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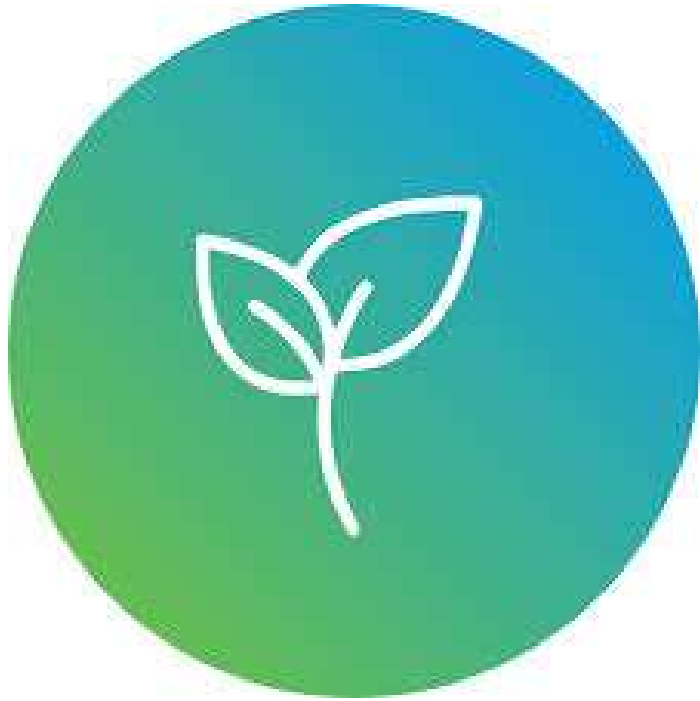
YECHAM
SECURITY OF 2013

PRESENTS

3RD IFC EDGE STUDENTS DESIGN COMPETITION

COMPETITION GUIDELINES

Promoting Affordability and Efficiency through Passive Design



Excellence in Design for Greater Efficiencies (EDGE)

EDGE is an innovation of IFC, a member of the World Bank Group. It is a free software, a green building standard, and an international green building certification system that provides an opportunity to gain a competitive advantage by differentiating their projects and adding value for their customers.

IFC created EDGE to respond to the need for a measurable and credible solution to prove the business case for building green and unlock financial investment. EDGE brings speed, market intelligence and an investment focus to the next generation of green building certification around the world.

EDGE includes a cloud-based platform to calculate the cost of going green and utility savings.

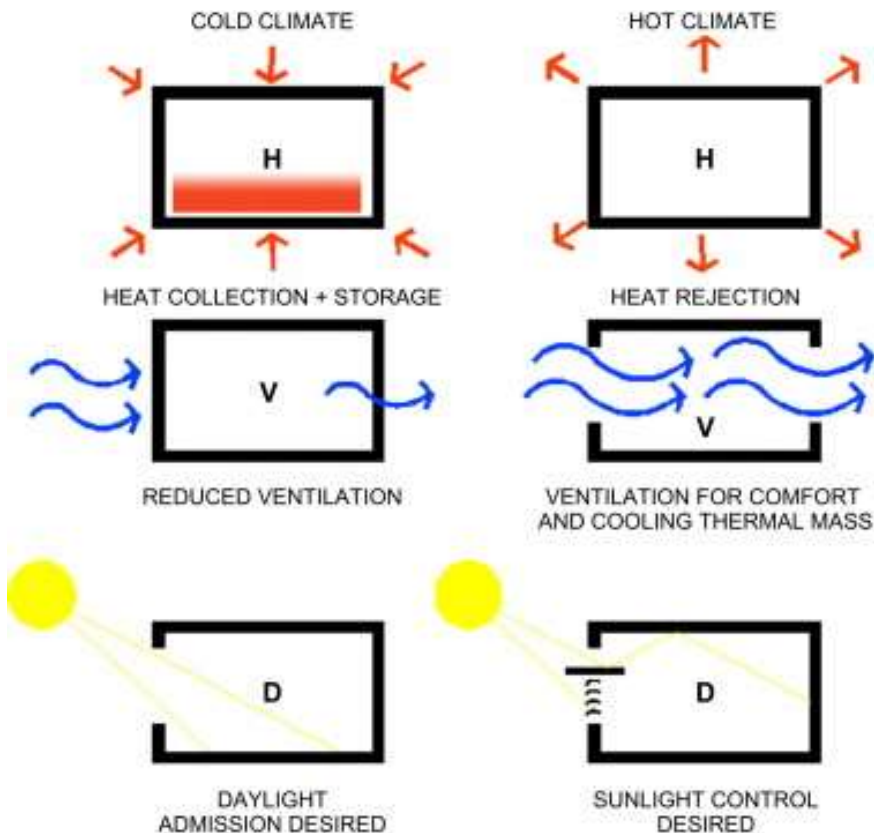
Designing for Greater Efficiency (DfGE)

IFC has introduced the DfGE course to help students and building industry professionals develop skills to support the movement towards a **Net Zero** future. It is offered online and in a university setting.

