



F3M PIEZO TILES

BLACK KOMODO INVESTMENTS FZE



BACKGROUND



Piezoelectric material converts pressure into electricity through a conversion of energy from stored potential energy to chemical energy between the bonds of the material, into electrical energy



If converted and stored correctly it can be applied for various use cases such as all modes of land transport to harvest degraded energy from transportation, including walking, cycling, driving and the like.



This can be a valuable and useful source of secondary energy, not as a replacement rather a topping off traditional and transitional energy sources.



BACKGROUND

- 2 parts to piezoelectric tile production and application:
 - **Tile design** – applicability and scalability
 - **Circuit design** – energy harvesting process, extraction + storage
- We have innovated tile shapes, designs and circuit designs to make them efficient at harvesting and storing energy, modular, customizable and applicable to most environments and surfaces.





IMPACT



- Piezoelectricity and piezoelectric tiles specifically aren't just harvesting degraded energy from everyday activities, they also aid in being **ESG** compliant as well as providing electricity in **rural areas** in the world where electricity production hasn't touched and is difficult to reach.
- They are not meant to replace energy sources, rather support the transition to a **greener** and more **sustainable** future!



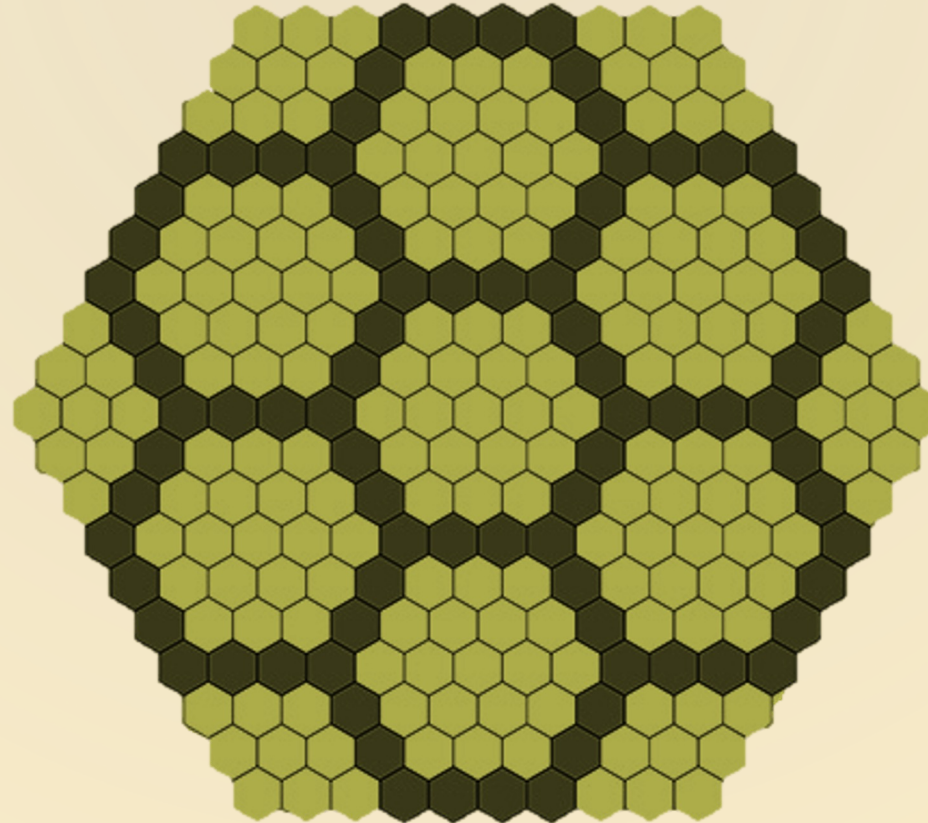
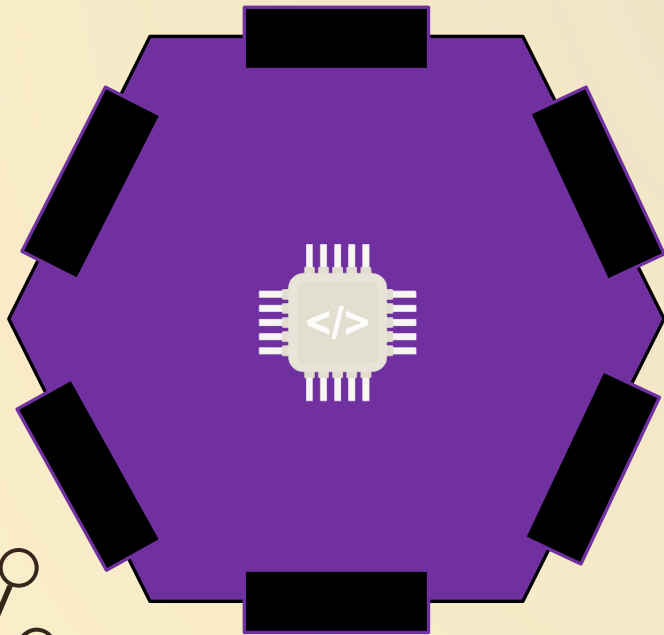
PRODUCT – **FRACTAL MOSAIC** **MULTILAYERED MODULAR** **PIEZO TILES**

