



# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT

SOUTH AFRICA  
2021



*Creating Markets, Creating Opportunities*

# ACKNOWLEDGEMENT

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This report was prepared as part of the UK-IFC Market Accelerator for Green Construction (MAGC) Research Program. The preparation of this assessment was based on 402 surveys of South African private sector companies including developers, real estate practitioners (i.e., brokers, real estate agents, and/or property managers), real estate investors (i.e., funds, REITs, and/or corporate landlords), financial institutions, building experts (i.e., architects, engineers, contractors, and Green Building experts), policy makers, commercial occupiers, and residential occupiers (i.e., tenants and homeowners). Substantive contributions were received from Lenore Cairncross and Kushinga Lawrence of IFC's South Africa EDGE team. A special thank you is extended to Corinne Figueredo, IFC EDGE Operations Manager, who provided guidance for the study.

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IFC - a member of the World Bank Group - is the largest global development institution focused on the private sector in emerging markets. We work in more than 100 countries, using our capital, expertise, and influence to create markets and opportunities in developing countries. In fiscal year 2021, IFC committed a record \$31.5 billion to private companies and financial institutions in developing countries, leveraging the power of the private sector to end extreme poverty and boost shared prosperity as economies grapple with the impacts of the COVID-19 pandemic. For more information, visit [www.ifc.org](http://www.ifc.org).

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# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA

Buildings account for one-third of global final energy use and one-fifth of energy-related greenhouse gas (GHG) emissions. Green Buildings can be a solution to reduce energy use and GHG emissions of buildings and contribute to low carbon economic growth. However, market failures and barriers (e.g., lack of supportive policies, information asymmetry between builders and buyers regarding the efficiency of a building, and lack of information about, experience with, and awareness of Green Buildings) result in the continuation of conventional approaches to constructing buildings.

The UK-IFC Market Accelerator for Green Construction (MAGC) aims to boost the uptake of greener construction practices and technologies in developing countries. As part of this initiative, the MAGC Research program gathers, analyzes, and disseminates new evidence to develop, improve, and promote approaches to green construction and market transformation.

The scope of MAGC Research includes a series of stakeholder assessments intended to understand the perceived motivations and obstacles to the growth of Green Buildings in selected emerging markets.

This report was conducted as part of the MAGC Research Program in 2021. The stakeholder assessment is intended to be representative, but not exhaustive. It aims to provide actionable insights and contribute to the understanding of the Green Building market in South Africa, shedding light on awareness, motivating factors, perceived obstacles, construction cost and performance estimates, and decision-making paradigms of each stakeholder group.

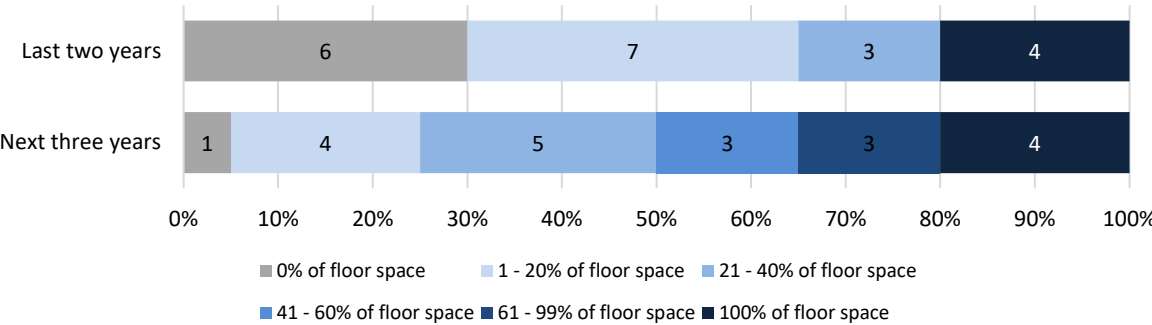
The South Africa stakeholder assessment was conducted through the SurveyMonkey online survey platform. 402 stakeholders responded to the surveys, representing nine stakeholder groups: developers, real estate practitioners (i.e., brokers, real estate agents, and/or property managers), real estate investors (i.e., funds, REITs, and/or corporate landlords), financial institutions, building experts (i.e., architects, engineers, contractors, and Green Building experts), policy makers, commercial occupiers, and residential occupiers (i.e., tenants and homeowners).

# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA

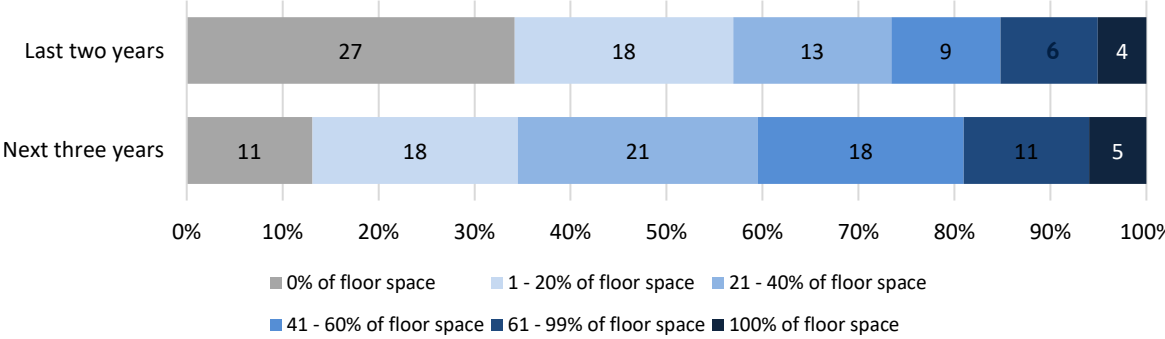
**Portfolio:** This report finds that South Africa has an active Green Building market, and that the growth trend will likely continue in the coming years. The majority of South African developers, building experts, real estate investors and practitioners all report a significant percentage of certified Green Buildings in their portfolios the last two years (including up to 100% for some developers and building experts), and the importance of Green Buildings is expected to grow for all stakeholders during the next three years.

These findings align with IFC's Green Building Market Maturity Snapshot for South Africa\*, which indicates that the certified Green Building penetration rate -the share of certified buildings among all new builds- has increased over the last few years.\*

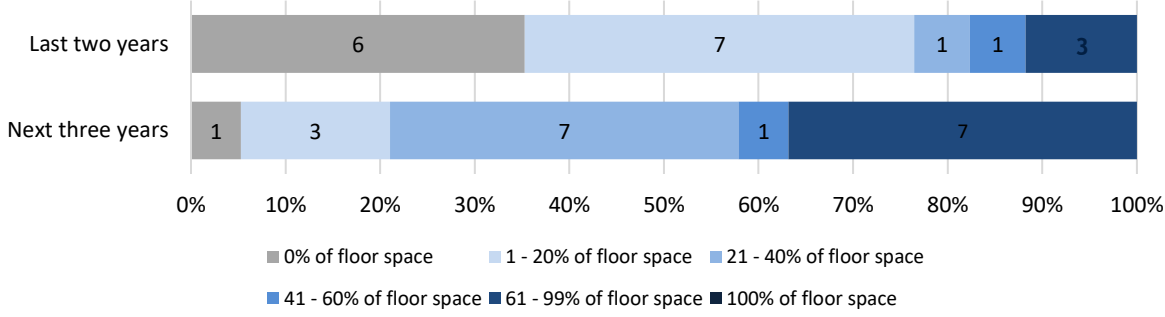
**Developers' Certified Green Building Portfolio and Expectations**



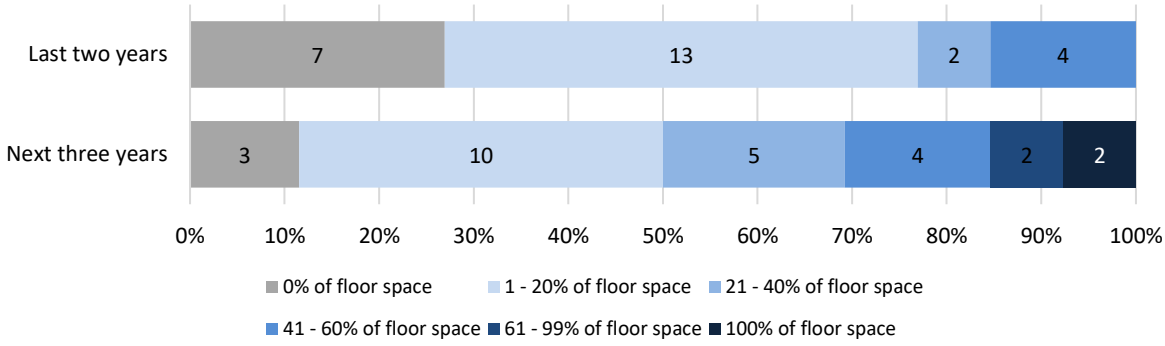
**Building Experts' Certified Green Building Portfolio and Expectations**