The **DfGE** course covers the basics of energy and resource efficiency measures in design from the technical and commercial perspective and seeks to encourage and incentivize resource efficiency in the construction sector.

To help promote sustainable building in Ghana, the EDGE program is throwing a design challenge for students under the theme “Promoting Affordability and Efficiency through Passive Design”

Promoting Affordability and Efficiency through Passive Design



Passive Design

'Passive design' is design that works with the local climate to maintain a comfortable temperature in the home. Good passive design should reduce or eliminate the need for additional heating or cooling depending on your location and often relies on an active occupant to work properly. A passively designed home can deliver a lifetime of thermal comfort, low energy bills, and low greenhouse gas emissions.

Statistics for the Importance of Passive Design Strategies

Passive design strategies save a great deal of energy consumption and reduce material waste. Here are some significant statistics that show how passive design strategies are becoming more and more prevalent in the contemporary world

AIA Research reveals that 80% of architects want to specify more sustainable materials, but only one in three feels they are meeting that goal.

According to a report by Frontiers, a blend of passive design strategies can significantly reduce **annual energy consumption by 35.4%**.

Data from IFC EDGE-certified projects suggest that the average incremental capital expenditure for some green buildings can range from 1 to 10 percent. Savings in utility costs relative to a traditional building can also result in short payback periods of two to three years in some residential projects.

Typical building retrofits reduce energy use by up to 25 percent while deep retrofits can sometimes save more than 50 percent

Promoting Affordability and Efficiency through Passive Design

Benefits of Passive Design Strategies

Passive design strategies are important even when active design strategies are used in a project. This is because they provide cost-effective, reliable, and energy efficient building solution. They help improve indoor comfort, increase energy efficiency, and contribute to aesthetic and sustainable attributes.

Energy Efficiency

While active design depends on mechanical processes, passive design relies on natural sources for heating, cooling, ventilation, and lighting, passive design strategies can significantly reduce a building's energy consumption. This can lead to lower energy bills and a reduced carbon footprint.

Indoor Comfort

Passive design strategies can create a comfortable indoor environment by taking advantage of natural ventilation and minimizing direct sun exposure. This can lead to a more pleasant and healthier indoor environment, free of drafts, hot spots, and indoor air pollution.

Health and Well-Being

Passive design strategies can improve health and well-being by promoting natural ventilation, reducing indoor air pollution, and providing access to natural light.

Durability and Longevity

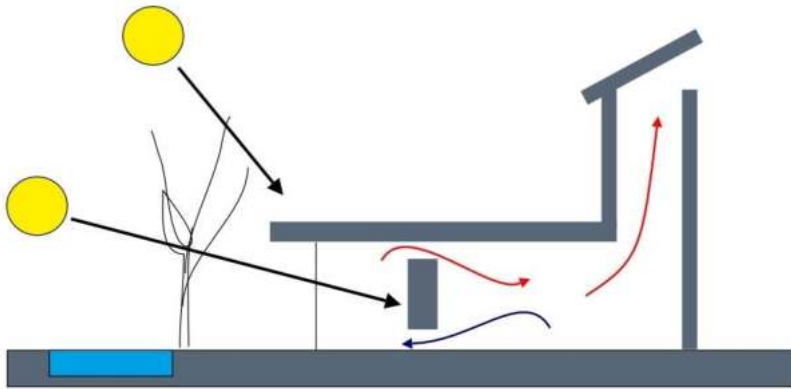
Passive design strategies often rely on durable materials and simple systems that require minimal maintenance, which can increase the building's longevity and reduce the need for frequent repairs or replacements.

Affordability

By reducing the reliance on mechanical systems, passive design strategies can lower the initial cost of construction and reduce ongoing operating costs, making sustainable buildings more accessible and affordable for a broader range of people.

Sustainability

Passive design strategies align with the principles of sustainability by reducing the use of non-renewable resources and minimizing the environmental impact of the building.



LONG OVERHANGS TO PROTECT THE INTERIOR FROM DIRECT SUNLIGHT AND STACK VENTILATION TO ALLOW FREE FLOW OF AIR AND KEEP THE INTERIOR COOL.

Promoting Affordability and Efficiency through Passive Design



Design of an Affordable Three Bedroom Single Family Home

The competition seeks to assess the knowledge of students and recent graduates who have completed the DfGE (Design for Greater Efficiencies) course. Participants are to design an affordable three-bedroom single family home using the EDGE app to support the design decisions and show the savings being made. The budget is 30,000USD or less for a building of 150 square meters.

