

# Assessing Professional Practice Collaboration in the Nigeria Built Environment: Lagos and Ogun States in Focus

**Adesina Adekunle John, Fakolade Samuel & Akinnubi Andrew**

Department of Architecture, Faculty of Environmental Sciences, University of Lagos,  
Akoka-Yaba, Lagos 101017, Nigeria.

**Corresponding Author:** [johnadekunleadesinaarc@gmail.com](mailto:johnadekunleadesinaarc@gmail.com)

## Abstract

Professional Practice Collaboration (PPC) is a partnership that acknowledges the professional expertise of each person involved and is underpinned by positive relationships built on respect, reciprocity, and effective communication. Why is collaboration important for professional practice development in Nigeria? This study focuses on the *Lagos* and *Ogun States* due to the quantum of other f construction activities and the ample numbers of building construction professionals practicing in the state. It is aimed at assessing the current PPC situation in the construction sector practice to know the level of adherence to ethical standards thereby identifying sustainable approaches for effective profession. This study adopted a mixed methods research approach whereby researchers collect and analyze quantitative and qualitative data within the same study sample frames of selected sites (projects) in Ogun and Lagos States. Key findings are presented, including key issues influencing; skill-sharing, project goals alignment, and project engagement of built environment stakeholders. The focus is on the established practices within the Federal Government of Nigeria (FGN)-recognized regulatory professional bodies. Competitive barriers and different working styles, insufficient communication, poor team management strategies, and collaborative approach. The analysis concludes that resistance, inexperience, professional friction, and lack of fairness in site operations. The building code of practice (as approved by the FGN) is not fully implemented and localized from the project conception, award, and implementation stages. There are many moving parts and various parties involved, which means building and nurturing professional relationships working in collaboration is an essential component of the work life of Architects, Engineers, Quantity Surveyors, and other professionals (both technical and non-technical) in the Architectural Engineering and Construction (AEC) industry that is involved in the process. There is also a need for mandatory and continuous professional development to help train professionals on the importance of PPC across all regulatory bodies and their professional institutions/societies.

**Keywords:** Architectural Engineering and Construction, regulatory bodies, quacks, [team management](#), professional development

## Introduction

Professionalism refers to a commitment to and showing outstanding performance and success in any endeavor (Ofori, 2022). The physical elements were essential for economic activity, long-term national growth, and social well-being compose the built environment (Yıldız, Kıvrak, Gültekin & Arslan, 2020). There is a need to enhance several areas of the built environment and

the industry that provides it and this can be achieved through proper collaboration and coordination of any given task (Li, Greenwood, & Kassem, 2019; Ofori, 2022). Ochedi & Taki; Ebekoziem & Aigbavboa (2022), stated what considered professionalism in built environment research, especially in Nigeria entails and how it might be improved across the board to meet the needs of investors and

developers for the greater goal of the people. Stating that a multifaceted industry like the construction sector needs collaboration and coordination from all parties involved. A complex sector like the construction industry demands a range of built environment disciplines, as well as specialized knowledge and expert services that would control the physical development of the environment and the urban space. It is impossible to overstate how important it is for Nigeria's postsecondary education to be sustainable in terms of the major subjects' requirements. Ochedi & Taki (2022), take into account significant works on the nature of the built environment and its many sectors, as well as the variables affecting them; and it draw on works on professional ethics, integrity, and good practice to provide a basis for competence in built environment studies, housing delivery and physical development of the city. Talking about effective communication, proper control of team players, and professional collaboration, most experts would encounter difficult situations at work when they are unsure of who to turn to for assistance, it is important to prioritize collaboration, and this may be avoided (Ofori & Ceric, 2018; Bordass & Leaman, 2013). A team is better able to simplify solutions and locate colleagues who can assist when they are familiar with the procedures and techniques at hand (Brown, 2012). Organizations require the ability to use knowledge throughout the company using online, seamless, integrated, and intuitive collaborative solutions that improve your workers' capacity for teamwork to solve construction site challenges and function successfully (Kaasinen, Anttila & Heikkilä, 2022). In cases where a crisis management procedure is not established, in a project, a collaborative team has the chance to think out solutions together while drawing on each other's knowledge. Speaking of adaptation, it comes naturally to a cohesive team, just like solving issues does, a team may be ready for any circumstance if it is aware of its purpose and ultimate objective. Project teams and companies must adapt to each other rather quickly, and if your team

is not in sync, change might easily spell disaster in participation and open dialogue because teams that work together converse (Sanderson, Esfahbodi & Lonsdale, 2022).

Omopariola et al. (2022), expressed opinions stating that effective communication begins with integrating collaborative technologies into your workflow which allows coworkers to view the work that is being done, who is in charge of it, and how it affects every individual's job. A group of workers that works well together is at ease discussing ideas and bringing novel methods and instruments to the table and while participating at that level, they speak to one another openly and directly, this leads to new ideas and ways the team can get better (Duffy, & Rabeneck, 2013; Omopariola et al., 2022). Skill-sharing is a key instrument for a team to communicate, anticipate change, and address problems, but a team cannot accomplish these things without sharing information. If each member of your team brings their area of expertise to the table, everyone may mentor one another, impart new knowledge, and advance the team as a whole (Duffy & Rabeneck, 2013).

Every effective team player also possesses a variety of expertise that may be used to develop new strategies for optimum performance. To align goals, with a network of independent and partner-driven efforts, everyone accomplishes a shared objective that matches the aforementioned goals and encourages team cooperation, which promotes competence-sharing and higher output (Brown, 2012). This implies that every professional may combine their skills and expertise to streamline their processes and realize their shared and common objective of value delivery.

