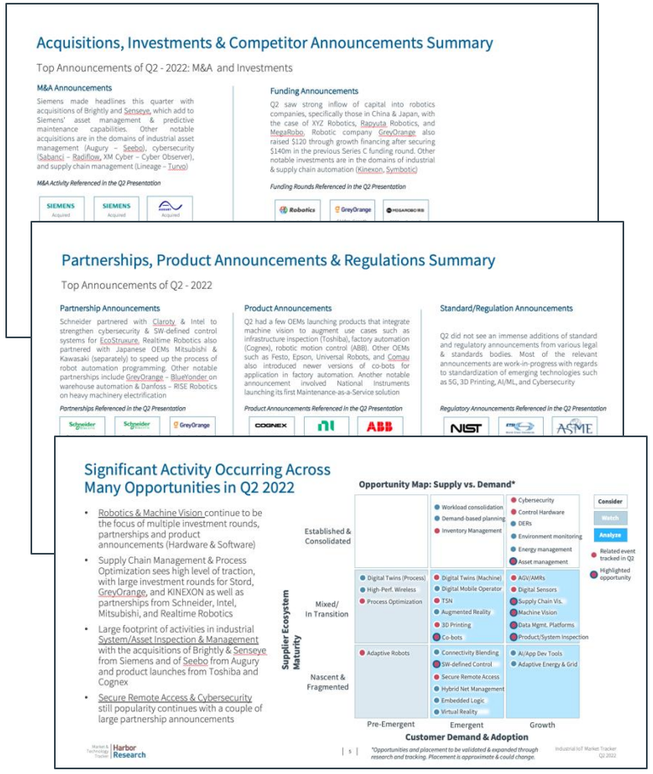
(see more on next page)

10-15-page quarterly tracking report in PPT (x3, one for each quarter), for Smart Buildings

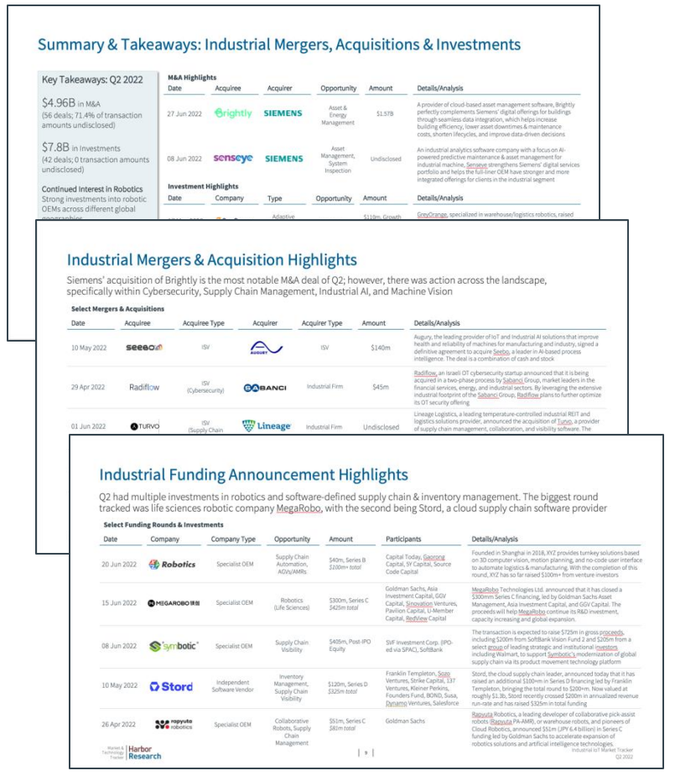
3 Quarterly Market & Technology Tracking Outputs & Benefits

Quarterly tracking reports will include a summary of key events, as well as highlights and analysis of the most important events from that quarter

Summaries of Key Events & Macro Trends



Individual Event Highlights with Analysis



Deliverables

- Tracking framework (event types, company types, technologies, etc.)
- 10-15-page powerpoint deck (x3, one for each quarter)
- Organized by trends and integrated into the trend analyses

Benefits & Values

- Stay up-to-date on ecosystem maneuvers, trends, and investments in the intelligent buildings space
- Track key technology innovations through analysis of M&A and investments
- Leverage graphics and charts from PPT-based trends report in key external presentations
- Focus on topic areas for further research in configured research projects 2

4 Steering Committee Meetings, Interactions, & Example Timeline

Harbor will hold a total of 6-7 steering committee meetings (1 per month) for Smart Buildings, including a kickoff meeting, with the funders of the research engagement. Additional interactions will be provided as well.