- We have designed a piezoelectric tile to take advantage of this process with proprietary designs to the tile as well as the circuit design and harvesting process in order to improve the efficiency of energy harvesting and storage from the chemical process undertaken from walking on the tiles.
- Our tile innovation: **Fractal Mosaic Multilayered approach to piezo tiles.**
- Our circuit design innovation: **Modular housing and efficient storage and harvesting circuit design.**
- The tiles come in 3 basic shapes, as well as a modular approach to customize the shapes to fit the environment in which they will be applied.
- Their energy harvesting process is modular as well, where each tile combines with other tiles to create a larger sheet of tiles which increase the power output of the whole circuit.



PRODUCT- HONEYCOMB MULTILAYER

TILE : BUZZ60



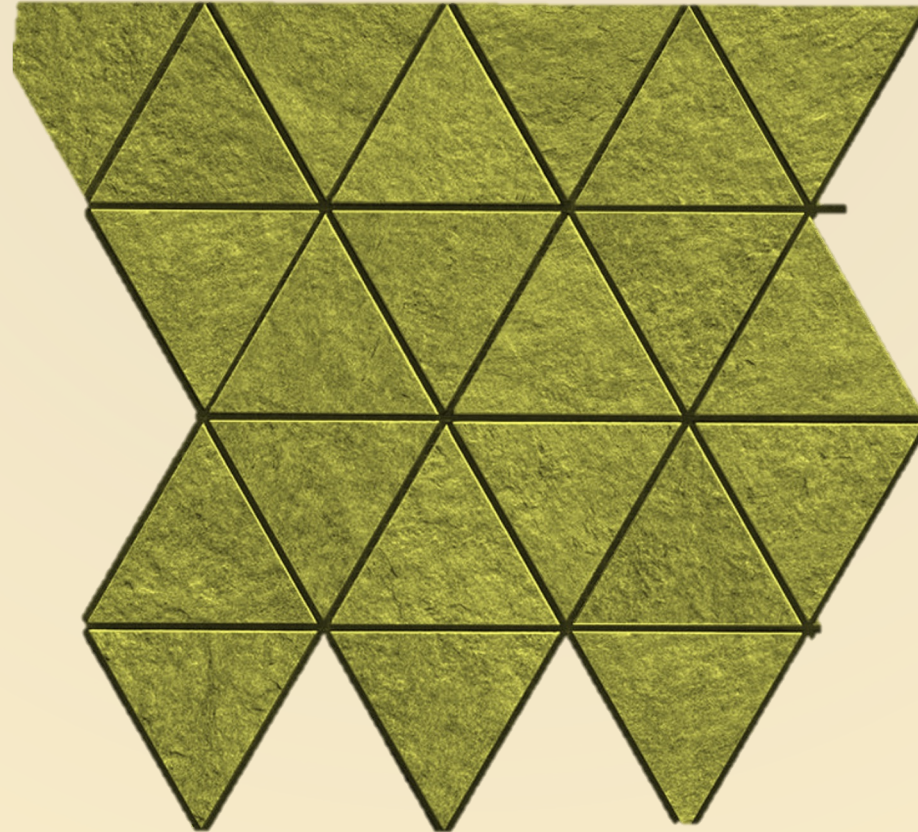
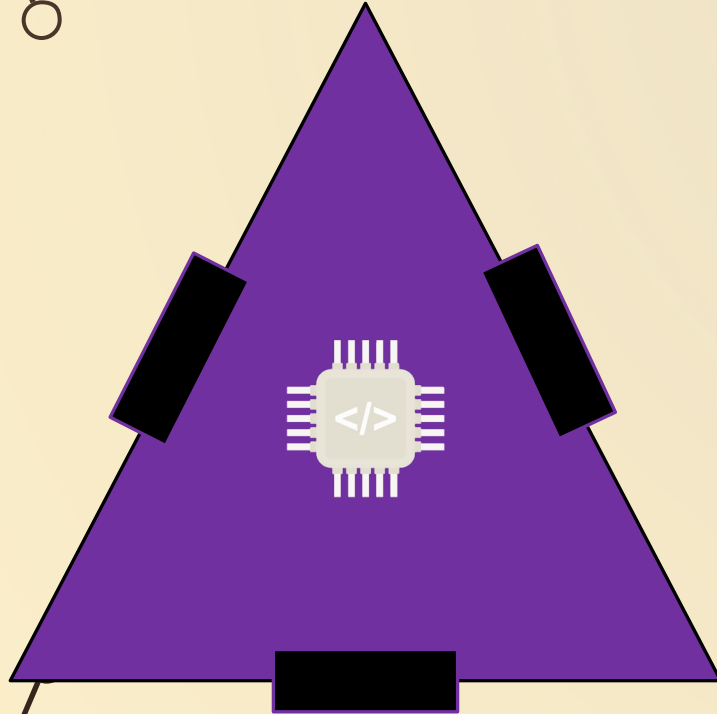
Our multilayered, mosaic style honeycomb piezo tile sheet.

Each sheet is designed to be fitted with customizable electrical connectors and a proprietary IOT system to record and compute power output, foot fall as well as basic wear and tear metrics on a dashboard in order to view and optimize placement of tiles.