## **Literature Synthesis**

A productive member of the team feels comfortable sharing ideas, is committed to the team's objectives, and is also ready to take on whatever comes next (Twinn, 2013). An upbeat team player shows up each day prepared to work and assist others (Duffy & Rabeneck, 2013). The advantages of

workplace collaboration depend on first, employee commitment and closely followed by professional participation, efficiency, earnings, loyalty, and satisfaction (Kaasinen et al., 2022). It is critical to promote an environment of collaboration for greater commitment as more organizations value employee engagement as a criterion for success (Marques, Bilro, Gonçalves & Rather, 2022). It is important to evaluate the advantages of collaboration in working environments and apply them technologically to enhance the team's output and help the team players to develop professionally (Marques, et al., 2022). Although there is a wide variety of building information modeling (BIM) literature on collaboration using BIM technologies, little of it has been applied to the Nigerian construction industry context. To attract investors and developers in Nigeria, it is important to focus on professional participation in the building sector, as well as the roles of architects, and other technical experts in collaboration with their specialties and other building industries (Amusan, Adewumi, Ajao, & Ogundipe, 2021; Omopariola, Olanrewaju, Albert, Oke, & Ibiyemi, 2022). Collaboration on construction projects is the foundation for professional competency and registration, contract and tort law concepts, copyright, moral rights, and professional standards of conduct as they apply to those working in the realm of construction (Bastidas, Oti, Sarpong, Nocht, Wan, Tang & Schooling, 2023). Infant (new generation young architects with little or no experience) architectural practices should focus on the following; collaboration with other professionals and clients; feasibility studies on the success of any project before commencement; discussions with physical planning, development, and building authorities; tendering modalities; methods of building procurement (particularly the specifics of architects- or landscape architects- or planners- or builders -or engineers administered contracts); control of the staging of the pre-design, design, contract documentation, and contract administration stages; and a broader

relationship between the local government and the clients (Ebekozien, Aigbavboa & Samsurijan, 2023; Bastida et al, 2023). In the past years, the methods used by architects the prime consultants most times use their pieces of training to solicit input for the creation of new settings have changed over time (Yusuf, Opawole & Ebunoluwa, 2022). As shown in Figure 1, for ethical professional practices and collaboration, the architects involve people in design processes in various ways, stages, and at various scales. This helps localize the knowledge garnered from home and abroad thereby promoting the use of collaborative and participatory techniques among architects and other design professionals, industry stakeholders—including clients, financiers, developers, and design professionals and their regulatory bodies—would need to work together (Ebekozien, Aigbavboa, Aigbedion, Ogbaini, & Aginah, 2022).

Collaboration in the built environment may result in fewer revisions and reworks, a higher chance of delivery on schedule, more revenues, less material waste, and other significant advantages (Oke et al., 2019; Ojo et al., 2021). Successful cooperation in the construction industry promotes effective communication, establishes clear roles and duties, is smooth, and fosters trust it enhances long-term outcomes and benefits from placing a focus on cooperative communication between the project's major actors throughout the design and preconstruction phases (Yusuf, Opawole, & Ebunoluwa, 2022). Changing the way projects are delivered, beginning with the initial contract, embracing diversity, promoting responsibility, and emphasizing human connection are all ways to foster a more collaborative culture knowing that collaboration and trust go hand in hand (Oluwunmi, 2022; Książak & Wojtczak, 2023). A building project may involve many different stakeholders, such as architects, engineers, quantity surveyors, etc., in various kinds of collaboration (Marques, Bilro, Gonçalves & Rather, 2022). The interaction between architects and other professionals when they are involved in

group problem-solving and coordinated action establishes professional cooperation in the context of an inclusive project site, it goes through its acknowledged advantages for both professionals and all the artisans (skilled and unskilled), gives the overview of some potential activities on site, and looks at what makes it successful (Ofori, 2022; Ebekozi, et al., 2022; Omopariola et al., 2022).

### Fundamentals in Professional Collaboration

Getting everybody on the same page is the first step in efficient team collaboration for a construction project manager (Bordass & Leaman, 2013; Twinn, 2013). When working with a remote team, avoid being afraid to communicate frequently and ensure all channels are used to your advantage (Ofori & Ceric, 2018). Professionals must relate well with others, but establish some boundaries and give each team member freedom because collaboration is vital in the construction sector for several reasons and advantages,

including the ability to address problems more effectively. People and organizations work together more cohesively and while doing so may learn from one another through collaboration this makes new communication avenues available (Kaasinen, Anttila, & Heikkilä, 2022). Cooperation raises spirits throughout your business, which also increases business employee engagement knowing that a collaborative work method entails people cooperating on projects or completing tasks in a group that is sufficiently small to guarantee everyone's participation (Kaasinen, et al., 2022). Professionals in the group may collaborate on an assignment together or work independently on activities that contribute to a common result (Książak & Wojtczak, 2023; Marques, et al., 2022).

Cooperation is given freely by all and it has to be voluntary, likewise collaborating is not something that can be forced and people are naturally dependable, vulnerable, and trusting while working together. Although they might have no structure, there is one and there is a common goal a successful



**Figure 1:** Collaboration interconnectivity amongst selected 8 major stakeholders (key players) in the AEC industry in Nigeria.

project must value openness and disagreement which must sometimes occur (Ebekoziem, Aigbavboa & Samsurijan, 2023). Collaboration is necessary because it enhances teamwork and problem-solving skills deepens creativity, effective procedures, more success, and enhanced communication results from this (Ebekoziem, et al., 2023). What does collaborative professional development look like? This includes talking to others, being open-minded, and resolving conflicts. These abilities are necessary to collaborate effectively, do additional work, advance professionally, and provide better results (Bastidas, Oti-Sarpong, Nochta, Wan, Tang, & Schooling, 2023).