The home is to be located in a suburb of Accra, such as Oyarifa or Kwabenya, on a plot size of 70x100 feet

Participants shall be expected to use passive architectural and engineering strategies to create a pleasing yet affordable single-family home for a family of five, including easy to maintain and indigenous landscape interventions.

Participants shall compete as individuals however each participant is allowed to consult architects or engineers to advise and support their submission who must be acknowledged in the submission as mentors.

Students who have not taken the DfGE course can still register and take the course during the competition period and present their certificates with their submission. The competition period is from 1st May to 26th August 2024.

Submission deadline is 26th August 2024

Eligibility Criteria

1. Students doing built environment and construction related courses in the various local tertiary institutions who have taken the DfGE course or can show proof that they have registered to take it.
2. Recent graduates 3 years out of school who have taken the **DFGE** course or can show proof that they have registered for the DfGE are able to submit their course certificates with the final submission.
3. Ghanaian students doing built environment and construction related courses in tertiary institutions abroad who have taken the **DfGE** course or show proof that they have registered with the course and are able to submit their course certificates with the final submission.
4. Students must participate as individuals however each participant is allowed to consult architects or engineers to advise and support their submission and may acknowledge at least one.

Note:

The **DfGE** course is a 16-hour course which participants can complete within 2-3 weeks during the competition period completion certificates must be submitted to info@yechampropertyconsult.com by **26th August 2024** to maintain eligibility.

Submission Guidelines

1. Downloaded EDGE assessment form (A4).
2. A maximum of four (4) A2 sized drawings including conceptual, floor plans, and at least one section and two elevations to a suitable scale. An EDGE/ DfGE sheet Rendered 3D drawings. Submission must be clearly annotated.
3. A short design report (maximum of 4 pages) indicating design concept, estimated contract sum, estimated construction period, which passive strategies have been utilized and reasons why the strategies are effective.
4. Title blocks must be anonymous. Participants will be given a special code to label files in their soft copy which will not be shared with judges.
5. A soft copy of all the above. The soft copy must be single PDF under 8MB with a cover sheet and a register of submission materials listed in the order they are arranged.

Note:

A **soft copy** of the entry/entries must be submitted through email with the subject 2024 IFC EDGE competition and sent to info@yechampropertyconsult.com by **5pm, 26th August 2024**.



Promoting Affordability and Efficiency through Passive Design

Prizes

1st Place:

- All expenses paid trip to South Africa to attend Green Building Council South Africa (GBCSA) Green Building Convention including registration and Lodging
- Free EDGE Expert Training
- Write EDGE exam for free
- Publication of name and submission in the media
- Certificate and Plaque

2nd & 3rd Place:

- All expenses paid trip to South Africa to attend Green Building Council South Africa (GBCSA) Green Building Convention including registration and Lodging
- Free EDGE expert training
- Publication of name and submission in the media
- Certificate

All Participants:

- Participation Certificate



How to Register

Registration must be carried out according to the online process describe as follows.

1. Click link below to google document and fill in all required fields with complete and truthful information;
<https://forms.gle/CavjevYqnbaoMuTU8> You will receive an e-mail with a special code that you will used to label your soft copy files.
2. Reply to the email to confirm receipt and confirm you registration

Request for information

Participants may submit Requests for Information (RFI) to obtain clarifications or resolve any ambiguities. RFI's and answers will be distributed to all registered participants as they are received.

Participants must specify whether the RFI is for the student's competition or professional awards in the subject of the email.

RFIs must be submitted via email to info@yechampropertyconsult.com Deadline for the submission of RFI's is **10th August 2024**