**Real Estate Investors' Certified Green Building Portfolio and Expectations**



**Real Estate Practitioners' Certified Green Building Portfolio and Expectations**

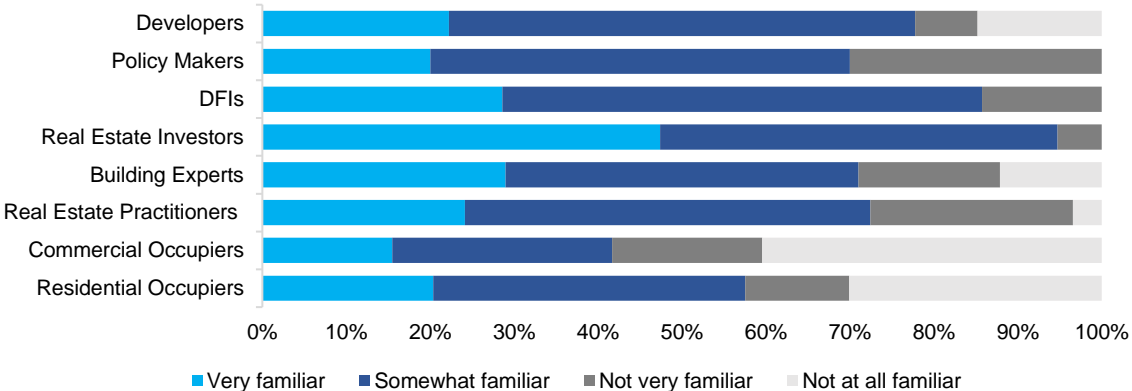


\*IFC.2021.South Africa Green Building Market Maturity Snapshot 2020

# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA

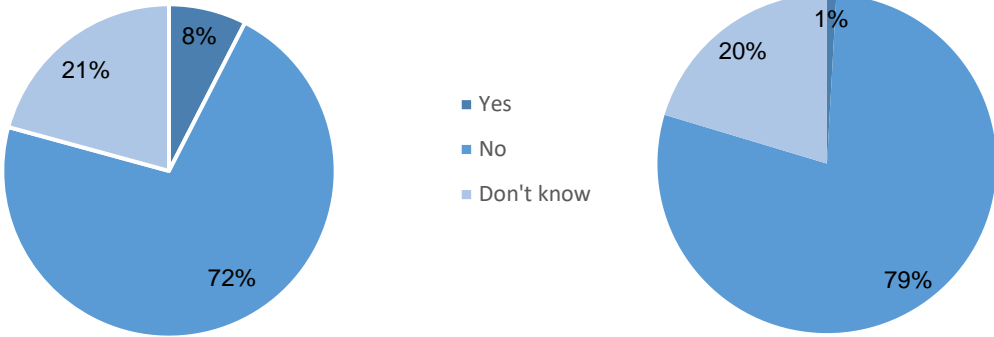
**Familiarity:** Overall, 63% of respondents indicated they are somewhat or very familiar with Green Buildings, indicating broad awareness among stakeholders in South Africa. Real estate investors is the stakeholder group reporting the highest familiarity with certified Green Buildings (94%). In contrast, residential and commercial occupiers report the least familiarity (57% and 41%, respectively).

**Familiarity with Certified Green Buildings**



**Demand:** Only 15% of the commercial and 1% of residential occupant respondents declare living or working in a Green Building. However, 80% of residential occupiers indicated that they would be willing to pay an additional 2% to live in a resource and energy efficient building, indicating strong demand for Green Buildings.

**Commercial Occupiers: Does Your Company Occupy a Certified Green Building?**      **Residential Occupiers: Do You Live in a Certified Green Building?**

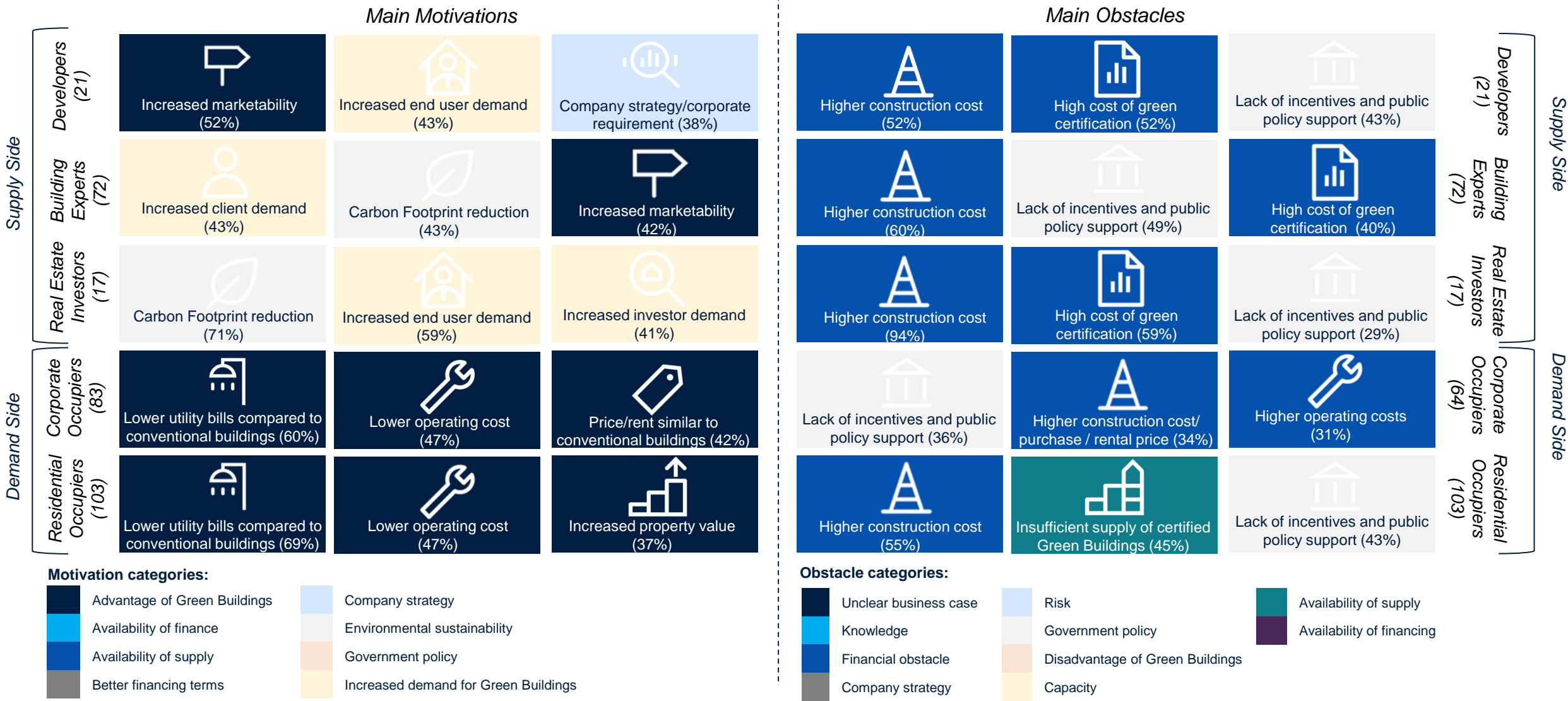


**Motivations:** Common motivations identified by respondents are environmental benefits, lower cost of utilities, and increased financial benefits of Green Buildings.

On the supply side, according to the survey the main motivating factors for Green Buildings are their reduced carbon footprint (71% of real estate investors and 43% of building experts), together with increased client/end user demand (59% of real estate investors, and 43% of building experts and developers) and increased marketability (52% of developers).

On the demand side, occupiers indicated that the main motivating factors for buying or leasing a Green Building are lower utility bills (69% and 60% of residential and commercial occupiers, respectively), followed by lower operating cost (47% of residential and commercial occupiers).

# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA



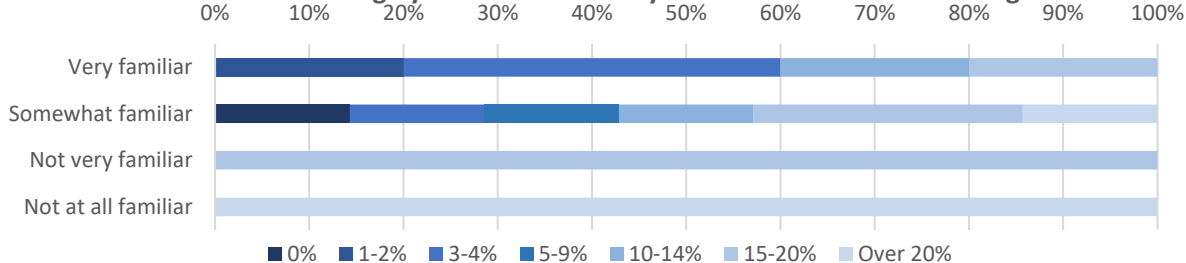
# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA

**Obstacles:** On the supply side, survey results indicate that the perceived higher cost of construction is considered the major obstacle to the expansion of certified Green Buildings (94% of real estate investors, 60% of building experts, and 52% of developers), followed by the cost of certification (59% of real estate investors, 52% of developers, and 40% of building experts) and lack of incentives and public policy support (49% of building experts, 43% of developers, and 29% of real estate investors). On the demand side, the main reported obstacles are the perceived higher cost of Green Buildings (55% and 34% of residential and commercial occupiers, respectively), the insufficient supply of Green Buildings (45% of residential occupiers), and the lack of incentives and public policy support (43% and 36% of residential and commercial occupiers, respectively).