### **Collaboration in Construction**

In essence, "working together in the construction process" only refers to teams cooperating to complete a project. No one has to rely on gatekeepers or travel great distances to offices to access the core plans and objectives of a project at any time (Ojo, Ogunsemi, & Ogunsina, 2022). When team members work well together, they pool their expertise and resources to focus on achieving common objectives that are set by the process's timeframe and budget rather than their objectives, and doing things this way is best for projects (Nnaemeka, A & Chijindu, 2023). However, how can construction companies effectively promote trust and collaboration considering the harsh facts of the modern industry? Players must cooperate to collectively establish to achieve a common objective. Through working together execution, all parties involved have constant access to the main objectives and plans. Whenever engaged in an undertaking, about 50 percent of those in construction companies with the highest levels of trust prioritize working together. Collaborating can provide difficulties including adjusting to a revolutionary technique's adaptations, moving employment sites and work environments, and the possibility for greater forthright expenses (Kineber, Oke, Alyanbaawi, Abubakar, & Hamed, 2022).

### **Challenges of Collaboration in Construction**

The building process has historically been a dispersed business. It's not that teams deliberately choose not to cooperate (Olawumi & Chan, 2022). Collaboration is frequently hampered by the defective structure in place. Each player in the building and remodeling business is vying for a tiny portion of the dough in this fiercely competitive sector. Unique targets for the immediate future are frequently more important to teammates than the project's long-term final result (Ojo & Ogunsemi, 2019). Most contracts specify how to work on certain task components but do not indicate how everything fits in tandem, especially if teams are using conventional packaging techniques like the process (Ebekoziem, et al., 2023). These provide those involved with various, frequently limited viewpoints that promote conflictual approaches. Construction assignments have historically been created in an adversarial setting, as the contractor notes. Waiting times, dispute resolution, and disagreements are frequent in building sectors because each team member is obliged to compete with the others to make a respectable profit (Olawumi & Chan, 2022). Additionally, "poor coordination between trades, incomplete drawings and specifications, and managers inadequate funding that slows cash flow and increases conflict and delay hinder progress." Punitive contractual provisions undermine teamwork and subcontractors are rarely recognized as partners on the same footing (Wong, Rashidi, & Arashpour, 2020). Great relationships are seldom the result of disparities, inconsistency, poor communication, and conflict (Wong, et al., 2020). However, many businesses continue to operate within what is known due to their fear of some of the negative consequences of challenging the standard and genuinely performing to interact and the building process (Van, Diep, Quoc, & Le, 2021).

## Research Methods

This study adopted a mixed methods research approach whereby researchers collect and analyze both quantitative and qualitative data within the same study sample frames of selected sites (projects) in both Ogun-Lagos States. The mixed method approaches allow researchers to use a diversity of methods, combining inductive and deductive thinking, and offsetting limitations of exclusively quantitative and qualitative research through a complementary approach that maximizes the strengths of each data type and facilitates a more comprehensive. Considering the relevance and applicability of the feedback from the quantitative data and deductions from the structured interviews focused on the six sub-themes (construction problem-solving, design collaboration, adaptability, construction open communication, and participation, skill-sharing, goal alignment, and engagement at the site) which are key indicators for determining effective collaboration (see Figure 4). With adequate and proactive collaboration, all the stakeholders involved in construction alongside the design team (including architects, town planners, urban designers landscape architects, surveyors, builders, civil, structural, and building services engineers, etc.), the primary constructor and subcontractor, and the owner/operator can all share a digital data model. Every expert contributes discipline-specific information to the collaborative model, which is frequently a decentralized model that incorporates the representations of many distinct subjects. The ability to visualize all models and communicate in one environment, increase design collaboration and production, enhance conflict mitigation and identification, and increase time and expense outcomes are all made possible by types of clustering.

The total population size of AEC professionals (at various levels of professional registrations with ARCON, COREN, CORBON, QSRBN, TOPREC, and others) captured in this study is 439 comprising average personnel on the team

(some in the office, onsite, offsite, and working remotely). Working on an average number of 215 ongoing projects in both Ogun and Lagos states. During the field survey, the resident professionals and interns (who display skillful professional acumen) both onsite and in the office when visited were questioned on their knowledge of construction, its application, and integrations into their various practices and site construction experiences. Out of 500 numbers of printed questionnaires (25 questions mostly with a checklist) adopting a random sample frame of 215 comprising 439 construction workers at the selected construction sites with resident professionals who are the relevant BIM key players comprising 27 AEC firms and companies was taken within the Lagos States cutting across the following areas; Lekki, Ibeju-Lekki, Epe Area, Lagos Mainland, Ikeja GRA Districts were considered for this study due to the high rate of building development there. The study also considered some parts of Ogun State which have been integrated as part of the Lagos Metropolitan Masterplan such as the Mowe-Ibafo, Siun, Owode, Arepo, Sagamu, Akute, Ifo, and Sango Ota development pressured areas (DPAs). The DPAs are areas that are fast developing due to the high influx of people in need of housing. This continuous migration has led to increasing pressure in the various areas within the selected states. Structured interviews were conducted directly with the resident professionals and major stakeholders in the industry and at the time of the visit following key players were selected amongst others which are also relevant however these were selected because they are the technical personnel.

