



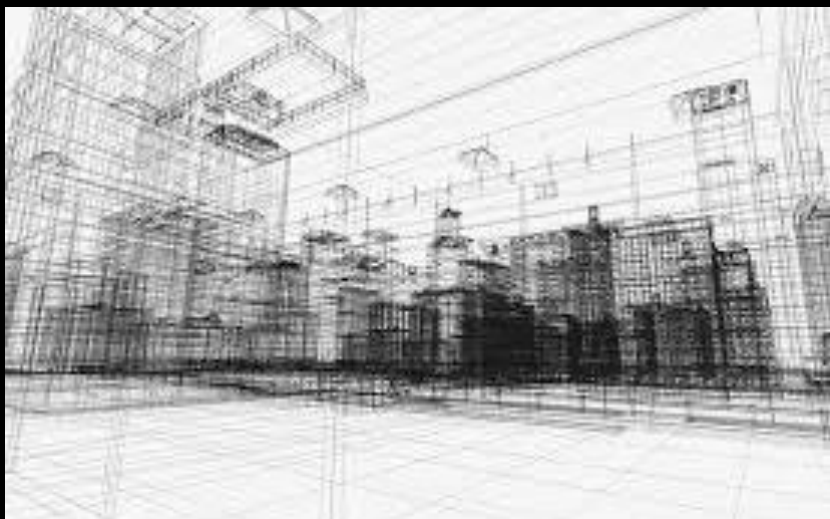
PALADIN

3D PRINT CONSTRUCTION

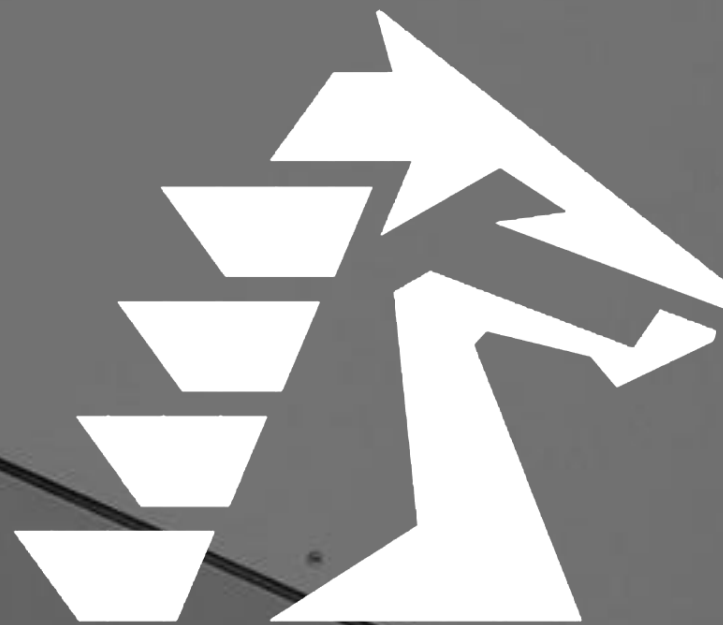
THE PALADIN GROUP 4D LLC

Presents





A new way of living



PALADIN

3D PRINT CONSTRUCTION

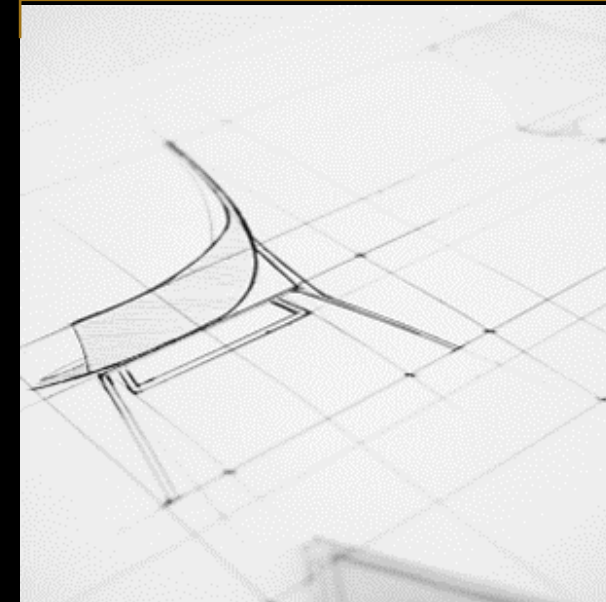


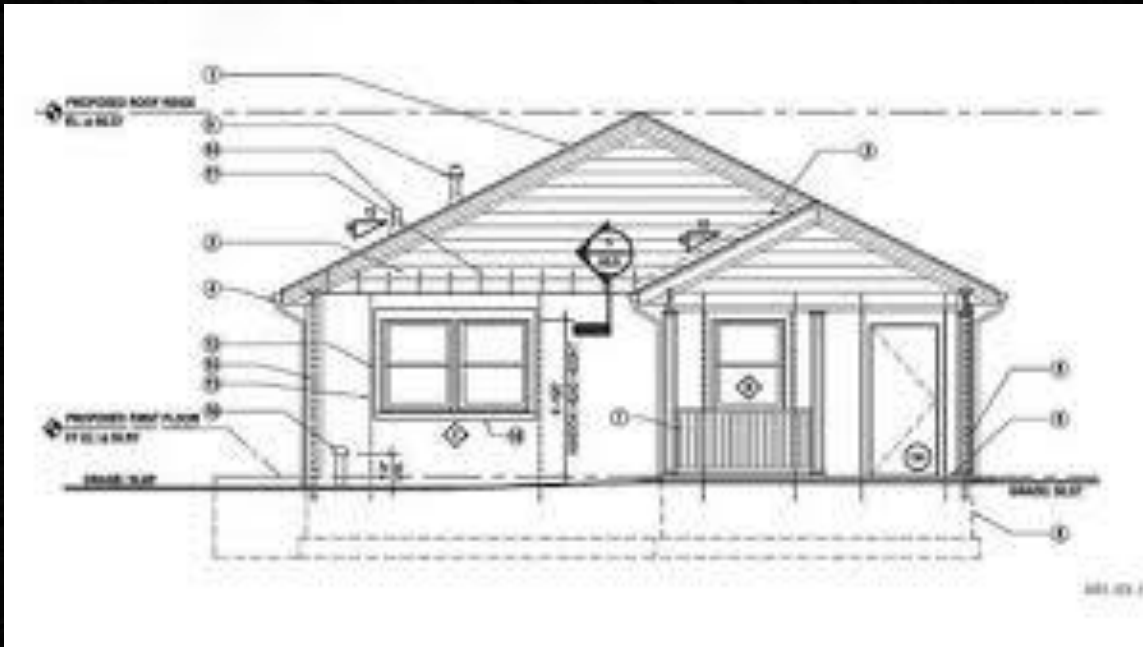
THE PALADIN GROUP 4D LLC.

MANY NATIONS, INCLUDING THOSE IN NORTH AMERICA AND EUROPE, URGENTLY NEED TO BUILD MORE LIVABLE, AFFORDABLE AND SUSTAINABLE COMMUNITIES FOR THEIR RAPIDLY GROWING POPULATIONS

COVID-19 HAS AFFECTED COMMUNITIES GLOBALLY AND HAS FOREVER CHANGED HOW WE DO BUSINESS, INTERACT WITH EACH OTHER AND THE WORLD. TECHNOLOGY LIKE 3D PRINTING, ARTIFICIAL INTELLIGENCE (AI), AND ADVANCED CONSTRUCTION MATERIALS WILL HELP US ADAPT AT SCALE.

DUE TO CLIMATE CHANGE, THE NEED IS URGENT FOR RESILIENT, AND AFFORDABLE HOUSING AND BUILDINGS ARE AT AN ALL-TIME HIGH WITH NO END IN SIGHT.





PALADIN IS PROPOSING THAT OUR LARGE-SCALE 3D PRINTING IS THE CONSTRUCTION TECHNOLOGY THAT WILL LEAD THE DEVELOPMENT OF LOWER COST AND HIGHER QUALITY CONSTRUCTION.