PRODUCT- TRIANGULAR MULTILAYER

TILE : T30

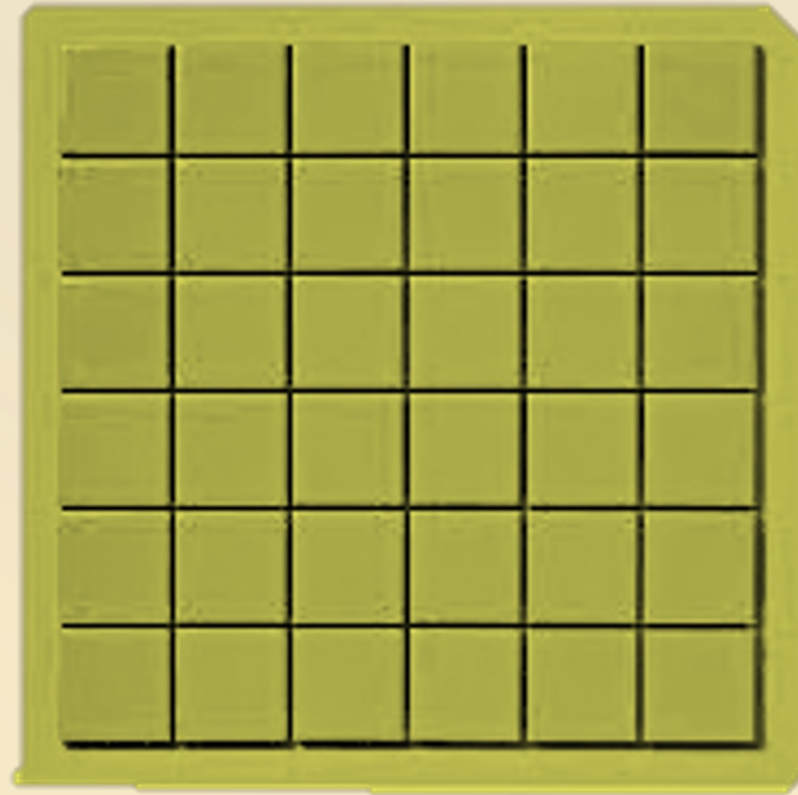
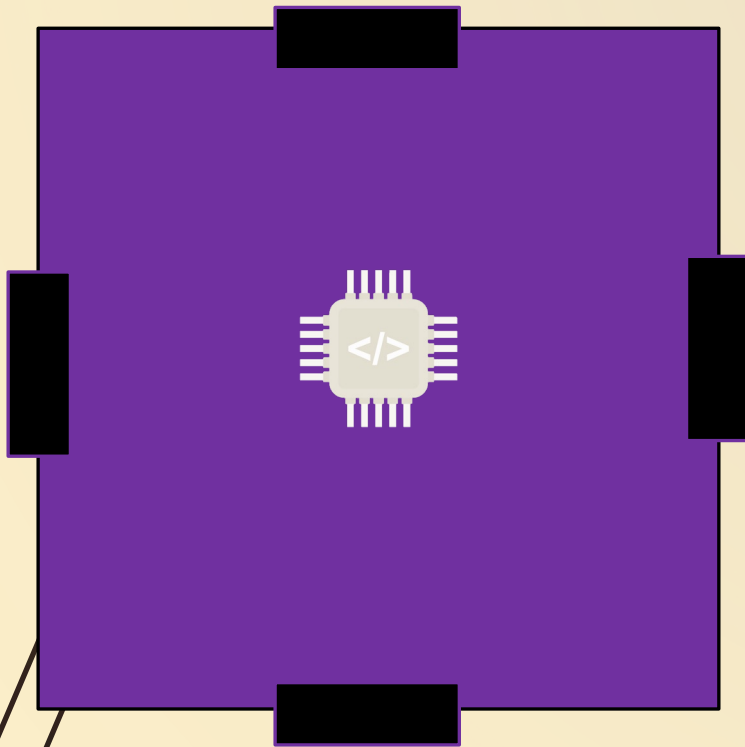


Our Multilayered, mosaic style triangular piezo tile sheet.

Each sheet is designed to be fitted with customizable electrical connectors and a proprietary IOT system to record and compute power output, foot fall as well as basic wear and tear metrics on a dashboard in order to view and optimize placement of tiles.