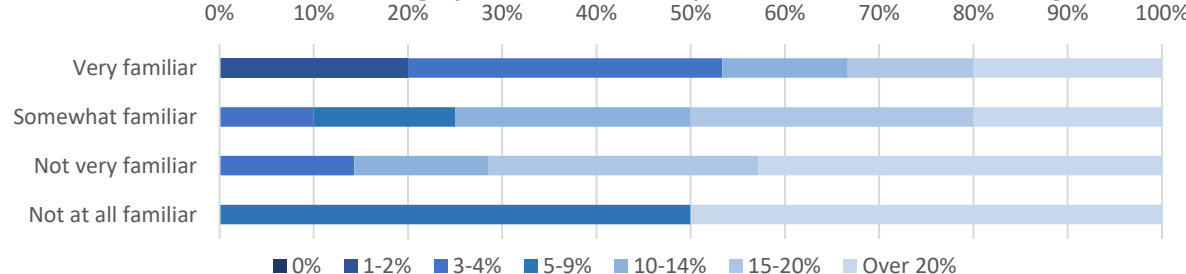
It is worth noting that the majority of surveyed developers and building experts in South Africa estimated the additional cost of Green Building construction to be 10% or higher. This is considerably above the typical 1-5% additional cost estimated by the Green Building Council South Africa (GBCSA), or the 1-2% typical EDGE estimates. However, respondent estimates of the additional cost of construction appear to decrease with the level of familiarity with Green Buildings, particularly among developers. While this could indicate that better knowledge may allow companies to find more cost-effective solutions, it could also mean that in the absence of information, stakeholders tend to overestimate the additional cost of green construction.

Regarding the cost of certification, the estimation of the professional fees required to certify a 5,000 sqm project varied significantly across developer and building expert respondents, again suggesting a potential knowledge gap.

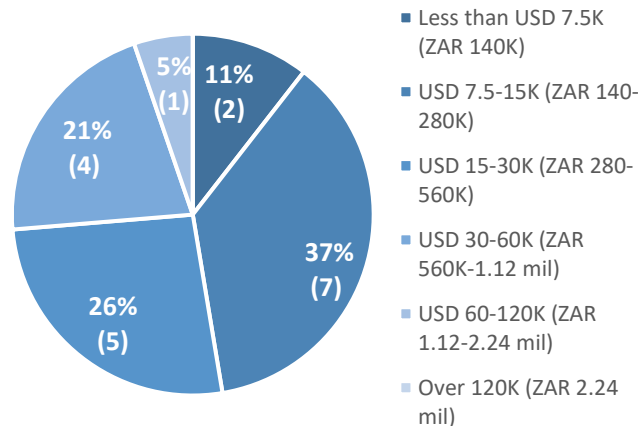
**Developers' Estimation for the Additional Cost of Construction of a Certified Green Building by Level of Familiarity with Certified Green Buildings**



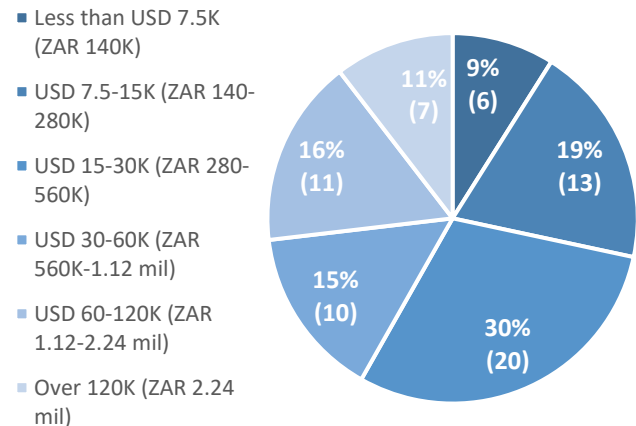
**Building Experts' Estimation for the Additional Cost of Construction of a Certified Green Building by Level of Familiarity with Certified Green Buildings**



**Developers' estimation of professional fees for Green Building Certification**



**Building experts' estimation of professional fees for Green Building Certification**



# GREEN BUILDING MARKET STAKEHOLDER ASSESSMENT: SOUTH AFRICA

**Standards:** As of 2021 South Africa had a voluntary national standard for energy efficiency buildings (SANS) and an obligatory standard for energy usage (SANS PART XA). Survey responses indicate that the implementation of these standards is perceived as insufficient by many stakeholders. Similarly, many survey respondents perceive policy support as limited, and/or complain that current regulations and incentives are not enough to catalyze the Green Building market, with several respondents calling for local governments' stronger stance on Green Building legislation. Overall, stakeholders identified the following public policy actions as key drivers for the development of the Green Building market: (i) fiscal incentives for certified Green Buildings (e.g., tax breaks, grants); (ii) mandatory Green Building certifications for new buildings; (iii) national Green Building code; (iv) non-fiscal incentives for certified Green Buildings (e.g., density bonus, expedited permitting); and (v) requirement for public buildings and/or social housing to be certified Green.

**Certification:** Certification systems bring quality and ensure certain standards for Green Buildings. Assessment results indicate that CEO/COOs, followed by project managers, are often responsible for choosing the type of Green Building certification used, often with guidance/advice from the Green Building Council / building expert. Stakeholders also indicated that the choice of certification is based on the building type to be certified, and that the cost of the selected certification is the main determining factor.

**Influencers:** Real estate practitioners are consistently considered the most influential stakeholders in developing the Certified Green Building market. Survey results suggest that peers, internet searches, and property-specific websites are among the primary sources of information on news and trends about property and buildings.

## Conclusion:

- South Africa has an active Green Building market, and stakeholders expect it to grow.
- Only 15% of the commercial and 1% of residential occupant respondents in South Africa reported living or working in a Green Building. However, 80% of residential occupiers indicated that they would be willing to pay an additional 2% to live in a resource and energy efficient building, indicating strong potential for the Green Building market in South Africa.
- The perceived cost of construction and certification are considered the major obstacles to the expansion of certified Green Buildings in South Africa. However, the majority of surveyed developers and building experts in South Africa estimated the additional cost of Green Building construction to be 10% or higher, considerably above typical estimates. In addition, survey results suggests that stakeholders unfamiliar with Green Buildings are more likely to overestimate the additional cost of Green construction, and that certification cost estimates vary significantly. All this suggests that there is still a sizable information gap regarding the cost of Green Building construction and certification in Colombia, and that further knowledge dissemination efforts are needed to close it.
- Many stakeholder groups raised a lack of policy support for Green Buildings as an issue, and respondents identified multiple policy areas that can incentivize and catalyze market development.



## ANNEX

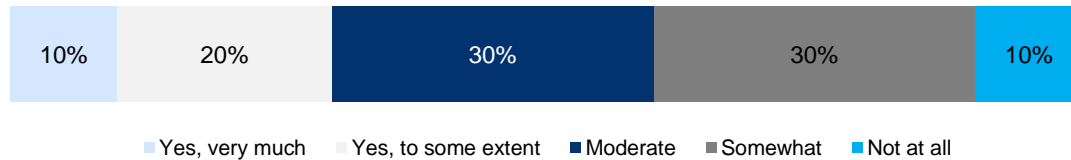


# Policy Makers

Responses: 10

The vast majority (90%) of policy makers surveyed are of the opinion that Green Buildings are very important as part of the response to climate change. The survey gathered mixed views on whether current public policies (e.g., regulations, incentives) encourage the certified Green Building market development.

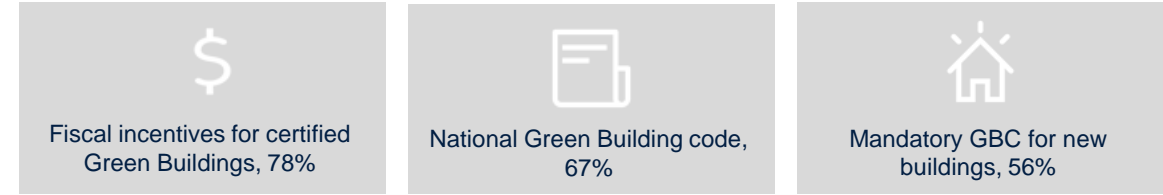
Do current policies encourage development of the CGB market?



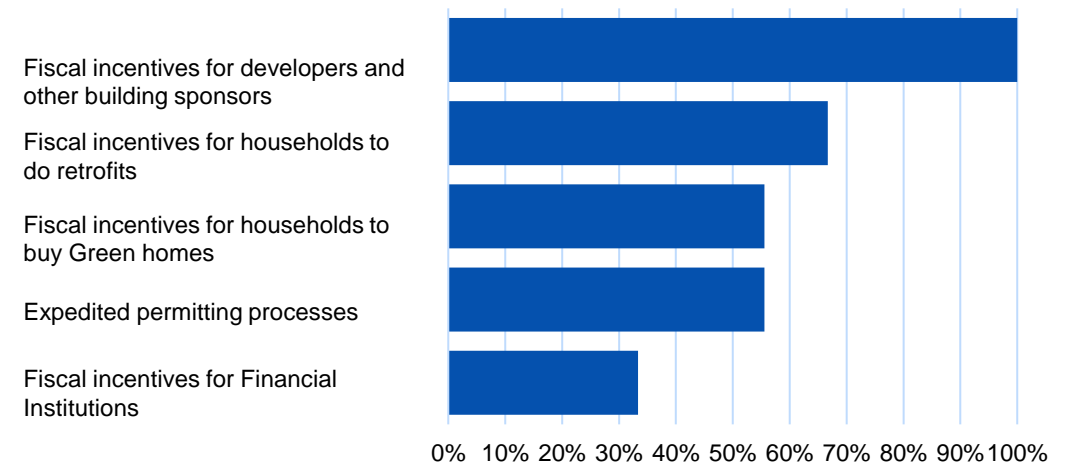
Furthermore, 60% of respondents feel that the contribution that current public policies make towards the development of the certified Green Building market is only somewhat effective, which could result from the lack of enforcement of Green Building regulations in South Africa. 60% of policy makers feel that South Africa has limited to no enforcement of Green Building Regulations.