They are; the architect, builder, structural engineer, quantity surveyor, landscape architect (urban designers), mechanical and electrical engineers, environmental health and safety experts (HSE), general contractor + subcontractor, construction project manager, and clients/homeowners. joint interviews were conducted among the key players and resident professionals available at the time of the pre-construction,

construction, and post-construction stages. Questions included the awareness, use, and impact of BIM on the design process, the impact on the post-contract stage, factors preventing the adoption of BIM, and solutions to challenges. Answers from the 439 respondents who finished the question were collected and analyzed. The results from the variables were tabulated and the mean value was determined. The mean values were used to determine the six identified variables earlier mentioned (see Figure 4).

### Data Collection and Result

Data were collected through physical visit sites and selected focus groups who visited the construction sites regularly. The result shows the key players interviewed on-site and their various firms stating the average number of projects and personnel on site and staff members in the office with or without the knowledge of any particular known collaboration strategy. There were various stages of work at the selected sites during the visit and the main contractor,

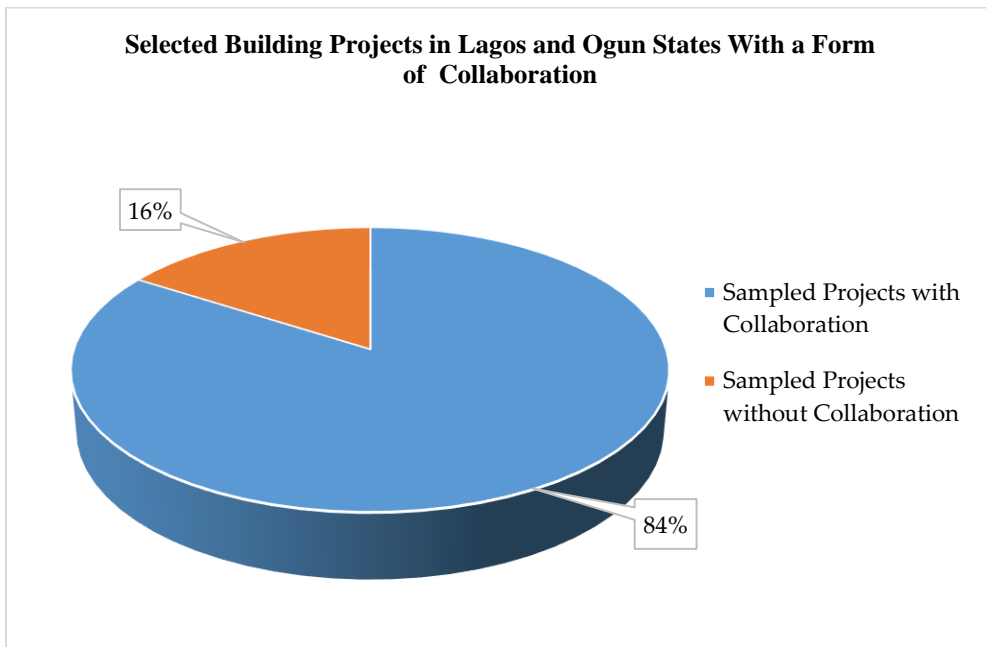
subcontractor, architect, civil engineers, construction project manager and seem to have the highest number of projects; 25.5%, 15%, 12.5 and 10% respectively. The level of collaboration varies accordingly with the contractors (main contractor) showing a high level of appreciation followed by the architects and of course, the landscape architects and environmental health and safety experts have limited or no knowledge of the software having very few projects and personnel to either train or use (see Table 1).

Table 1 above shows the percentage distribution of various construction projects visited and the personnel interviewed on-site. The following key players in the construction industry responded accordingly as shown but out of the 11 key players, the major determinants of the choice of effective collaboration strategies and selection of proper work-flow in building construction projects according to the responses are the architects, the construction project manager, the quantity surveyor and/or the main contractor.

**Table 1:** The key players(professionals) and some of their selected projects within Lagos and Ogun State.

Key Players	Average Number of Projects	Average Personnel on the team (Office & Site)	Project with BIM collaboration	Percentage of Ongoing Projects (%)
Architects	32	65	7	15
Builders	15	45	4	7.0
Civil + Structural Engineers	27	45	9	12.5
Quantity Surveyors	11	15	5	5.5
Landscape Architects & Urban Designers	05	17	0	2.3
Mechanical Engineer	13	18	2	6.0
Electrical Engineer	13	30	2	6.0
Environmental Health & Safety Experts	03	35	0	1.5
General Contractor + Subcontractor	55	105	11	25.5
Construction Project Manager	22	45	3	10
Clients / Home Owners	19	19	5	8.7
Total	215	439	34	100

Researcher's Fieldwork, 2022.