Timelines

Launch: 30th April 2024

Roadshow Duration: 18th May to 29th June 2024

Request for Information Deadline: 5th August 2024

Registration Deadline: 10th August 2024

Deadline for Submission of DfGE Certificate: 26th August 2024

Submission Deadline: 26th August 2024

Judging Period: 28th August to 2nd September 2024

Awards Cocktail: 28th September 2024

Promoting Affordability and Efficiency through Passive Design

JUDGES



Arc. Samuel
Mbrayeh Quartey
Architect & Head Judge



Arc. Daniel
Kwadjo Teye
Architect



Ing. Yaa Obenewaa
Okudzeto
Electrical Engineer



Arc. Samuel Adabie
Architect



Arc. Kobina
Ebo Apeatse
Architect & EDGE Expert



Elizabeth
Wangeci Chege
Energy Efficiency &
Cooling Specialist



Promoting Affordability and Efficiency through Passive Design

1. GENERAL RULES

- 1.1. Participants must adhere to the, registration and submission deadlines and general rules;
- 1.2. Participants must follow all the instructions regarding the submission requirements
- 1.3. Technical staff appointed by the Organizer and the Partners of the competition will evaluate the eligibility of the projects: this is not binding for the purpose of the jury's work;
- 1.4. The jury's verdict is incontestable;
- 1.5. It is forbidden for participants to contact jurors for matters related to the competition;
- 1.6. Participants must not disclose the content of their projects before the winners are officially announced;
- 1.7. Participants with business or blood-relations with jurors of the competition cannot take part in the competition.
- 1.8. Violation of the participation rules by the participant will lead to them being disqualified from the competition.
- 1.9. The authorship of each project is attributed to each participant;
- 1.10. By registering and participating in the competition, participants fully accept all the rules, terms and conditions of the competition. Any exception will be excluded;
- 1.11. The Organizer has the right to change dates or other details in order to improve or fix aspects of the competition. In this case, the contestants will be given reasonable notice via email and on the Organizer's media channels;
- 1.12. The Organizer is not responsible for web malfunctioning, technical difficulties or failure to receive or upload materials; it is highly recommended to complete the registration, and submission procedures in advance of the given deadlines; participants are invited to notify the Organizer via e-mail in case of technical problems;
- 1.13. All the material that is available and useful for the competition's purposes shall be made available to participants via email.

2. INELIGIBILITY

- 2.1. Any participant can be excluded from the competition. Participants can be disqualified when the submitted material is not written in English;
- 2.2. The submission must not show the names or references to the designers.
- 2.3. Submissions that are incomplete or inconsistent to the criteria included in the "submission guidelines";
- 2.4. Late submissions
- 2.5. Participants who try to contact a juror for matters relating to the competition will be automatically disqualified;
- 2.6. Participants who plagiarize other designer's works will be excluded.

3. NOTES ON SUBMISSIONS

- 3.1. By taking part in this Competition and accepting the Rules, Participants recognize, from now on, to the Organizer and to the Partner the non-exclusive right to: i) publish the Materials or part of the Materials in any way or form and with any means of communication and/or support, including online platforms, social media channels and printed publications; ii) distribute the Materials or part of the Materials in any way or form and with any means of communication and/or support, including online platforms, social media channels and printed publications.
- 3.2. All the projects that will win a prize and any (available) intellectual property right and/or industrial right on the projects are definitively acquired by the Organizer and by the Partner. The organizer acquires the exclusive right of economic exploitation of the project and the permanent, unlimited, irrevocable, exclusive, internationally-acknowledged right to use, realize, adapt, modify, publish in every media, display, reproduce and distribute the project also for marketing and advertising purposes, review the editorial, create works based on the project or giving the project or parts of it to third parties in any means, way or through any technology also including the freedom of panorama without any limitation in time or place.
- 3.3. By taking part in this Competition and accepting the Rules, the Participants awarded with a prize or with a mention (projects receiving a honorable/finalist mention) undertake, from now on, to provide, if needed, any further digital materials (i.e. 3D models) regarding the project to help the Organizer and the Partner better report the results of the competition.
- 3.4. The Materials must be new and original and the outcome of the intellectual activity of Participants: works and/or materials that do not comply with these features must not be submitted. Therefore, Participants agree to indemnify and hold the Organizer harmless from any cost or damage connected with the infringement of any third-party intellectual property right. By taking part in this Competition and accepting the Rules, Participants declare to be authors of the uploaded Materials.
- 3.5. The Participants of the Competition guarantees that the submitted Materials do not infringe, in any way, the industrial and intellectual property right of third parties and commit to hold the Organizer and the Partner harmless from any connected request that might arise from third parties.

4. PRIVACY AND TREATMENT OF PERSONAL DATA

- 4.1. The processing of Participants' personal will be carried out by the Organizer for the sole purpose of the participation in the Competition and distribution of the Prizes.
- 4.2. Participants will be held accountable for the data - including personal data - they provide. The Organizer does not assume any responsibility for wrong data provided. In any case, according to privacy policies, the Organizer has the right to verify participants' personal data by requesting a copy of an identity document that reports the same data entered for the registration;
- 4.3. The Organizer will share the personal data provided by Participants to the Partner.
- 4.4. The Organizer is not responsible for participants' false data provision.

5. NOTES REGARDING PRIZES ADJUDICATION

- 5.1. The publication of the results according to the calendar of the competition has to be considered a provisional publication. It shall be bound by the verification of the requisites defined by the Competition;
- 5.2. Once the results will be published, the Organizer reserves the right to collect and verify a copy of the identity cards of the Winners.
- 5.3. Prizes will be awarded after verifying the identity of the Winners and after they sign a self-declaration certifying that they fully accept the terms of the Competition and the declarations of the transfer of rights regarding the Materials and the indemnification required by the Organizer for the use of the Materials.

6. COMPETENT COURT AND APPLICABLE LAW

- Ghanaian law regulates the rules of this competitions. Any controversy that might arise shall be exclusively resolved through adjudication by the Ghana Institute of Architects