Purpose: Maintain alignment on scope of work, review completed deliverables, and discuss upcoming activities.

Agenda (1-1.5 hours depending on the scope of work activities occurring)

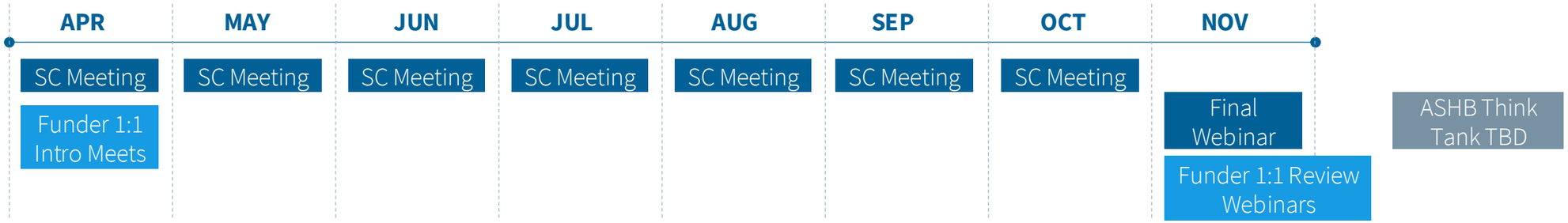
- Introduction, attendance, review of agenda, (5min)
- Review and discuss annual survey (Q1 only, 30min)
- Review current Quarterly Tracking Report (30min)
- Review current Trend Analysis progress (30min)
- Review poll results and proposed scope for upcoming trend analysis (20min)
- Wrap-up, actions & Next steps (5min)

Draft starting point for Steering Committee Meeting agenda and timeline to be refined via steering committee meetings

Key Deliverables

- **6-7 Steering Committee** meetings, with minutes and recordings
- **1:1 meetings with funders** to understand needs and priorities
- **Final webinar** to review research findings
- **Organization webinars** for each funder to review research findings
- **Think Tank** for ASHB community