Of the respondents, 80% consider voluntary Green Building certification important or very important. Surveyed policy makers believe that fiscal incentives for certified Green Buildings (78%) would be the most significant accelerant for the certified Green Building market, followed by the enforcement of a National Green Building code (67%); and mandatory Green Building Certifications for new buildings (56%). When asked what types of incentives would accelerate the development of the certified Green Building market, all policy makers indicated fiscal incentives for developers and other building sponsors, followed by fiscal incentives for households to carry out retrofits (69%) would be helpful.

## Public policy actions as accelerants in the Certified Green Building market



## Top five Incentives that could accelerate the market



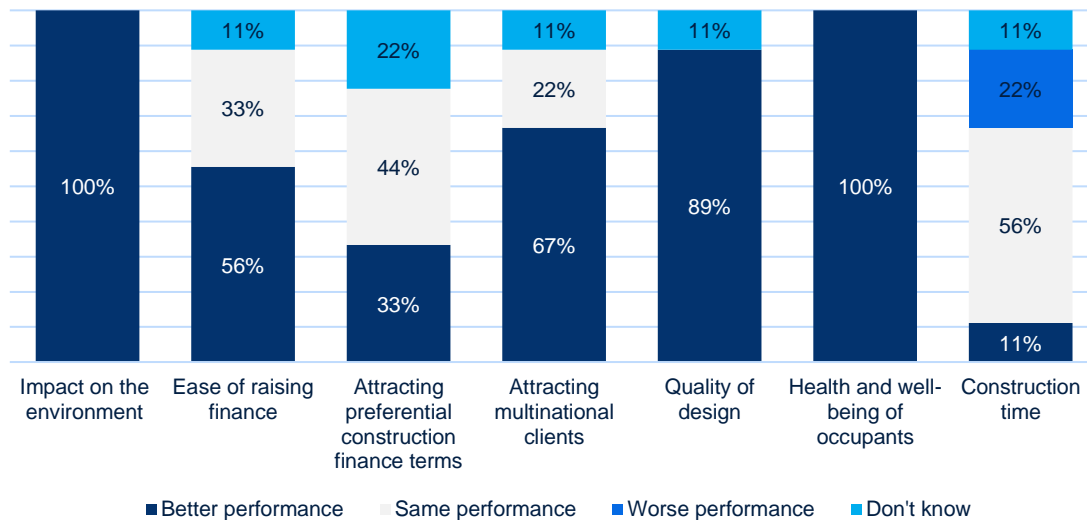


# Policy Makers

Responses: 10

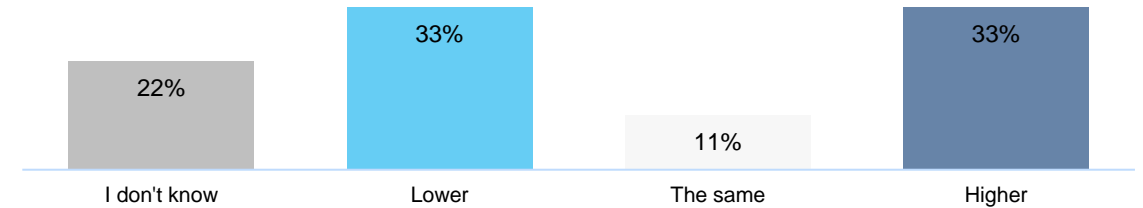
All policy makers who answered the survey believe that certified Green Buildings perform better than conventional buildings in terms of impact on the environment, and certified Green Buildings have a better impact on the health and well-being of occupants. The graph below shows policy makers' views on Green Building performance. Survey results suggest that policy makers who are more familiar with certified Green Buildings tend to attribute a better performance rating to certified Green Buildings.

**Performance Indicators of Certified Green Buildings vs Conventional Buildings**



Policy makers were also asked to compare the predicted savings to actual savings (accrued or realized) of certified Green Buildings. 33% indicated that it would be higher, 11% stated that it would be lower, while 22% indicated they don't know, and 11% indicated it is the same.

**Predicted Savings vs Actual Savings**



When asked what policy makers believe as the current motivators and obstacles for the development or investment of certified Green Buildings - 56% of policy makers indicated that increased investor demand and end-user demand is the main motivator. In comparison, 67% indicated that a lack of incentives and public policy support is the main obstacle to developing the South Africa Certified Green Market.

### Main motivators in developing the Certified Green Building Market



### Main obstacles in developing the Certified Green Building Market





# Development Finance Institutions

Responses: 8

Development Finance Institutions (DFIs) are multilateral, bilateral, or national development institutions or subsidiaries set up to support development in developing countries. Six out of the eight DFIs surveyed indicated that their institutions support the development of the Green Building market in South Africa by providing financing to financial institutions or developers, policy support, and capacity building to government officials, experts, and financial institutions. In South Africa's response to climate change, six out of the seven DFIs answering that question indicated that the construction of Green Buildings is very important or important. Regarding Green Building familiarity, the majority of DFIs (four out of seven) surveyed indicated that they are only somewhat familiar with certified Green Buildings, whereas two indicated that they are very familiar with certified Green Buildings.

From an enforcement perspective, three out of six DFIs think that South Africa struggles with limited or no enforcement of Green Building regulations. The survey provided a list of public policy actions often used to develop the certified Green Building market. According to respondents, the following three public policy actions would be the best accelerant for the certified Green Building market in South Africa:

### *Accelerants for the certified Green Building market\**



According to the DFI stakeholder group, increased end-user demand (four out of seven DFIs) and increased access to financing (e.g., a broader range of green investors, investor appetite for green bonds, etc.) (three DFIs) are the two major factors currently supporting the development of the certified Green Building market.

The main perceived obstacles, on the other hand, include higher construction costs (four DFIs) and a lack of incentives and public policy support (four DFIs). Stakeholders think the following accelerants are required to grow the certified Green Building market.

DFIs highlighted key actions they believe could increase the uptake of certified Green Buildings in South Africa which include, among others, the following:

- Actions that mainstream Green Building certification as part of the construction of buildings and/or retrofitting of existing buildings;
- Making Green Building certification a prerequisite for financing or acquisition;
- Development of Green financial instruments to finance Green Buildings;

All DFIs estimate that certified Green Buildings performs better (1-20% better) in terms of Internal Rate of Return (IRR) and reduced utility bills. Three out of five DFIs estimated that certified Green Buildings reduce utility bills by 15-20% compared to conventional buildings. Given that South Africa is a water-stressed and energy-strained country, this could be a key benefit of transitioning from conventional buildings to Green Buildings.



# Financial Institutions

Responses: 6

The Financial Institutions survey targeted a relatively small group of stakeholders that provide mortgage and construction loans in South Africa. Financial Institutions (FIs) in South Africa raised a high level of concern given the potential climate risk in their real estate portfolio. Three FIs indicated that both transition (e.g., public policy, market preferences, norms, and technology) and physical risk (drought, flood, other changes in climate) are major risks they face. The other three indicated that transition risks are their only major concern. Currently, four out of six banks responded that they provide financing for Green Building projects. All four provide, in some form, differentiated Green Building products. Three of them require a certification to approve the loan. FIs also finance other Green initiatives, the most popular being renewable energy projects, energy efficiency improvement, and water efficiency improvement.

### Green Building Project Portfolio\*

Repurposing and retrofits of existing buildings into Green Buildings



Green Building construction finance (Commercial / Industrial)



Green Building construction finance (Residential)



FIs' Green Building project portfolio consists of retrofitting existing buildings into Green Buildings (two FIs out of four), commercial and industrial Green Building construction finance (two FIs out of the four), and residential Green Building construction finance (one FI).

FIs predict that the highest Green Building finance growth potential is likely to occur within the Green Building construction finance sector for commercial and industrial buildings, followed by repurposing and retrofits of existing buildings into Green Buildings.

Out of the four FIs that currently finance Green Building projects, two estimated the current and expected share of certified Green Buildings in their loan portfolio. Both FIs indicated that their loan portfolio for Certified Green Buildings is expected to increase (between 3 and 20%) in the next three years. FIs have implemented, among other things, the creation of a definition for Green Building projects and internal technical expertise in Green construction and finance to offer certified Green Building finance.

### Actions implemented to offer Certified Green Building finance\*

A definition for Green Building projects



Development of internal technical expertise in green construction and green finance



Partnership with an internationally recognized Green Building system



Technical advice and support to developers on green construction



\* One  icon represents one FI



# Financial Institutions

Responses: 6

According to the respondent FIs, real estate developers are the most influential stakeholder in developing the Green Building market in South Africa. The view is that they influence the market by constructing a building that can be certified Green.

The three main motivations to currently finance Green Building projects or that encourage FIs to finance Green Building projects in the future are as follows:

### Main Motivations to Increasing the Share of Certified Green Building Projects\*



Five out of the six FI respondents indicated that the lack of incentives and public policy support is the biggest obstacle, followed by, for two out of four FI respondents, the perceived high risk of the new asset class, the lack of demand from clients, a lack of clarity on the benefits of Certified Green Buildings and insufficient supply of certified Green Buildings.

### Main Obstacles to Increasing the Share of Certified Green Building Projects\*



Out of the two FIs that currently do not finance Green Building projects, one FI plans to develop a Green Building finance product. The other one declared that Green Building is not their strategic focus.

