

## BUILDING MATERIALS AND BUILDING METHODS COMPETITION.

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### BUILDING MATERIALS AND BUILDING METHODS

#### Introduction

Building materials have always played an important role in the construction industry. They were all naturally occurring in the ancient times, for example, stone, wood, straws, clay, lime, and mud. As the building techniques were improving, simple composite materials, combined by means of mixing and/or heat treatment, were developed. A typical example is concrete, which was developed by the Roman Empire. Due to advances in science and technology at the beginning of the 20th century, materials with better performance and durability were introduced, for example, reinforced concrete, steel, plastics, and metal. Building materials remain the most significant input in project development and play a very important role in the delivery of construction projects. A wide variety of modern methods of construction techniques and products have been developed that have completely changed the behavior of construction industry from what it was before. This change is amazing and is in the way to bring more and more developments in this sector.

Building material is any material which is used for construction purposes. Many naturally occurring substances, such as clay, rocks, sand, and wood, even twigs and leaves, have been used to construct buildings. Apart from naturally occurring materials, many man-made products are in use, some more and some less synthetic. The manufacturing of building materials is an established industry in many countries and the use of these materials is typically segmented into specific specialty trades, such as carpentry, insulation, plumbing, and roofing work. They provide the make-up of habitats and structures including homes.

Building construction is the process of adding structures to areas of land, also known as real estate. Construction methods are the means used to transform resources into constructed products. These resources include land, building experts, materials, machines and labour. The selection of construction methods is a complex decision process which consider multiple attributes such as cost, time, quality and physical characteristics of the land to build on.

Modern building methods embrace a range of offsite manufacturing and onsite techniques that provide alternatives to traditional house building. The methods range from whole homes being constructed from factory-built volumetric modules, through to the use of innovative techniques for laying concrete blockwork onsite. In time new approaches have been linked with significant benefits: speed of delivery, improved quality, reduced labour and costs. In recent years more developers are engaging in project trials and going on to make increasing use of the variety of systems available. This competition intends to make those interested in building to look at both better building materials and methods.

#### Purpose of the Competition

Purpose study of construction materials provides essential information that will help improve efficiency, productivity and economy in construction. The purpose of study of Construction Materials is to know the sources of construction materials. Identify and know the properties of various construction materials. Know how the materials are tested as per various standards. Know how to choose proper material from the commercially available varieties for a particular purpose of construction. Know common defects in the materials. Know various precautions to be taken while building for better durability. It is therefore vital reading for all professionals.

The purpose of Building materials and building methods contest is four fold. The first is to invigorate the extensive and well trained and active building community. Kenya to day has a very large number of well educated and experienced professionals. These professionals are a very large pool of great talent. The first purpose is that the contest aims to put these people to work. The second purpose is to direct this talent to an area of great potential in social and economic well being. The contest will challenge building experts to look at crop value addition, study it and understand it. They will study social trends, business practices, and the economy to see how building materials and methods can improve people's social and economic wellbeing. By directing their attention on building materials and methods they will eventually put themselves at a very vantage point in a technology that will be necessary in the future to maintain rural economies. Expertise in building materials and methods will be a boom for the individuals and for the country. The third purpose of the contest is to arouse awareness to various stakeholders like regulatory agencies, business people and the public at large on the benefits of building materials and methods. Increased awareness will lead in the creation of an appropriate environment for the adoption of the technology. It will also lead to early widespread adoption of the technology to the benefit of businesses and society at large.

## Competition Description

### Building Materials and Building Methods Competition

Building materials and building methods competition is two competitions in one. It is a competition on building materials and a competition on building methods as well. A competitor can participate in one and not the other and they can also chose to compete on both at the same time as both of them are related.