**Figure 2.** Figure showing the breakdown of the projects with and without effective collaboration using BIM as a tool.

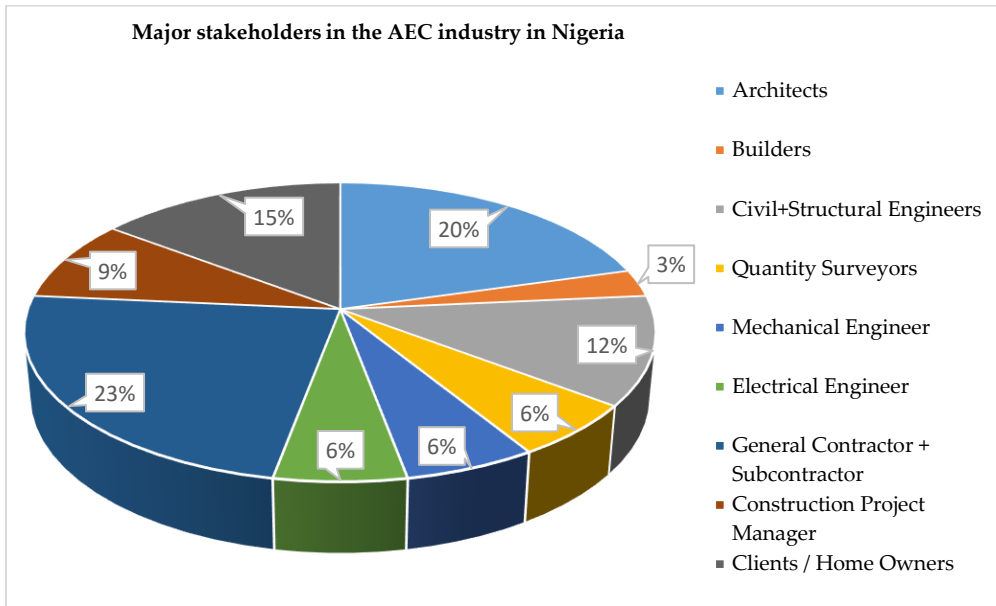
Therefore, it means that the architect as the prime consultant most times determines the choice of BIM usage right from the pre-design stage. Nevertheless, the role of the client/homeowner could think otherwise if affordability, availability, or technical know-how is an issue and rather use or prefer something less expensive but still effective and clear devoid of any form of technical ambiguities.

However, the study observed the lack of trained personnel, technical know-how, educational acumen, professional experiences, internet connectivity, BIM object libraries, awareness of technology, installation & maintenance tools are some of the issues hindering the key players in deploying acceptable tools hence most of them will fall back to the manual and old methods of site coordination, documentation, and management. The study also revealed that of the 212 stakeholders met only 34 of them have an ongoing project

that has a form of collaboration in it which is approximately 17% of the entire sample frame of the parts of Ogun State and Lagos metropolis (see Figure 2 above).

The research mentioned above shows that all significant stakeholders and industry experts in the building sector value the choice of BIM software. In this part of the world, Revit is the most often used. With the help of this well-known BIM design application, users may create, modify, and display building models in a three-dimensional environment. Construction professionals, BIM architects, and BIM engineers utilize it worldwide, making it one of the most popular BIM software programs available. The Autodesk architectural cloud connects team members, data, and workflows. The network of connections is perceived to be stronger (see Table 2 below).





**Figure 3.** Figure showing some of the ongoing projects by the key players in the AEC industry.

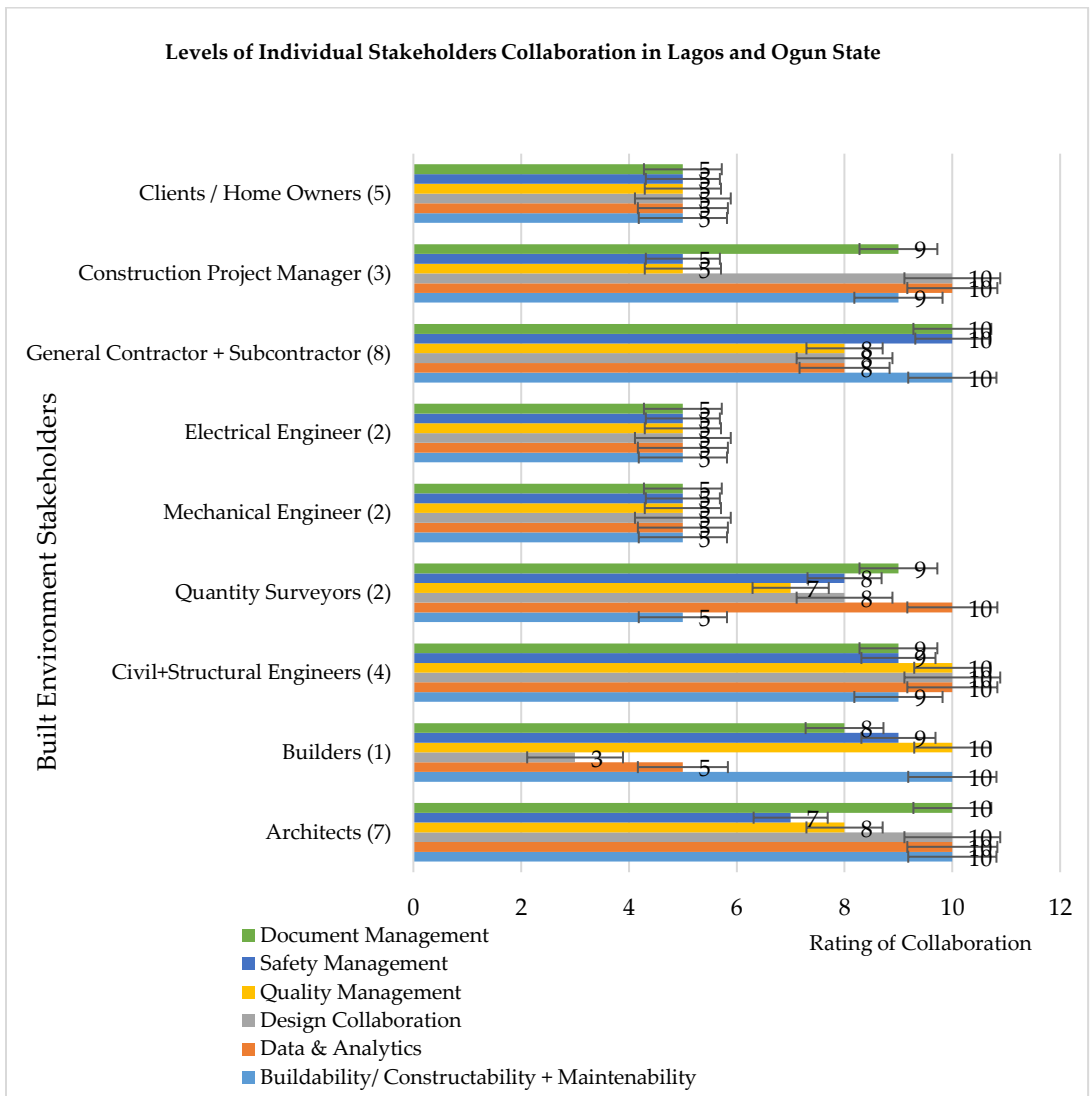
**Table 2.** Checklist of the Level of Individual Professional Collaboration