\* One icon represents one FI



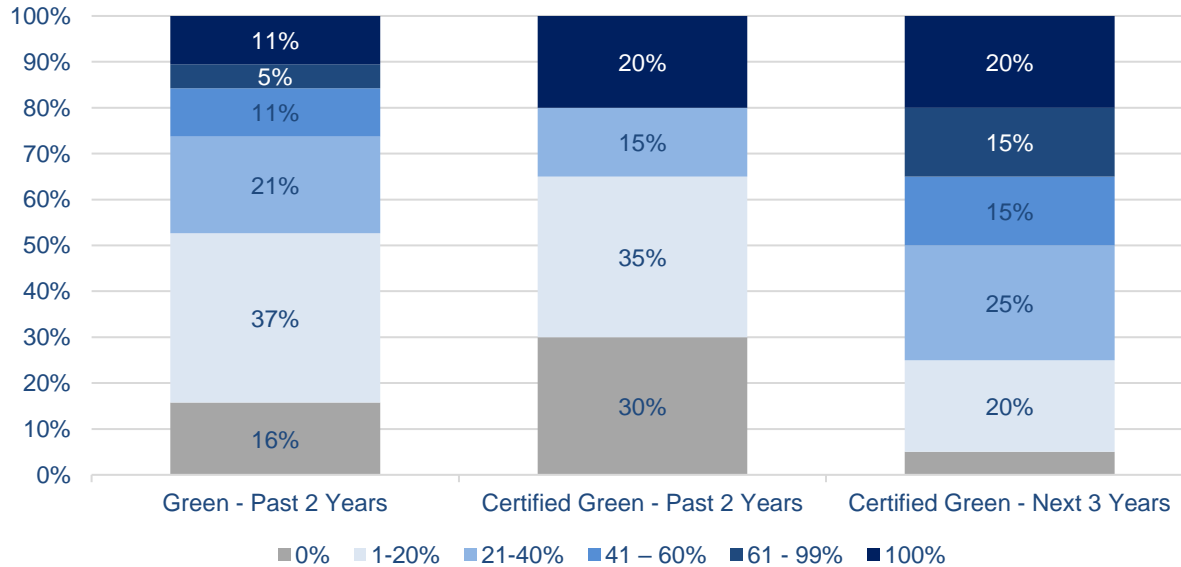
# Developers

Responses: 27

Developers were ranked as the most influential stakeholders in developing South Africa's Green Building market. Based on 27 survey responses, 78% of developers consider themselves very familiar (22%) or somewhat familiar (56%) with Green Buildings. 84% of developers profess to have certified Green Building in their portfolio.

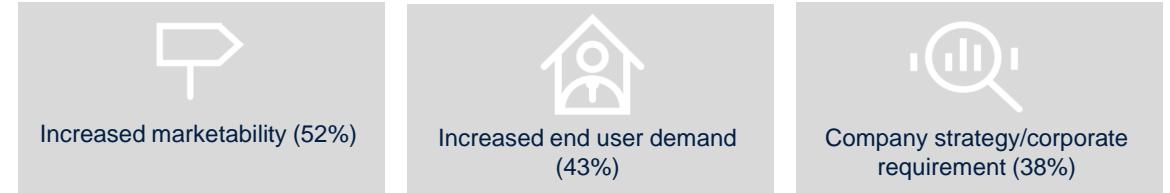
94% of developers intend to increase the share of certified Green Building in their portfolios in the future, or to continue developing only certified Green Buildings (see detailed breakdown of developers' expectations below).

Share of Developers' Portfolio Certified Green (% of floor space)



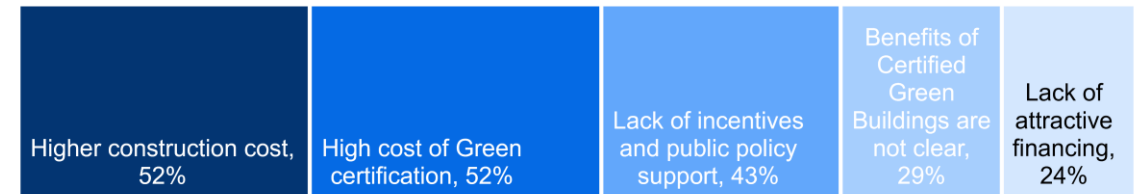
Offices (21%), middle-income residential (11%), retail (11%), student accommodation (11%), warehouse and industrial (11%), and mixed-use community developments (11%) are the most popular in term of certified Green Building developments. The anticipated increase in Green-certified floor space is predominantly driven by the increased marketability, increased user demand, and company strategies/corporate requirements linked to Certified Green Buildings.

### Main factors supporting the decision to certify Green



Most developers report that the perceived higher construction cost and high cost of Green Certification are the main obstacles to increasing the share of certified Green Buildings in their development portfolios. However, developers that are very familiar with certified Green Buildings indicated that the main obstacle for them is primarily the high cost of green certification, lack of attractive financing, and lack of incentives and public policy support.

Main Obstacles to Increased Portfolio Share of Certified Green Buildings



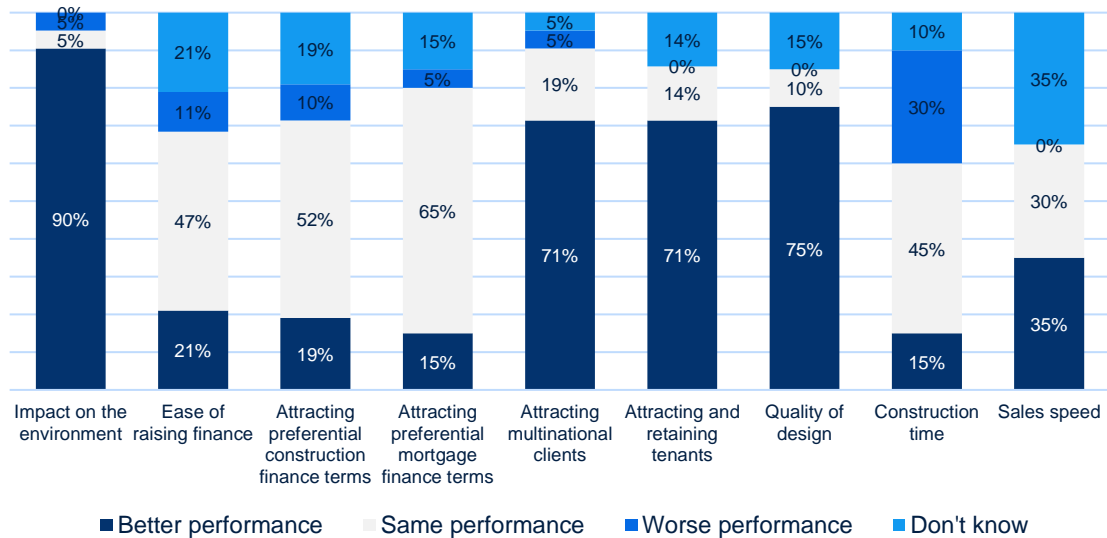


# Developers

Responses: 27

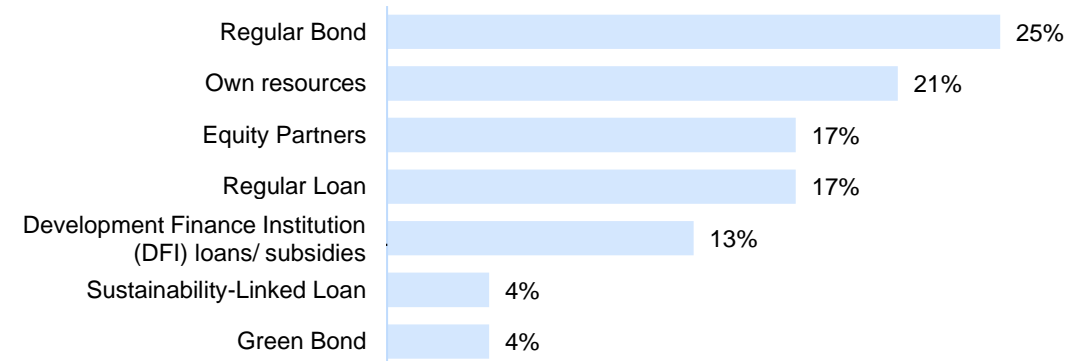
Regarding construction cost, 50% of developers estimate that it will cost between 1-9% more, while another 50% estimate that it will cost between 10-20%+ to develop a Certified Green Building compared to a conventional building. Developers who are not very familiar with Green Buildings tend to give higher estimates of the additional construction cost than developers that are very familiar with Green Buildings. This is considerably above the typical 1-5% additional cost estimated by the Green Building Council South Africa (GBCSA), or the 1-2% typical EDGE estimates. However, developers believe that certified Green Buildings perform better in terms of the building's impact on the environment, attracting and retaining tenants, attracting multinational clients, and design quality.

**Performance indicators**  
**Certified Green Buildings vs Conventional Buildings**



Most developers use regular bonds (25%), followed by their resources (21%), regular bonds (17%), and equity partners (17%) to finance their developments. Only 8% of developers have applied for a Green bond or sustainability-linked bond.

**Sources of financing**



88% of developers consider that current regulations provide very little or no Green Building Development facilitation. The majority (60%) of developers indicated that the enforcement of Green Building regulations in South Africa ranges from limited to nonexistent, 30% said that enforcement is average, and only 10% showed a good level of enforcement.