PRODUCT- SQUARE MULTILAYER TILE: BOX90



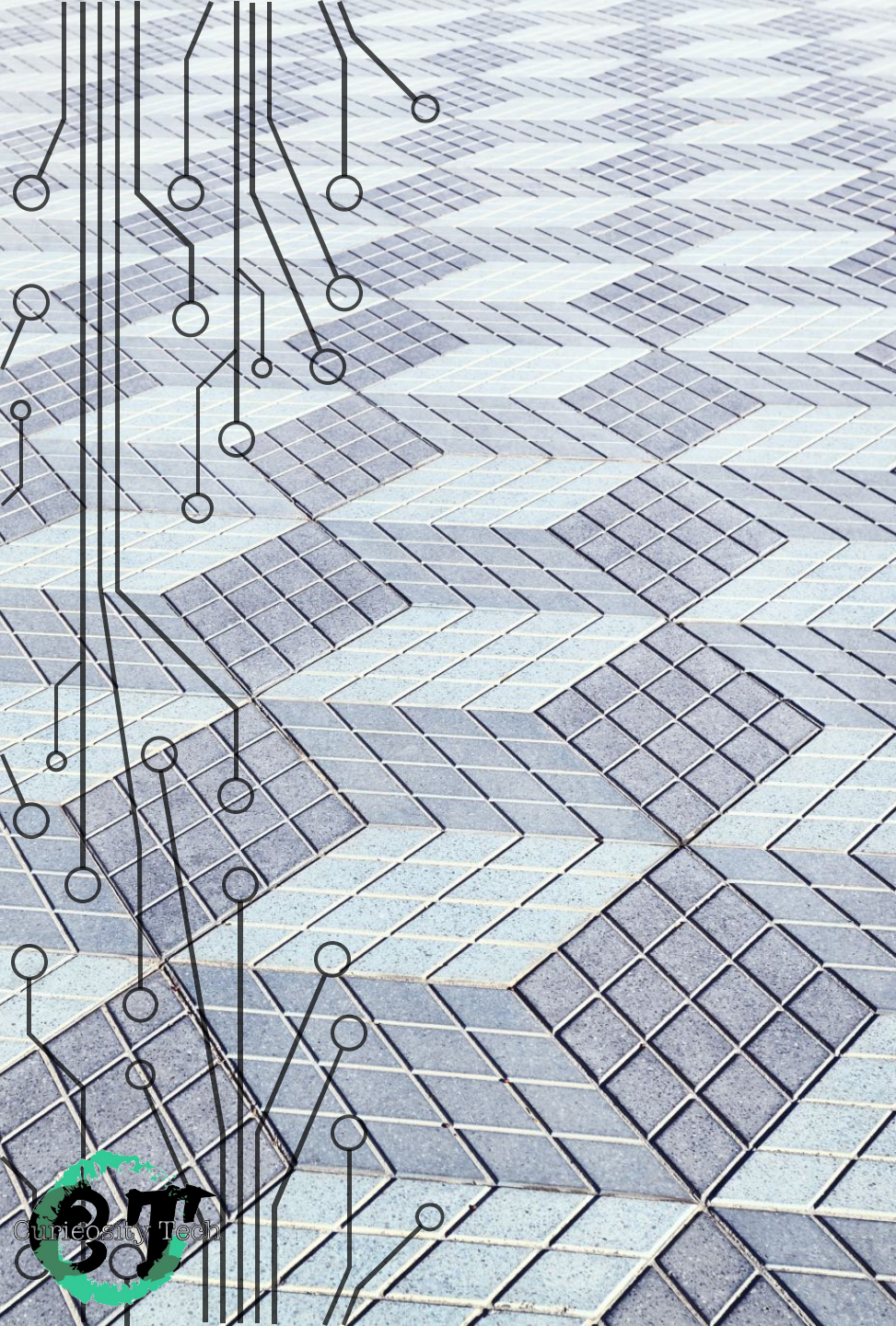
Our Multilayered, mosaic style square based piezo tile sheet.

Each sheet is designed to be fitted with customizable electrical connectors and a proprietary IOT system to record and compute power output, foot fall as well as basic wear and tear metrics on a dashboard in order to view and optimize placement of tiles.



APPLICATION

- We offer two types of applications for Curieosity's piezo tiles.
 - **In-ground:** Installation within the surface of the environment, so as to make it part of the environment.
 - **On-ground:** A mat-style application whereby the tiles form a mat and can be applied on top of the already created surface.