Key Players	Problem-solving	Adaptability	Design Collaboration	Open communication and participation	Skill-sharing	Goal Alignment and Engagement
Architects (7)	****	****	****	****	***	*
Builders (1)	****	****	****	****	***	*
Civil + Structural Engineers (4)	****	****	****	****	***	*
Quantity Surveyors (2)	****	****	****	****	***	*
Landscape Architects/Urban Designer (0)	Not available	Not available	Not available	Not available	Not available	Not available
Mechanical Engineer (2)	****	****	****	****	***	*
Electrical Engineer (2)	****	****	****	****	***	*
Environmental Health & Safety Experts (0)	Not available	Not available	Not available	Not available	Not available	Not available
General Contractor + Subcontractor (8)	****	****	****	****	***	*
Construction Project Manager (3)	****	****	****	****	***	*
Clients/ Home Owners (5)	****	****	****	****	***	*

Note: 4\*(extreme impact), 3\*(critical impact), 2\*(fair impact), 1\*(no impact)

The main stakeholders' perspectives on how the possible collaboration barriers should be removed were revealed via the responses to the questions and interviews. Such are the demands for more study, different degrees of training, and the development of fundamental professional and ethical practices that would encourage collaboration among the experts.

Documents management, safety management, quality management, design, data analysis, buildability/constructability, and finally the maintainability of the building projects are fundamentals in the ratings to determine if there could or had been any effective collaboration amongst the key players (see Figure 4 below).



**Figure 4.** Bar chart showing the level of collaboration on a scale of 1 to 10. 10 means most relevant and 1 means least relevant.

No matter how a professional partnership in a building project gets started, the following are some of the topics that were brought up or taken into consideration early on to assist in establishing a common ground and evaluate their varied ratings as shown in Figure 4. "Who among the professionals delivers what?" is one of the questions that were to be answered by the selected professionals. This is crucial before the commencement of any undertaking to avoid complacency and issues amongst everyone involved. What is everyone bringing? Who is providing what in terms of knowledge, abilities, and technical expertise? The knowledge of the architects' ideas and creativity, the expertise of the builders and structural engineers, and the quantity surveyor's specifics of the cost plans are all valuable contributions to the success of any construction project with the best quality.

### **Discussion**

Teamwork amongst professionals, as seen in this research, is one method. Everybody's participation is a collective duty, and by working together, experts in the field can produce inclusive building projects of the highest value. Professional cooperation does not, however, include a single, short conversation between an architect, engineer, builder and a quantity surveyor, project manager, contractors, or other experts only. Effective professional connection involves building mutually beneficial interactions while advancing common construction-related objectives. Actual collaborative professional work is a way to perform work alongside one another that: takes into account the expert knowledge of each party involved; is supported by mutually beneficial connections based on trust, cooperation, and clear communication; and is focused on a common objective, with the customer's satisfaction as well as the client's needs for job delivery as the primary priorities.

Collaborations involving multiple professions are possible and it is extremely critical to realize that there will be disagreements between the experts involved

in collaborations. Technical cooperation is neither a one-time encounter with someone with expertise nor an ongoing consultation for appraisal and evaluation. Discussions for providing feedback on assessments and other similar site activities are necessary and appropriate, but they only make up a tiny portion of what might be a true partnership. Practice-focused professional learning opportunities and a better awareness of the responsibilities and talents of other individuals employed by their different businesses or organizations, as the situation might be, are two advantages associated with expert cooperation.

These productive professional connections can sometimes develop naturally, whether through general client or site meetings or discussions about the project. Highlighted below are five issues as some of the few challenges preventing good collaboration between technical workers, listed in no particular order. Conclusion and suggestions were made based on the gap that the study had found, and they are mainly relevant to Nigeria and perhaps some other sub-Saharan African nations. Concerning the following listings; specifying building materials selection, keeping up with changing technologies, design software, and constant professional innovations solving the affordable housing gap, navigating the political landscape, and bridging the generational gaps between seniors and young professionals.

The necessity for seniors of all ages and levels of experience to work hard to bridge the generation gap and learn from one another was lamented by younger professionals and interns. Freshly baked registered professionals in all the professional bodies like ARCON, COREN, CORBON, etc. may bring new talents to the table, particularly in terms of technology, even though they can successfully give a lot of expertise in terms of managing a site, operating a business, and designing for a variety of different clientele. They can only work well together when there exists mutual understanding, hierarchical structure, and standing rules or engagement as stated in the

approved building code by the Federal Government of Nigeria.

## Conclusion

The findings of this research explored the roles, responsibilities, and interactions amongst various built environment professionals and exposed the understanding of professional practice principles. The duties of architects in working within their field and with other built environment experts, with a focus on professional practitioner participation in the building construction business. Considering the information gathered during the field investigation, it was further discovered that the stakeholders needed more technical know-how, organized guidance, and leadership.