Interaction Timeline

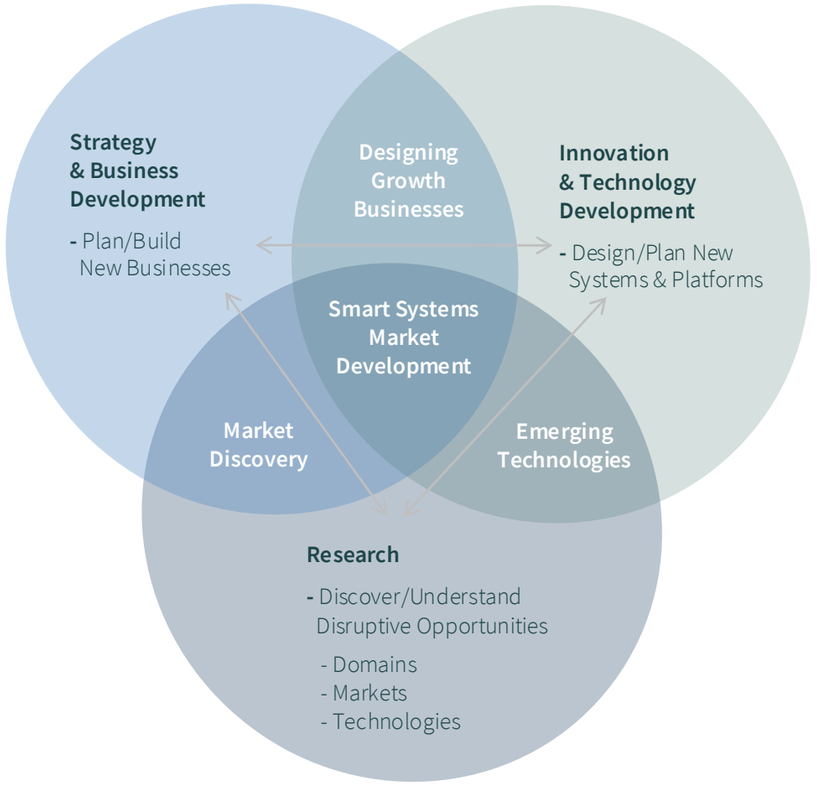


2024 Intelligent Buildings Research Arrangements & Budget

TEAM & EXPERIENCE: Harry Pascarella, Vice President, and Dan Chmil, Director of Research, would directly manage these projects. They would be assisted by one of Harbor's research staff. The entire staff has significant experience analyzing intelligent buildings and connected home opportunities

TIMELINE: Based on the scope described, the engagement would take the form of an extended, ~8-month contract from April to November 2024. We will work with the funders through steering committee meetings to set and adjust priorities throughout the year.

NEXT STEPS: Once this statement of work is agreed to by both parties, we will require 2 weeks to organize our project team ahead of a project kickoff and related work activities. The arrangements for this proposal are valid for 60 days, after which we reserve the right to adjust the arrangements or terms based on the availability of resources and other potential conflicts. We look forward to the opportunity to work together.



Who Are We?

Harbor Research is a consulting, research & venture development firm – we bring together a unique combination of knowledge, processes & skills that enable our clients to succeed in a connected economy

What Do We Do?

The firm partners with clients to design, validate and develop new smart systems and services businesses. Our primary focus is on helping clients develop strategy, define new business models, assist with business and market development plans as well as address the organizational challenges driven by new disruptive growth opportunities

What Do We Serve?

Harbor services the community of emerging technology ventures, diversified product and services companies, global IT and network infrastructure players and capital market constituents

2025 Smart Buildings Trends Research

1. Introduction to Harbor Research
2. Proposed Scope of Work, Process, & Budget
3. **Appendix: Examples of Previous Research Experience**

Harbor Research

Harbor Research Serves Technology Innovators, OEMs & Services Providers

Illustrative Technology Supplier Clients

Computing & Connectivity

intel, SAMSUNG, arm, VITESSE, DIGI, SIERRA WIRELESS, eurotech, BSQUARE, Qualcomm, NXP, SILICON LABS, Telit, Laird TECHNOLOGIES, WIND, FREEWAVE, LINK LABS

Network Infrastructure & Services

orange, verizon, Sprint, INTELSAT, cisco, BELDEN, HUAWEI, NOKIA, Deutsche Telekom, vodafone, KORE, COX, MOTOROLA SOLUTIONS, ERICSSON, CalAmp, dura-line

Software, Apps, Platforms & Infrastructure

Microsoft, IBM, SAP, ORACLE, Meta, TIBCO, MOCANA, Ayla Networks, DELL Technologies, Hewlett Packard Enterprise, servicenow, ptc, Symantec, fathym, ODEN TECHNOLOGIES

Ecosystem Participants: Private Equity & Associations

GRAHAM PARTNERS, ARGOSY PRIVATE EQUITY, INVERNESS GRAHAM PARTNERS IN INNOVATION, SPINNAKER VENTURE PARTNERS, BAIRD, ubiQuity, CABA Continental Automated Buildings Association, MFA, OnGo, SEMATECH

Illustrative OEMs, Service Providers & Vertical-specific Software Clients

Energy & Resources

JOHN DEERE, GE, Air Liquide, DOOSAN, spectris, lightsource bp

Industrial & Manufacturing

Rockwell Automation, ABB, FORTIVE, EMERSON, FLOWSERVE, BOSCH, KOCH INDUSTRIES INC, aspentech

Buildings & Facilities

Schneider Electric, United Technologies, Johnson Controls, AcuityBrands, Honeywell, SkyFoundry