Developers report that fiscal incentives (e.g., tax breaks, grants) (20% of cumulated answers), non-fiscal incentives (e.g., density bonus, expedited permitting) (11%), a requirement for public buildings to be certified Green Buildings (11%), National Green Building Code (9%), mandatory Green Building Certifications for new buildings (9%), policy to train and develop Green Building expertise (9%), and development of a national strategy for Green Finance including green building finance (9%) are needed to support the growth of the Certified Green Building market in South Africa.



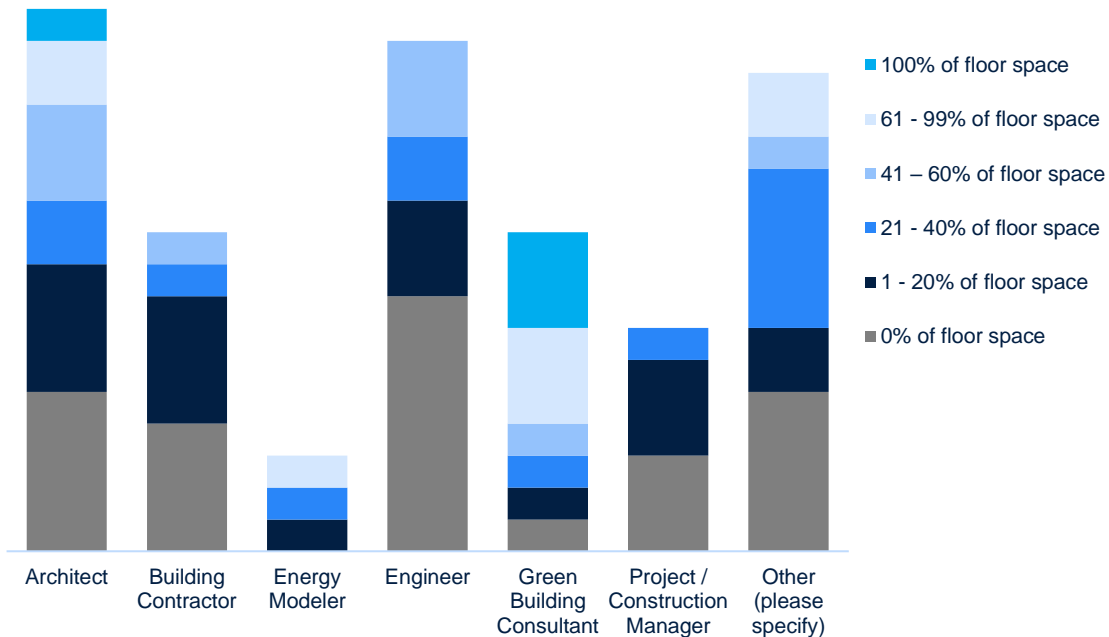


# Building Experts

Responses: 107

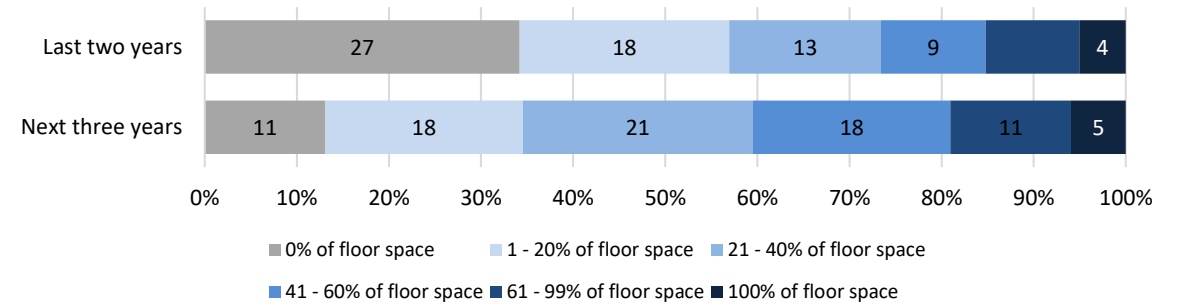
Of the various groups surveyed, designers (architects and engineers) and Green Building consultants are one of the stakeholder groups most familiar with certified Green Buildings – 70% of this stakeholder group indicated that they are either somewhat or very familiar with certified Green Buildings. Engineers and building contractors are less familiar with certified Green Buildings (and, to some extent, project/construction managers), while architects, energy modelers, and Green Building consultants are more familiar. The graph below illustrates the proportion of self-declared Green Building projects in each stakeholder's group portfolio over the last two years.

### Share of Green Building Projects in Portfolio by Stakeholder Group



The below graph summarizes the expectation of designers and Green Building consultants in terms of their expected increase in certified Green Building floor space in their portfolio in the next three years.

### Building Experts' Certified Green Building Portfolio and Expectations



Respondents indicated that they used Green Star certification most widely (71% have used it at least once), followed by EDGE (40%), LEED (35%), and BREEAM (14%). Stakeholders indicated that their decision regarding which certification system to use was primarily guided by the building type to be certified. The experience of designers and consultants in South Africa is that the three most popular property segments in terms of developing and certifying Green Buildings are offices, high-income residential, and hotels. This is mirrored in the feedback from developers' preferences.

### Main real estate sectors for Certified Green Building development



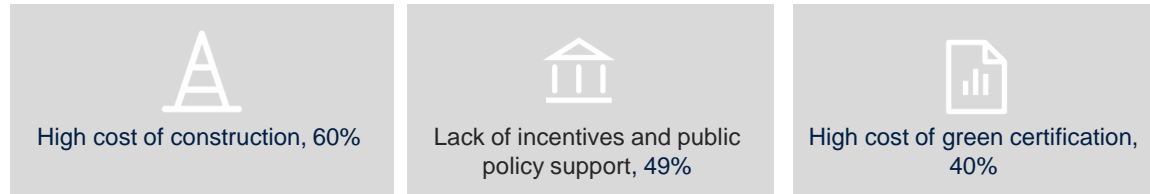


# Building Experts

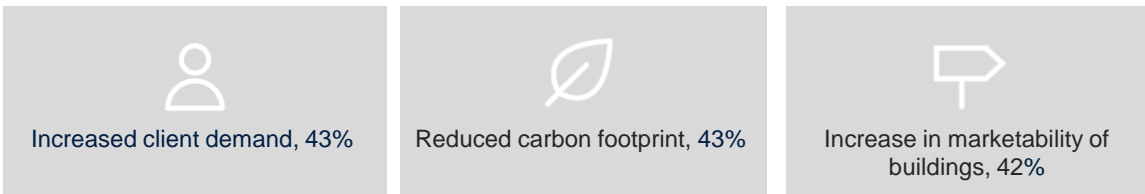
Responses: 107

Feedback from designers and consultants indicates that the main obstacles to more remarkable growth in the certified Green Building market are the high cost of construction (60%), lack of incentives and public policy support (49%), the high cost of Green certification (40%) and the lack of knowledge of the benefits of certified Green Buildings (40%). Conversely, the primary motivations for developing certified Green Buildings are the increase in client demand (43%), reduced carbon footprint (43%), and the increase in the marketability of these buildings (42%).

## Main obstacles for developing the certified Green Building market



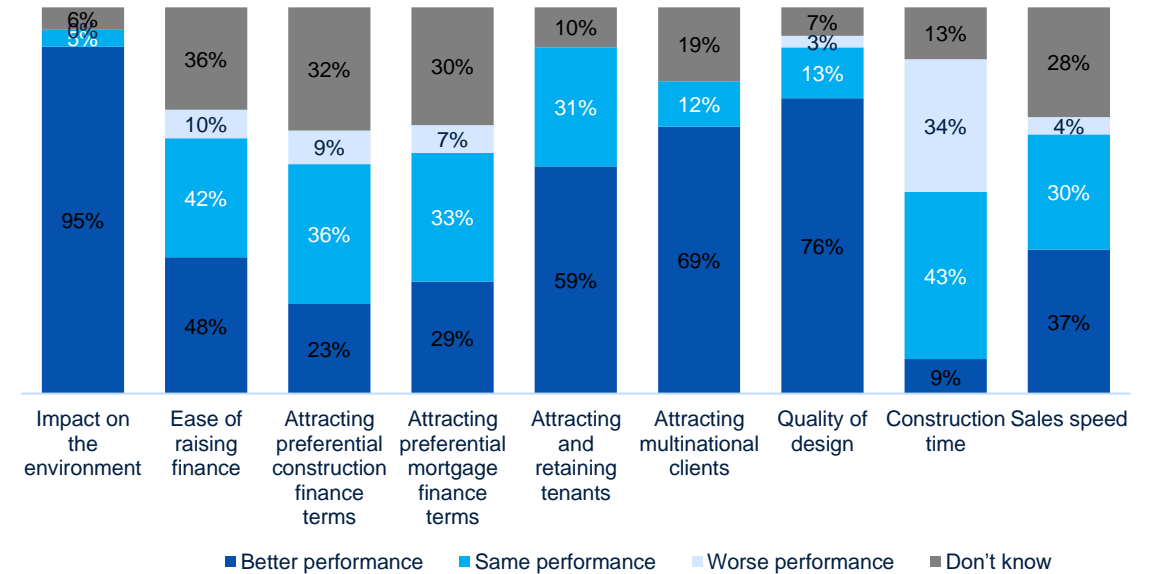
## Main motivators for developing the certified Green Building market



Certified Green Buildings are expected to perform better than conventional buildings in terms of impacting the environment and attracting multinational clients. Further, the surveyed stakeholders estimate that certified Green Buildings have lower operating costs and utility bills.