WE WILL SPEARHEAD THIS AS THE DISRUPTIVE TECHNOLOGY THAT WILL FUNDAMENTALLY REVOLUTIONIZE THE CONSTRUCTION INDUSTRY AROUND THE WORLD.

PROOF IS IN THE NUMBERS

85%

GROWTH DUE TO
RAPID
URBANIZATION

800
MILLION

NUMBER OF
HOMES NEEDED
IN THE NEXT 80
YEARS

US\$8
TRILLION

ESTIMATED
GLOBAL
CONSTRUCTION
MARKET VALUE
BY 2030



NUMBERS BUILD THE NARRATIVE

WITHIN 5 YEARS, 1-IN-4 AMERICANS WILL BE OVER 65 YEARS OLD.

WITHIN 10 YEARS, MORE THAN 50% OF THOSE 65+ WILL BE LIVING ALONE IN SINGLE PERSON HOUSEHOLDS.

BY 2030, ALMOST 60% OF THE PLANET'S 8.3 BILLION PEOPLE WILL LIVE IN CITIES.

AS MANY AS 2 BILLION OF THESE PEOPLE WILL LIVE IN SLUMS.

100 MILLION PEOPLE WILL BE HOMELESS.

WE HAVE A SOLUTION !

COMPETING 3D PRINTING TECHNOLOGY



DELTA SYSTEM

- TAKES WEEKS TO SET UP
- BREAKS DOWN UNDER REAL FIELD CONDITIONS.
- HIGH WEIGHT AND HIGH COST
- DIFFICULT TO SHIP AND DEPLOY IN REMOTE OR VARIED SITES.