Transportation & Logistics

Panasonic, DAIMLER, Club Car, PHONONIC, AVTEC

Retail, Healthcare & Consumer

Diversey, Sealed Air, GETINGE, glassbeam, klatu, Unity, GAMEFAM, KEURIG

Diversified

DANAHER, SIEMENS, Ingersoll Rand, FUJITSU, Cognizant, wipro

Reference Assignments for the Leaders in HVAC, Buildings, Energy & Facilities

Over the last decade, Harbor has executed assignments for a broad cross section of players in the energy, HVAC and facilities arena — below is a representative range of clients we have worked closely with in recent years

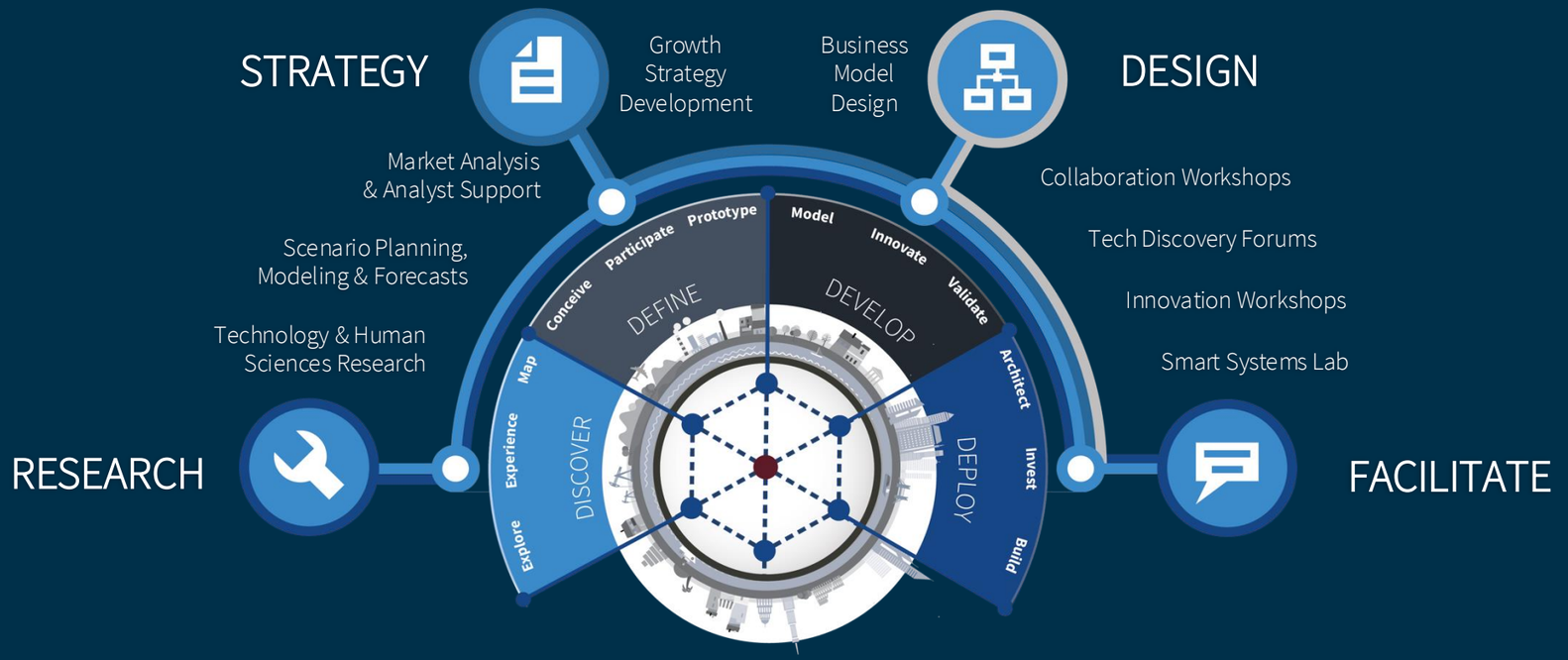
Energy Services	HVAC Manufacturers	Building Controls	Power Equipment	Software & New Tech.
AMERESCO	YORK	SIEMENS	EATON	CISCO (Building & Energy Networks)
EATON (design new energy efficiency business)	Carrier	Honeywell	Schneider Electric	GRIDLOGIX (acquired by Johnson Controls)
KEMA	TRANE	Schneider Electric	Danfoss	TRIDIUM
EDF	Danfoss (Drives & HVAC Equipment)	Johnson Controls	Itron	TENDRIL
PACIFIC CONTROLS			GE Energy	SkyFoundry
Constellation			EMERSON	BELDEN (Hirschmann)
cimetrics			COOPER	riptide
comverge energy made better				BuildingIQ
				Intellility
				OPTIMUMENERGY
				JLL