#### Building Materials competition

1. Select a material.
  - i. Select a material.
  - ii. Pick a material used in the history of building construction and demonstrate how it can be used locally to build cheaper housing in a new or old method. The quality of cheap housing and the comparable cost with housing constructed using conventional methods will determine the score.
  - iii. A new material out of processing a selected material. If a new material is created the score of the new material will be determined based on cost of new material and ease of use, and the strength of the new material.

The winning competitor will be based on

- A. The skills necessary to process the starting material to the new material. The lower the skills necessary to process the old material to a new material scores 10%
- B. The qualities of the processed product based on strength of processed material, ease of use of processed product and longevity of expected life of building using processed material. Qualities of new materials will score 50% of total marks as follows
  - i. Strength of processed product 25%.
  - ii. Longevity of building using new product 25%

#### Building methods competition

Use new methods in building construction.

Show how to build using

1. New method
2. New method using new material

New method

Where a new method of building is demonstrated using old known materials the new method will be scored on the basis of both the skills necessary to use the new method and the cost savings that arise out of using the new method. The lower the skill the more the marks. The greater the savings the more the marks.

New method using new material

Where a new method of building is demonstrated using a new material the material and the method will be scored separately. The jury will satisfy themselves that the method is really new. The jury will also consider cases where old isolated methods presented can be promoted and widely used. The method will be scored as in section one.

The material will be scored on the basis of both the investment necessary to process original material into new material for example how much it will cost to create a new cement out of for example sand and another material (if possible). The lower the cost the higher the score.

The material will also be scored on ease of use for example how easy will it be to use the new cement. The lower the cost the higher the score. This cost will consider the machinery necessary and the level of skills necessary to use the new material.

Three Prizes will be offered.

There will be three prizes. There will be prizes for new materials only and those submitting materials and methods together will be ranked on materials against those submitting materials only. The same ranking will be applied on methods. There will be also a prize for those submitting both materials and methods. The scores in materials and methods will be considered to determine winners in joint material and methods scores.

## BUILDING MATERIALS AND BUILDING METHODS COMPETITION

### TERMS AND CONDITIONS

#### Overview

1. The Competition is conducted by Inovatology Partners Ltd, the promoter. The promoter's registered office is P.O. Box 57225, 00200, City Square, Nairobi. Any rights of the Promoter are extended to its affiliates.
2. The Competition seeks to identify and reward an innovative and outstanding contribution to the building industry by eligible competitors.
3. Registration by competitors and institutions for the competition is free of charge and must be in accordance with the competition terms. By registering, competitors and institutions agree to be bound by the competition terms. Any registration or entry that is not in accordance with the competition terms will not be valid and will not be considered.
4. In this agreement, unless the context otherwise requires, 'Intellectual Property Rights' means all intellectual property rights, registered or unregistered, including the following rights:
  - a) patents, copyright, registered designs, trademarks, know-how, inventions and the right to have confidential information kept confidential; and
  - b) any application or right to apply for registration of any of the rights referred to in paragraph

### COMPETITOR OBLIGATIONS

5. To participate in the competition, competitors must register and submit an entry for the competition. Entries must be in accordance with the competition terms and conditions.

6. Entries must not include inappropriate language or material, gratuitous violence, sexual references or statements or material that, in the promoter's opinion, promote hatred towards an individual, race, or community or which are offensive, illegal, inflammatory, obscene, unsuitable for minors, abusive, indecent, threatening, or otherwise unlawful.

7. By submitting an entry, each competitor warrants that:

a) all details provided with the competition's entry are true and accurate;

b) the competition's entry, and the innovation submitted as part of that entry, is wholly comprised of original work, created and owned by the competitor, and has not previously been communicated to the public;

c) the inspiration includes all ideas and materials that inspired the innovation;

d) the competitor's entry does not contain commercial words, art, photographs or images;

e) the competitor's entry does not contain any identifiable existing product or existing product logo;

f) the competitor has all necessary rights and licenses to grant the rights set out in these competition terms;

g) the exercise of the rights granted to the promoter in these competition terms will not infringe the rights of any third parties; and

h) the competitor will indemnify the promoter against any loss or damage resulting from any breach of these warranties.