Stakeholders reporting higher familiarity with certified Green Buildings indicated that the construction cost of a certified Green Building ranges between the same and 4% more. However, stakeholders reporting lower familiarity with certified Green Buildings estimate construction costs to be considerably higher. According to designers and consultants, the predicted savings of certified Green Buildings are generally higher than the anticipated savings, especially when considered long term. Designers and consultants indicate that the accuracy of the savings could be improved by collecting proper data and conducting more research.

### Certified Green Buildings vs Conventional Buildings



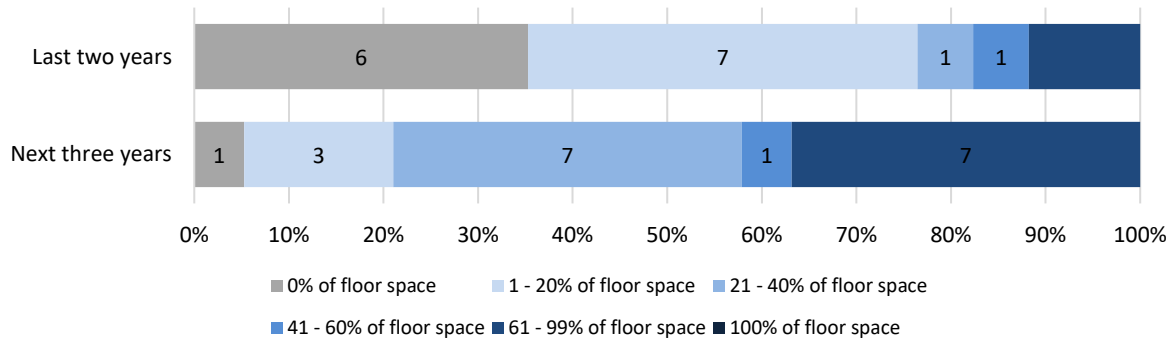


# Real Estate Investors

Responses: 20

The real estate investors' survey collected industry insights from Real Estate Investment Companies, Real Estate Investment Trusts (REIT), Pension Funds, Sovereign Funds, and Insurance Companies. Almost half (47%) of this stakeholder group reports that they are very familiar with certified Green Buildings. However, they report a limited presence (in terms of square meters) of certified Green Buildings on their portfolios. 76% of investors and corporate landlords have less than 20% of their portfolio's floor space Green certified. However, 76% of investors and corporate landlords also anticipate growth in the share of certified Green Building floor space in their portfolio.

**Real Estate Investors' Certified Green Building Portfolio and Expectations**



Offices (36%), warehouse and industrial (21%) and mixed-use communities (7%) are the most popular certified Green Building types that investors and corporate landlords have invested in. The main motivations for this type of investment are carbon footprint reduction (71%); increased end-user demand (59%); increased investor demand (41%); increased profitability (41%) and company strategy/corporate requirement (41%).

Investors and corporate landlords indicated that the perceived higher construction cost of Green Buildings (94%) and high cost of certification (59%) are the main deterrents to the increased share of certified Green Buildings in these portfolios.

Similar to building experts, the primary certification rating system used to certify assets by investors and corporate landlords is Green Star, with 73% of respondents having used it at least once. The certification tool was primarily chosen because of the perceived reputation of the rating tool (25%) and the specific building typology to be certified (19%).

Real estate investors estimate that certified Green Buildings cost 15-20% more in terms of construction cost than conventional buildings, but also that the property value/sales price is higher. The majority (42%) of respondents believe that the Internal Rate of Return (IRR) is likely to be the same; 25% indicated that it could be between 1-9% more. Property value is estimated to be 5-9% higher, which is lower than the concomitant premium on construction cost.

An area in which certified Green Buildings perform better than conventional buildings, and that is of considerable importance to real estate investors, is in attracting and retaining tenants. This could be attributed to increased ESG requirements imposed on large corporates and multinationals and the maturation of their sustainability agendas which generate demand for certified Green Buildings. 62% of Investors and corporate landlords believe that building and financial market regulations do in no way facilitate Green Building developments in South Africa. Similarly, Green Building regulations are perceived as being hardly enforced – 64% selected limited or no enforcement. Investors and corporate landlords view fiscal incentives (e.g., tax breaks, grants, etc.) as the primary potential accelerant to growing the Green Building market in South Africa.



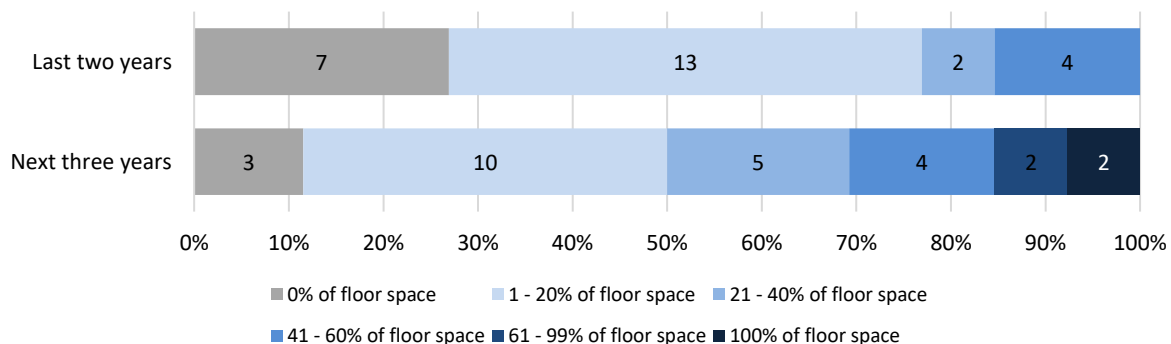
# Real Estate Practitioners

Responses: 29

Brokers, real estate agents, and property managers were the key participants in this survey. 48% of respondents feel that they are somewhat familiar with certified Green Buildings, while 24% indicated that they are very familiar with certified Green Buildings. According to the South African real estate practitioners surveyed, developers, investors, and corporate occupiers are the client groups they feel are most familiar with certified Green Buildings. Public institutions, retailers, and individual tenants are perceived by real estate practitioners to be the least knowledgeable about certified Green Buildings.

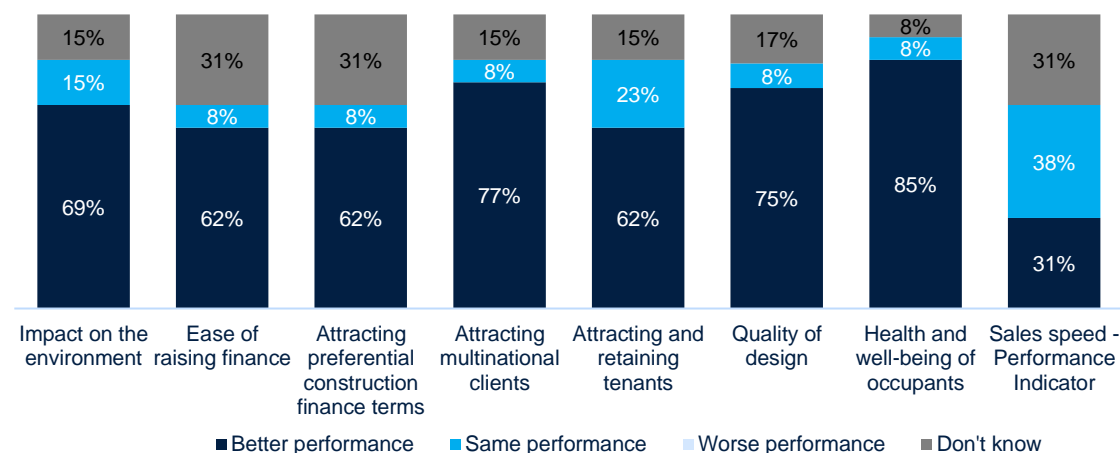
More than three-quarters (77%) of real estate practitioners surveyed have certified Green Building portfolios of less than 20% of total floor space. Nevertheless, during the next three years, 58% of real estate practitioners expect to see an increase (given the total floor space) of certified Green Building in their portfolio.

**Real Estate Practitioners' Certified Green Building Portfolio and Expectations**



Real estate practitioners believe utility cost savings are a primary attractor for tenants. According to real estate practitioners, the main obstacles for certified Green Buildings are the perceived higher rental and purchase price for these assets, the perceived high cost of certification, and the protracted timeframe associated with this.

**Certified Green Buildings vs Conventional Buildings**



Given several performance indicators, 85% of real estate practitioners report that certified Green Buildings perform better than conventional buildings in terms of health and well-being of occupants, 77% identified attracting multinational clients, and 75% identified the quality of design. Most real estate practitioners feel that current regulations are only somewhat (24%) or not at all (35%) facilitative to Green Buildings developments in South Africa. Similarly, 65% feel that the enforcement of these Green Buildings regulations is limited or non-existent.