Additional Intelligent Buildings & Related Experience

- For a multinational provider of cleaning and hygiene products in the hospitality, healthcare, food and beverage, food service, retail, and facility management sectors, we provided a comprehensive analysis of the 'Internet of Clean' sector including key market dynamics, current competitor and peer supplier strategies and maneuvers, as well as competitor solution features & packaging, use cases and services delivery models
- For the largest social media and networking company in the US, we conducted a demographic research study on a consumer-device prototype to understand the use cases, applications and target constituents in support of a Market Requirements Document.
- For the largest manufacturer of electrical products in North America, we conducted user survey research as well as competitor, peer and alliance candidate direct interviews to uncover unmet customer and user needs for new and evolving "connected" energy management and services opportunities.
- For the global leader in network infrastructure equipment, Harbor conducted an analysis of managed services opportunities in connected residential multi-dwelling and commercial properties, including market sizing, competitor analysis, alliance development analysis and go-to-market design.
- For the world's largest semiconductor and processor manufacturer, Harbor conducted an analysis of IoT opportunities within the residential sector. Primary emphasis was placed on opportunities where media and content were dominant values to determine core computing and network bandwidth requirements.
- For a venture-backed startup, conducted an analysis of consumer energy services offerings to help target candidate developer alliances as well as partnership opportunities with utilities and related services providers.
- Worked with CABA to develop an opportunity assessment within Connected MDUs, conducting a survey of 1,500 MDU owners, technology suppliers and service providers in the space, including 60 in-depth interviews to validate research findings. The engagement summarized the top IoT application and use case opportunities among primary buyers of technologies in the space, supported by a 5-year smart systems forecast model.
- For a large silicon player, Harbor defined and developed a software architecture for competitive analysis of IoT platforms. This research examined twenty-five supplier and OEM platform providers in the IT, Telco and OEM markets to validate and segment monetization and pricing models.
- For a leading connected lighting solution provider, Harbor defined new and expanded smart services and IoT solutions as well as building the business case required to support this critical growth initiative. Harbor clearly articulated alternative strategies and solutions available to the company and defined clear steps and a program of actions to fully prosecute the market opportunity.
- For the software branch of a leading industrial and energy OEM, Harbor analyzed of the costs and economics of asset performance management in support of asset health, productivity, optimization, and compliance and integrity. Harbor developed a market model that broke down the costs of data management and analytics tools, and located gaps the company's software may not address currently and can be added to the product roadmap.
- For the largest manufacturer of electrical products in North America, Harbor conducted user survey research as well as competitor, peer and alliance candidate direct interviews to uncover unmet customer and user needs for new and evolving "connected" energy management and services opportunities.
- For the global leader in network infrastructure equipment, Harbor conducted an analysis of managed services opportunities in connected residential multi-dwelling and commercial properties, including market sizing, competitor analysis, alliance development analysis and go-to-market design.
- For a venture-backed startup, conducted an analysis of consumer energy services offerings to help target candidate developer alliances as well as partnership opportunities with utilities and related services providers

CONTACT US FOR IN-DEPTH RESEARCH & CONSULTING

info@harborresearch.com | +1 303.786.9000 | HarborResearch.com



Harbor Research has over thirty years of experience working with clients on growth strategy and new business creation. At the core of Harbor's approach is a deep understanding of the core technologies, markets and business characteristics as well as the management and organizational challenges companies face adopting and developing digital and smart systems technologies. We strive to generate deep insight into how emergent technologies drive value creation and competitive advantage in our clients' businesses and the economy as a whole.