The requirement for professionals to understand their legal and ethical obligations to clients, consultants, and other parties in the realm of construction is also made clear. Within the framework of monetary, interpersonal, societal, and expert circumstances, this study has complemented professional practices and partnerships. The necessary stakeholders must possess the necessary abilities to allow the implementation of the professional competency standards for built environment professionals, including registration, contracting, and professional codes of conduct. There are ongoing conflicts between structural engineers, architects, builders, and quantity surveyors since each of these professions has always followed its path. Few studies and publications have been done on effective collaboration and partnership in Nigeria's construction industry. However, this study's findings show that busy ecosystems are those where construction is taking place.

Clients in the construction sector want their service providers to take care of the hassles associated with their project on their behalf, necessitating excellent teamwork and communication between them to complete the task in the client's best interests. Additionally, there is a lack of efficient interaction between these professionals and

their clients. Although not professional-centric, it would imply that architects did not listen to clients when they were given the project brief before the project's initial start. The study's conclusion identified important issues that hinder efficient and effective communication among professionals, including specifying building materials quickly and accurately, staying current with emerging technologies, addressing the affordable housing crisis, navigating the political environment, and bridging the divide between generations with younger experts. In many professions, it is necessary to shift both the seniors and younger professionals' perspectives.

The conventional construction process in Nigeria is not being helped by the present trend of professional practice as identified in Tables 1 and 2, which is also continually interrupting the construction process, especially in the country's economic capital (Lagos State) and part of its suburbs (Ogun State), as this research explored. The good news is that these challenges can be solved by everyone by working together, delegating tasks, and communicating and collaborating effectively. Regulations like professional developmental structure and policies from the government and regulatory bodies to have mandatory workshops, seminars, and conferences on the importance of collaboration among the allied professions and it should be implemented throughout the project to address collaboration in project delivery, facilities maintenance, and post-construction activities, as well as the unprofessional influx of some self-described real estate and housing developers who have seized control of the housing delivery sector and quackery in its golden years while the real professionals have little or nothing to show for their expertise and professionalism.

## References

- Amusan, L., Adewumi, D., Ajao, A. M., & Ogundipe, K. E. (2021). Adoption, Implementation Information and Communication Technology Platform Application in the Built Environment

- Professional Practice. In *Advances in Artificial Intelligence, Software and Systems Engineering: Proceedings of the AHFE 2021 Virtual Conferences on Human Factors in Software and Systems Engineering, Artificial Intelligence and Social Computing, and Energy, July 25-29, 2021, USA* (pp. 446-455). Springer International Publishing. DOI [https://doi.org/10.1007/978-3-030-80624-8\\_56](https://doi.org/10.1007/978-3-030-80624-8_56).
- Bastidas, V., Oti-Sarpong, K., Nochta, T., Wan, L., Tang, J., & Schooling, J. (2023). Leadership for responsible digital innovation in the built environment: A socio-technical review for re-establishing competencies. *Journal of Urban Management*. <https://doi.org/10.1016/j.jum.2023.01.004>.
- Bordass, B., & Leaman, A. (2013). A new professionalism: remedy or fantasy? *Building Research & Information*, 41(1), 1-7.
- Brown, M. A. (2012). Construction management: the management of the development, conservation and improvement of the built environment. *Organization, technology & management in construction: an international journal*, 4(2), 457-460. <https://doi.org/10.5592/otmcj.2012.2.1>.
- Duffy, F., & Rabeneck, A. (2013). Professionalism and architects in the 21st century. *Building Research & Information*, 41(1), 115-122. <https://doi.org/10.1080/09613218.2013.724541>.
- Ebekozien, A., & Aigbavboa, C. (2022). Evaluation of built environment programmes accreditation in the 21st century education system in Nigeria: stakeholders' perspective. *International Journal of Building Pathology and Adaptation*, 41(6), 102-118. <https://www.emerald.com/insight/content/doi/10.1108/IJBPA-02-2022-0027/full/html>.
- Ebekozien, A., Aigbavboa, C. O., Aigbedion, M., Ogbaini, I. F., & Aginah, I. L. (2022). Integrated project delivery in the Nigerian construction sector: an unexplored approach from the stakeholders' perspective. *Engineering, Construction and Architectural Management*, (ahead-of-print). <https://doi.org/10.1108/ECAM-09-2021-0823>.
- Ebekozien, A., Aigbavboa, C., & Samsurijan, M. S. (2023). An appraisal of blockchain technology relevance in the 21st century Nigerian construction industry: perspective from the built environment professionals. *Journal of Global Operations and Strategic Sourcing*, 16(1), 142-160. <https://doi.org/10.1108/JGOSS-01-2022-0005>.
- Kaasinen, E., Anttila, A. H., & Heikkilä, P. (2022). New Industrial Work: Personalised Job Roles, Smooth Human-Machine Teamwork and Support for Well-Being at Work. In *Human-Technology Interaction: Shaping the Future of Industrial User Interfaces* (pp. 271-301). Cham: Springer International Publishing. [https://link.springer.com/chapter/10.1007/978-3-030-99235-4\\_11](https://link.springer.com/chapter/10.1007/978-3-030-99235-4_11).
- Kineber, A. F., Oke, A. E., Alyanbaawi, A., Abubakar, A. S., & Hamed, M. M. (2022). Exploring the Cloud Computing Implementation Drivers for Sustainable Construction Projects—A Structural Equation Modeling Approach. *Sustainability*, 14(22), 14789. <https://doi.org/10.3390/su142214789>.
- Kineber, A. F., Oke, A. E., Hamed, M. M., Rached, E. F., Elmansoury, A., & Alyanbaawi, A. (2022). A Partial Least Squares Structural Equation Modeling of Robotics Implementation for Sustainable Building Projects: A Case in Nigeria. *Sustainability*, 15(1), 604. <https://doi.org/10.3390/su15010604>.