8. In the event of any non-compliance with any clause, the promoter may, in its discretion, determine that the competitor's entry is not valid and is excluded from the competition. The promoter reserves its rights to seek damages and enforce the indemnity provided in those clauses.

## EVALUATION

The winning competition will be chosen based on the following scores

1. Originality and creativity of idea 20%
2. Clarity in describing how blockchain can be used in the stated use case 5%
3. Potential to develop the solution offered to a practical service to society 25%
4. The impact of the proposed use of building materials and methods in the case stated when implemented. The impact will be based on social and economic parameters. 25%
5. The description of the technical details to implement the stated solution which will show the competitor's understanding of building materials and methods and how to deploy it in the stated use case. 25%

## COMPETITION FINALISTS, FIRST PRIZE WINNER,

10. Finalists will be determined by a competition judging panel consisting of representatives of the promoter and experts in building materials and methods and commerce.

11. The finalists must execute a copy of these competition terms to be eligible to receive the prizes.

13. The finalists will be invited to attend the final 'Judging Event' in person, being the final event where they will present their entry to the judges held at a location to be advised by the promoter. Travel and accommodation expenses will be the sole responsibility of each of the finalists.

14. During judging:

a) the judging panel shall determine the winners by applying the criteria in evaluation of the competition terms summary and selecting the entries which, in the opinion of the panel, best meet those criteria;

b) the judging panel may choose more than three (3) finalists or more than three (3) prize winners at their sole discretion

d) If a judging panel is unable to make a unanimous decision, they will decide winners by a simple majority vote of the members of the panel.

17. The prize values and description are correct at time of printing, but no responsibility is accepted for any variation in the value or the nature of any prize. Prizes supplied by a third party are subject to availability. In the event that any prize is unavailable for whatever reason, the promoter reserves the right to substitute any prize for another.

18. If a winner has not been in contact with the promoter to claim its prize within 30 of days of a notification telephone call or email, the promoter reserves the right to offer the prize to the next eligible entrant selected by the relevant judging panel. The promoter does not accept any responsibility if a winner is not able (or otherwise fails) to take up the prize. In that event, the new winner will be selected in accordance with the competition terms.

19. Prizes are not transferable or exchangeable, and non-monetary components cannot be taken as a monetary payment.

20. Upon the three winners:

a) the promoter will have 60 days to negotiate with the winners on the purchase of the Intellectual Property Rights in the three prizes;

b) If the promoter and any of the winners are unable to reach agreement on the purchase of the intellectual property rights within the relevant periods specified above, the winners will maintain their ownership of their intellectual property rights in their innovations.

21. During the negotiation periods set out in clause 20, the winners must not consider or negotiate any offers from third parties to purchase the intellectual property in the innovation.

## LIMITATION OF LIABILITY

24. To the full extent permitted by law, the promoter, its affiliates, representatives, agents or distributors will not in any circumstances be responsible or liable to compensate competitors or institutions, or accept any liability for:

a) any incorrect or inaccurate information;

b) any technical error that may occur in the course of the administration of this competition;

c) any error, omission, interruption, deletion, defect, loss or delay of any entry or otherwise in operation or transmission, communications line failure, theft or destruction or unauthorized access to or alteration of a competitor's entry or the running of the competition; or

d) any injury, damages, expenses, cost, liability or loss whatsoever (whether direct, indirect or consequential) to competitors or institutions or their respective property as a result of any person entering into the competition or accepting or using any prize, including without limitation to non-receipt or damage to any prize.

25. These competition terms do not exclude any rights that cannot be excluded (for example, any such rights under applicable consumer protection legislation), to the extent permitted by law.

## DATA PROTECTION AND PRIVACY

26. The promoter collects, holds and processes personal information about competitors and institutions to include competitors and institutions in the competition, administer the competition, to award prizes (where applicable). If the personal information requested is not provided, a competitor or institution will be ineligible to participate.