# Commercial Occupiers

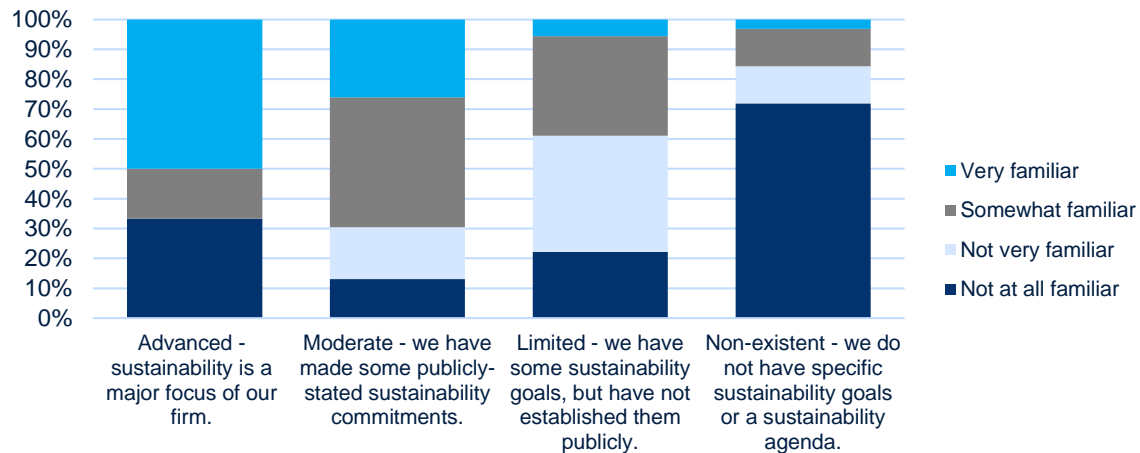
Responses: 88

The commercial occupiers' stakeholder group consisted of businesses or companies active in the following sectors: hospitality; offices; retail; warehouses; light industry; health care, and education that either rent or own a building/space in South Africa. The survey results revealed that 30% of business-owned the floor space they use while the majority (70%) rent the floor space they use. Of the stakeholders surveyed, 68% of corporate occupiers owned or rented floor space <1,000 sqm.

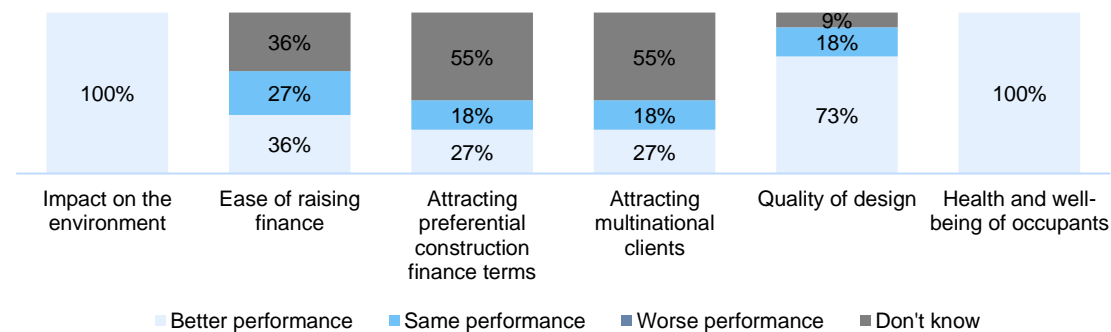
One of the key questions for this survey was for stakeholders to rate their company's sustainability agenda – 38% of stakeholders indicated that their company does not have specific sustainability goals or a sustainability agenda. More than half (58%) of the respondents indicated that they are either not at all familiar or not very familiar with certified Green Buildings. 69% of corporate occupiers surveyed indicated that they do not occupy a certified Green Building, and 18% don't know whether they occupy a Certified Green Building or not.

According to the survey results, 36% of survey respondents indicated that the main reason for the low occupancy of certified Green Buildings is due to a lack of incentives and public policy support, higher construction cost/purchase price/rental price (34%), and higher operating costs (repair and maintenance) (31%). The factors that would motivate companies to occupy certified Green Buildings include, amongst others, lower utility bills (i.e., energy, water) compared to conventional buildings (60%), lower operating costs (repair and maintenance) (47%), and price/rent similar to conventional buildings (42%). All surveyed commercial occupiers indicated that certified Green Buildings perform better in terms of health and well-being of occupants and impact on the environment compared to conventional buildings. The below graph summarizes corporate occupier's performance perceptions of certified Green Buildings vs. conventional buildings.

### Certified Green Building Familiarity vs. Sustainability Agenda



### Certified Green Buildings vs Conventional Buildings





# Residential Occupiers

Responses: 113

This survey included a combination of homeowners (48%) and rental tenants (52%). Of the stakeholders surveyed, the majority hailed from large urban nodes, i.e., Johannesburg, Cape Town, and Pretoria. However, when asked if they lived in a Green home, 20% of respondents were unsure (didn't know). This could be attributed to the lack of knowledge of certified Green Buildings within this stakeholder group, with nearly half (42%) of respondents not being very (12%) or at all familiar (30%) with Certified Green Buildings. When asked what would be the main motivators for respondents to live in a certified Green Building, the response was primarily financial and cost-related. Residential stakeholders would be more motivated to pursue living in a certified Green Building with a proven financial benefit, either in lower utility and operational cost or in increased property value.

## Main motivation to buy/ rent a certified Green Building



## Main obstacle to buy/ rent a certified Green Building



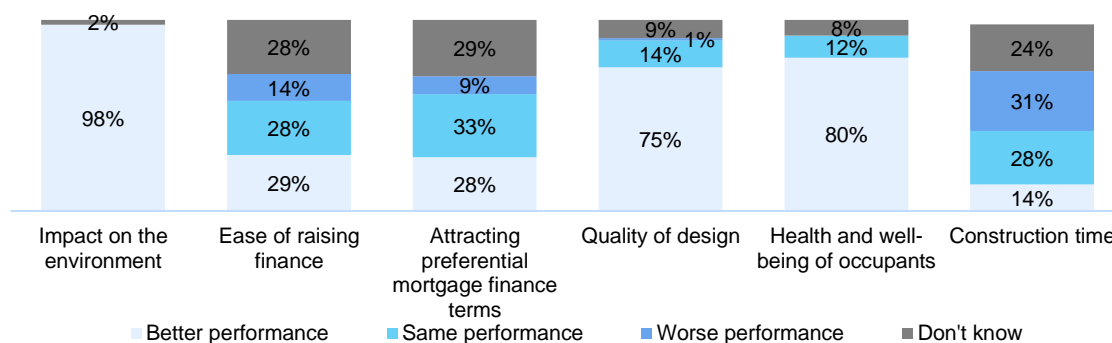
80% of residential occupiers indicated that they would be willing to pay up to 2% more to live in a resource and energy-efficient building, indicating strong demand for Green Buildings.

## Additional premium to make home energy and resource efficient

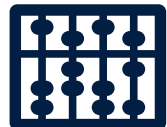


Given performance indicators comparing certified Green Buildings against conventional buildings, the majority of residential occupier respondents estimated that certified Green Buildings performed better in almost all categories. The exception is construction time, where 31% of stakeholders think that certified Green Buildings perform worse (i.e., take longer to build) than conventional buildings (estimated at 15-20% more).

## Certified Green Building vs Conventional Building



Stakeholders also raised concerns about certified Green Buildings' ability to attract preferential mortgage finance terms (9% indicated worse performance) and the ease of raising finance (14% indicated worse performance). Construction time and shortage of specialized finance products contribute to the higher cost of construction/purchase/rent of a Green home and are deterrents in pursuing this type of home.



# METHODOLOGY

The stakeholder assessment surveys were conducted through the online survey platform SurveyMonkey. The anticipated time to complete each survey was 10 – 15 min. The South Africa survey was open for responses from August 23<sup>rd</sup> to November 11<sup>th</sup>, 2021.

Nine different surveys were designed, each of which considers sector-specific questions related to the Green Building market. The surveys focused predominantly on Green Building familiarity, motivations and obstacles, performance, regulations, and incentives, finance, and source of information.

The number of target survey responses intends to provide a representative, but not exhaustive, assessment of each stakeholder group in each selected Green Building market. However, in some cases obtaining contact information and/or eliciting responses from stakeholders proved challenging, and the target number of responses could not be achieved. In addition, in some cases stakeholders only provided answers to some survey questions. Therefore, the number of responses on which each analysis featured in this report is based can vary.

The target and actual number of surveys for each stakeholder group is presented in the table to the right. Additional information regarding the number of responses on which an analysis is based on is provided throughout the report.

| Stakeholder Group/Subgroup              |                                    | # Target Surveys | # Actual Surveys |
|---|------------------------------------|------------------|------------------|
| <b>Developers</b>                       | Developers                         | 20               | 21               |
|   | Municipal                          |                  |                  |
| <b>Policy Makers</b>                    | Regional                           | 10               | 10               |
|   | National                           |                  |                  |
| <b>Development Finance Institutions</b> | Multilateral DFIs                  | 5                | 6                |
|   | National DFIs                      |                  |                  |
| <b>Financial Institutions</b>           | FIs (Banks)                        | 5                | 8                |
|   | Funds                              |                  |                  |
| <b>Real Estate Investors</b>            | REITs                              | 15               | 20               |
|   | Other RE funds                     |                  |                  |
|   | Corporate landlords                |                  |                  |
| <b>Building Experts</b>                 | Architects                         |                  |                  |
|   | Engineers                          |                  |                  |
|   | EDGE experts +Other GB consultants | 50               | 107              |
|   | Contractors                        |                  |                  |
| <b>Real Estate Practitioners</b>        | Brokers                            |                  |                  |
|   | Real estate agents                 | 15               | 29               |
|   | Property managers                  |                  |                  |
| <b>Commercial Occupiers</b>             | Corporate Occupiers                | 40               | 88               |
|   | Retailers & Other                  |                  |                  |
| <b>Residential Occupiers</b>            | Homeowners                         | 40               | 113              |
|   | Tenants                            |                  |                  |
| <b>Grand total</b>                      |                                    | <b>200</b>       | <b>402</b>       |

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