- Książak, P., & Wojtczak, S. (2023). *Toward a Conceptual Network for the Private Law of Artificial Intelligence* (Vol. 51). Springer Nature. <https://books.google.com/books?hl=en&>
- Li, J., Greenwood, D., & Kassem, M. (2019). Blockchain in the built environment and construction industry: A systematic review, conceptual models and practical use cases. *Automation in construction*, 102, 288-307.
- Marques, S. H., Bilro, R. G., Gonçalves, M., & Rather, R. A. (2022). Partners we can trust: the role of employee engagement influencing partnerships' relationship quality in the voluntary sector. *Management Research: Journal of the Iberoamerican Academy of Management*, (ahead-of-print).
- Nnaemeka, A. J., & Chijindu, A. H. (2023). Assessment of suppliers' collaboration on construction project in Ebonyi state. *World Journal of Advanced Research and Reviews*, 17(2), 336-364. DOI url: <https://doi.org/10.30574/wjarr.2023.17.2.1385>
- Ochedi, E. T., & Taki, A. (2022). A framework approach to the design of energy efficient residential buildings in Nigeria. *Energy and Built Environment*, 3(3), 384-397.
- Ofori, G. (2022), "Professionalism in built environment research: beyond integrity and good practice", *Engineering, Construction and Architectural Management*, Vol. 29 No. 9, pp. 3617-3646. <https://doi.org/10.1108/ECAM-02-2020-0118>.
- Ofori, G., & Ceric, A. (2018). A new professionalism in construction: the importance of trust. In *International Conference on Professionalism and Ethics in Construction*. <https://doi.org/10.18744/CONF.2018039>.
- Ojo, L. D., & Ogunsemi, D. R. (2019). Critical drivers (CDs) of value management adoption in the Nigerian construction industry: A Delphi study. *Journal of Engineering, Design and Technology*, 17(1), 250-264. <https://doi.org/10.1108/JEDT-09-2018-0143>.
- Ojo, L. D., Ogunsemi, D. R., & Ogunsina, O. (2022). Conceptual framework of value management adoption in the Nigerian construction industry. *Construction Innovation*, 22(4), 939-961. <https://doi.org/10.1108/CI-02-2021-0017>.
- Oke, A. E., Kineber, A. F., Al-Bukhari, I., Famakin, I., & Kingsley, C. (2021). Exploring the benefits of cloud computing for sustainable construction in Nigeria. *Journal of Engineering, Design and Technology*. <https://doi.org/10.1108/JEDT-04-2021-0189>.
- Olawumi, T. O., & Chan, D. W. (2022). Developing project evaluation models for smart sustainable practices implementation in construction projects: a comparative study between Nigeria and Hong Kong. *Engineering, Construction and Architectural Management*, 29(3), 1522-1552. <https://doi.org/10.1108/ECAM-11-2020-0906>.
- Oluwunmi, A. O. (2022). Built Environment Professionals' Perception of the Importance of Facility Management Professionals at the Design Stage. *International Journal of Real Estate Studies*, 16(2), 96-105. DOI: <https://doi.org/10.11113/intrest.v16n2.191>.
- Omopariola, E. D., Olanrewaju, O. I., Albert, I., Oke, A. E., & Ibiyemi, S. B. (2022). Sustainable construction in the Nigerian construction industry: unsustainable practices, barriers and strategies. *Journal of Engineering, Design and Technology*. <https://doi.org/10.1108/JEDT-11-2021-0639>.
- Sanderson, J., Eshahbodi, A., & Lonsdale, C. (2022). The effect of team-member knowledge, skills and abilities (KSAs) and a common learning experience on sourcing teamwork

- effectiveness. *International Journal of Physical Distribution & Logistics Management*, (ahead-of-print).  
[. https://doi.org/10.1108/IJPDLM-07-2021-0277](https://doi.org/10.1108/IJPDLM-07-2021-0277).
- Twinn, C. (2013). Professionalism, sustainability and the public interest: what next? *Building Research & Information*, 41(1), 123-128.  
<https://doi.org/10.1080/09613218.2013.743306>.
- Van Tam, N., Diep, T. N., Quoc Toan, N., & Le Dinh Quy, N. (2021). Factors affecting adoption of building information modeling in construction projects: A case of Vietnam. *Cogent Business & Management*, 8(1), 1918848.  
<https://doi.org/10.1080/23311975.2021.1918848>.
- Wong, J. H., Rashidi, A., & Arashpour, M. (2020). Evaluating the impact of building information modeling on the labor productivity of construction projects in Malaysia. *Buildings*, 10(4), 66.  
<https://doi.org/10.3390/buildings10040066>.
- Yıldız, S., Kıvrak, S., Gültekin, A. B., & Arslan, G. (2020). Built environment design-social sustainability relation in urban renewal. *Sustainable Cities and Society*, 60, 102173.  
<https://doi.org/10.1111/exsy.12992>.
- Yusuf, A., Opawole, A., & Ebunoluwa, E. (2022). Evaluation of the organisational capability of the public sector for the implementation of building information modelling on construction projects. *Acta Structilia*, 29(1), 26-58.  
DOI: [10.18820/24150487/as29i1.2](https://doi.org/10.18820/24150487/as29i1.2).