27. Competitors agree that the promoter may, in the event the competitor becomes a finalist or winner, publish or cause to be published their personal information, name, photograph or likeness and locality in any media globally, without compensation. Winners must participate in publicity calls and marketing as requested by the promoter during the competition and up to 18 months after selection of the winners. Competitors and institutions accept personal information provided to the promoter in accordance with these competition terms will be held and used according to the promoter's privacy policy.

28. Competitors may submit only one entry.

29. The promoter reserves the right to amend these terms at its sole discretion, by posting updated terms at [inovatology.com](http://inovatology.com). By continuing to participate in the competition, or accepting any prize, competitors and institutions are deemed to accept the amended terms.

30. Each competitor must keep their entry, and their innovation, confidential, and not disclose any information about their entry or their Innovation to any third party, except as required by law or permitted by the promoter or these competition terms. This confidentiality obligation continues until the date that the winners are announced by the promoter, and does not apply to any information in the public domain (other than if due to a breach of these competition terms).

31. The promoter may at its own discretion refuse competitors and institutions entry to the competition or to award any prize if competitors or institutions fail to comply with these terms, the law, or if, in the promoter's opinion, a competitor or institution's involvement with the competition may cause adverse publicity to the promoter.

32. Competitors retain ownership of any Intellectual Property Rights in their entries and innovations subject to these terms. Competitors will grant the promoter and its affiliated companies or nominees a worldwide, perpetual, irrevocable, sub-licensable, royalty free license to use the Intellectual Property Rights in competitors entries (and any component of entries) for the purposes of the competition and any promotional and marketing purposes without notice and without any fee being paid, including (without limitation) to use, display, publish, transmit, copy, edit, alter, store, communicate to the public, re-format and sub-license entries.

33. Competitors and institutions acknowledge that the promoter and its affiliated companies may exercise the global, non-exclusive right to communicate competitors entries in whole or in part to the public on any media platform.

34. Competitors and institutions acknowledge that the promoter and its affiliated companies may allow other persons to view, reproduce, download and otherwise deal in the copyright works attached to and embodied in entries.

35. Upon entry, competitors and institutions waive their Moral Rights (described below) and any other similar rights in the entries and innovations and consent to any act or omission that would otherwise infringe moral or similar rights. In these terms, Moral Rights includes:

- a) a right of attribution of authorship;
- b) a right not to have authorship falsely attributed;
- c) a right of integrity of authorship; and

d) any right of a similar nature which is conferred by statute and which exists or comes to exist anywhere in the world.

36. If for any reason the conduct or operation of the competition is not capable of proceeding as planned, is interfered with, or disrupted in any way, the promoter reserves the right to cancel, terminate, suspend, modify or recommence the competition. The promoter may amend these terms at its discretion. The latest version of the terms will be available at [www.inovatology.com](http://www.inovatology.com).

37. All decisions made by the promoter regarding the competition are final and the promoter will not enter into any correspondence with competitors and institutions on any decision.

38. If any provision of these terms is held to be illegal, invalid, void or otherwise unenforceable, it will be severed from the remaining provisions, which will continue in full force and effect.

39 These Terms shall be governed by the laws of Kenya and Competitors and Institutions submit to the non-exclusive jurisdiction of the courts of Kenya.

## Prizes

### The First Winners:

The winners will be awarded prizes to be advised later.

In the case where a winner is sponsored by an institution, in addition to the winner's individual prize, the winner's institution will also be awarded a prize to be decided later

### General terms for the winners:

The winners will also be presented with commercial opportunities on visibility on a global stage via Inovatology Partners Ltd Company channels.