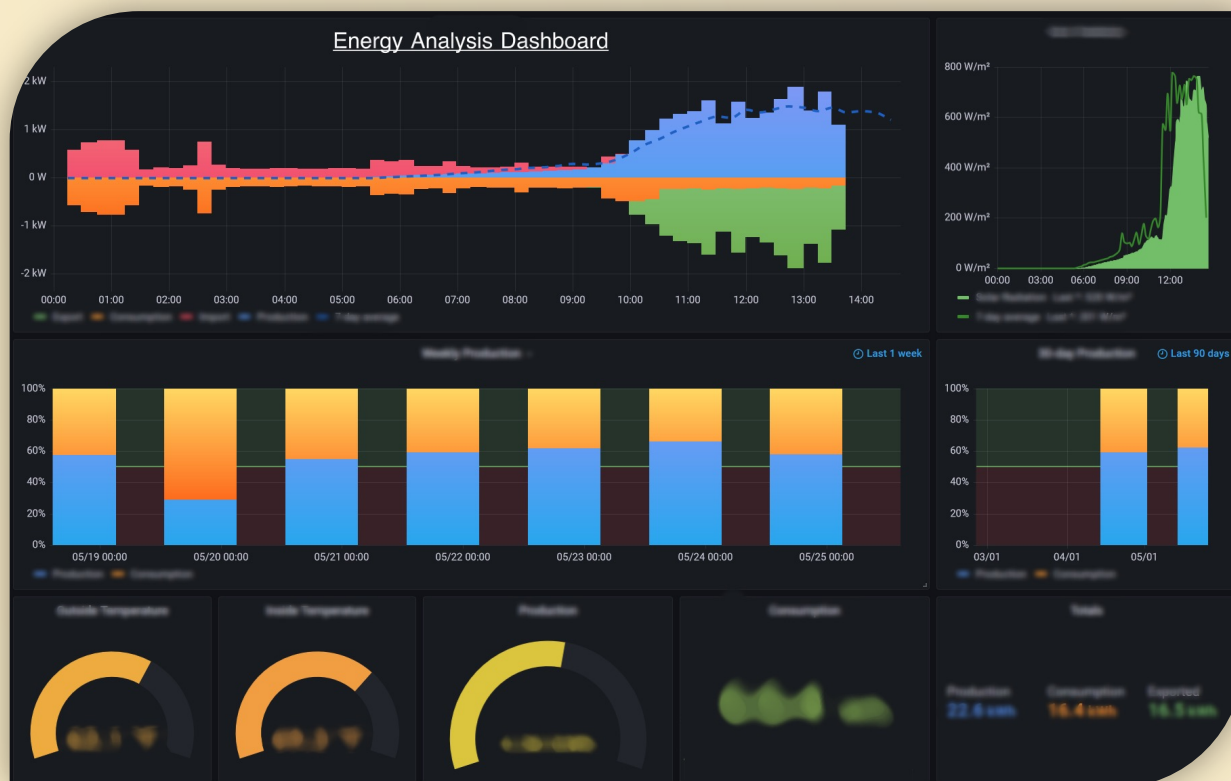
SOLUTIONS

- We offer two types of solutions:
 - **Architect Installation Solution:** This primarily uses the in-ground installation process and is usually for real estate development or development of new/refurbished properties or locations. This comes with our engineering team who will assist in the on-site installation process and connectivity. Catering primarily to real estate developers and property managers, corporates and individuals.
 - **Direct to Consumer:** This primarily uses the on-ground application, where they can purchase a mat to apply it relatively easily to the desired environment, catering to individuals, corporations and properties.





EAD - ENERGY ANALYSIS DASHBOARD



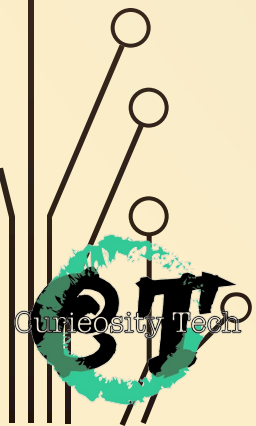
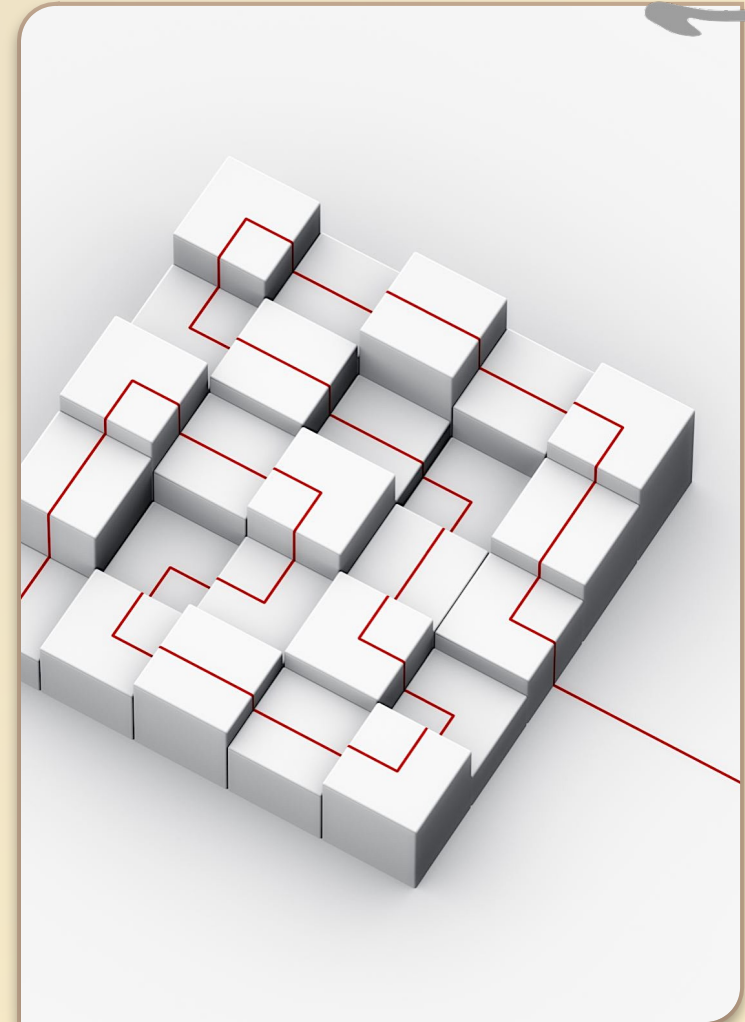
- The analysis dashboard will log, compute and report the following as the basic model:
 - Power output
 - Footfall
 - Frequency of footfall
 - Average pressure
 - Manage the wear and tear
- Customizable for your metrics and requirements





PROPRIETARY PATENTS

- Design patents (in process) on circuit, tile face and housing design as well as the modular design process.
- Utility patent pending (in process) on application of tile and the functionality of the circuit and tile and modularity of the tile sheet.
- All tile faces are modular for materials used on top as the surface, which can be custom fitted with any material required for the desired environment.
- Our innovation: **Stacked Modular Tile Face**





PHASES

Phase 1



R&D:
Completed by Q3
2025



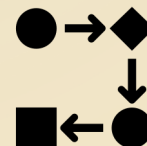
Phase 2



**Production and
Streamline:**
Begin Q4 2025



Phase 3



**Production At
Scale:**
Begin Q1 2026



Phase 4



Integration:
Q2 2026 and
beyond



TEAM – BOLT LABORATORIES (INDIA)

- Senior project team in India to lead the on-ground operations with a research team.
- Senior management and designers in the UAE to manage equipment and material procurement and circuit and tile design.
- Production and testing laboratory based in India fitted with lab grade equipment for measurement, stress testing, durability and power output testing and production of tiles.

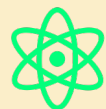




CO-LEAD INVESTIGATIVE SCIENTIST



Dean of Research at SRM University.



Doctorate in Quantum Mechanics/Machine Learning
Approach, Catalyst Theory and Carbon and Boron based
materials with over 100 publications worldwide.



Dr. Ranjit Thapa PhD

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CO-LEAD INVESTIGATIVE SCIENTIST



Associate professor of Physics in SRM University.



Doctorate in Piezoelectric and Ferroelectric materials, material synthesis and magnetoelectric multiferroics with over 50 publications worldwide.



Pioneer in non lead based piezoelectric ceramics.



Dr. Pranab Mandal PhD



FOUNDER



Founder of CurieosityTech and Black Komodo Investments FZE



Bachelors in Psychology and Physics with a concentration in particle physics, calculus cognitive and behavioral psychology.



Innovations in piezoelectric energy harvesting circuit and tile design.



Samridh Seth





THANK YOU!



PLEASE CONTACT US AT:

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