## Intellectual Property

The participants are free to publish their submission and any related ideas in scientific journals, conferences or on online platforms. Those publications shall be made only after the submission period concludes. The participants will provide to the promoter if reasonably possible a copy of any publication (e.g. journal, conference etc.) that directly relates to the ideas generated in the competition. In addition, and on a non-exclusive basis, the participants agree to provide the promoter and its affiliates, legal representatives, assigns, agents and licensees a non-exclusive, perpetual, world-wide, royalty free license to all rights, title and interest in the submission, including all intellectual property rights in, and embodied by, the submission (including, without limitation, all patent rights, design rights, trademarks and copyright), for the duration of protection afforded by the relevant intellectual property rights, including the right of representation and reproduction and the right of performance, with respect to the competition, as well as in all materials arising out of the participants' participation in the competition in any media and format throughout the world, without further compensation. Such license shall be transferable and shall include the right to sub-license. It is the sole responsibility of the participants to ensure that they are entitled to license all rights, title and interest in the submission, including all intellectual property rights in, and embodied by, the submission. At the request of the promoter, the participants and/or their academic mentors shall provide written confirmation of the ownership of any rights, title and interest in the submission, including all intellectual property rights in, and embodied by, the submission. The participants agree to allow the promoter to use, represent, reproduce, etc. their name, photographing and recording of their images and words on any kind of medium and format for any kind of internal and external communications by the promoter throughout the world and without any additional remuneration. The Participants also agree that this authorization remains in force unless they terminate it by notifying the promoter by email to [inovate@inovatology.com](mailto:inovate@inovatology.com) their withdrawal of their consent. Prior to any use of the promoter's name, logo, images or any other similar promoter material in any publication, permission must have been granted in writing. In such a case the promoter undertakes to cooperate to allow the timely submission, examination, publication of any dissertation or thesis for a degree, which includes such material. If such a request is made and if within two months no response has been provided, such permission will be considered as having been withheld. The Participants shall unless expressly authorized in writing by the relevant party, not disclose any confidential information or documentation to third parties and shall only use such confidential information or documentation for purposes of this competition. Upon termination of this competition, the obligations herein relating to confidentiality shall continue in full force and effect for a period of one year.

## Correspondence

All correspondence must be in English. A FAQ (Frequently Asked Questions) on the competition is provided here, which will aim to cover many of the questions that Participants may have. Any additional questions or comments concerning the Competition must be sent via email to: [inovate@inovatology.com](mailto:inovate@inovatology.com). However, no guarantee of an answer or an answer time may be given. Furthermore, Inovatology reserves the right not to answer the question if it is judged that an answer would give an unfair advantage to certain participants. Participants who have received unofficial or content sensitive information relating to the competition with the intent of allowing an unfair competitive advantage, from employees, interns and any party involved with the competition must immediately inform Inovatology by emailing [inovate@inovatology.com](mailto:inovate@inovatology.com).

## Privacy Policy

The Promoter collects your personal data for the purpose of organizing the management of the competition in the building materials and methods. You have the right to access, correct, delete and object to the use of your personal data. You also have the right to give your prior consent for marketing and to object to it under the applicable regulations. You can ask for restriction of the use of your data. Please use this email address [inovate@inovatology.com](mailto:inovate@inovatology.com) to make your request or send it to the following address: Inovatology Partners Ltd, P.O. Box 57225, 00200, City Square, Nairobi. The privacy policy detailing in full how we handle personal data in line with current regulations can be found here [inovatology.com/data](http://inovatology.com/data)

## Claims and Disputes

Any individual or team suspected of plagiarism will be investigated, and, if deemed appropriate by the promoter, disqualified from the competition. Claims/disputes should be sent within one calendar month of the end of the competition by mail to Inovatology Partners Ltd, P.O. Box 57225, 00200, City Square, Nairobi, and by email to [inovate@inovatology.com](mailto:inovate@inovatology.com); please include 'Dispute' in the subject header. Rules are governed by Kenyan law. Disputes are subject to jurisdiction of the Kenyan Courts..