GANTRY SYSTEM

- LIMITED FOOTPRINT CAPABILITIES (700SQFT MAX)
- EXTREMELY HEAVY, DIFFICULT TO TRANSPORT
- LONG SET UP TIMES AND COMPLEX OPERATIONS
- BUILDS OFF OF LEVEL SITES ONLY (NO SLOPE OR GRADE CHANGES)

ROBOTIC ARM

- LIMITED FOOTPRINT AND DESIGN CAPABILITIES
- EXTREMELY EXPENSIVE
- UNRELIABLE IN THE FIELD (BREAKS DOWN, EXPENSIVE PROPRIETARY PARTS)
- CAN ONLY OPERATE WITHIN A HERMETICALLY SEALED TENT
- DIFFICULT TO SHIP AND DEPLOY IN ANY REMOTE AREAS
- SET UP AND OPERATION BY TRAINED PERSONNEL



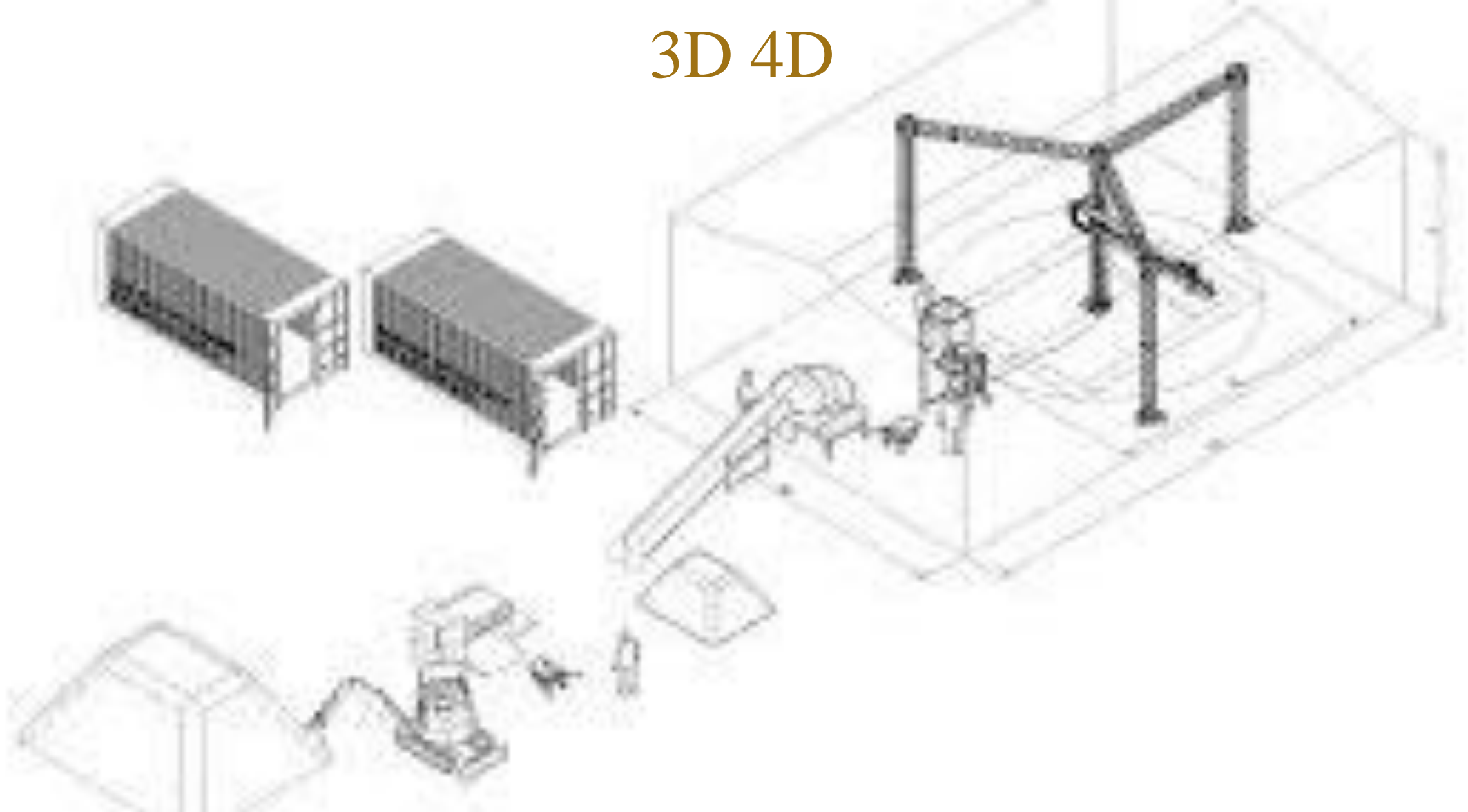
**PALADIN HAS DEVELOPED A
REVOLUTIONARY, LARGE-SCALE, 3D
CONCRETE PRINTING TECHNOLOGY
THAT WILL FUNDAMENTALLY
DISRUPT THE CONSTRUCTION
INDUSTRY AROUND THE WORLD.**

**SOLVES VIRTUALLY ALL LIMITATIONS
OF TODAY'S 3D CONSTRUCTION PRINTERS**

**3D 4D
CONCRETE PRINTER
(PATENT PENDING)**



3D 4D





DEPLOYMENT

EASY AND COST EFFECTIVE SET UP/ TAKE DOWN WITH 2 PEOPLE IN APPROX 3 HOURS. FIELD MAINTAINABLE. LESS WORKERS WILL ALLOW CONSTRUCTION OF VITAL STRUCTURES TO CONTINUE IN A POST-COVID WORLD.



VERSATILITY

CAN BE CONFIGURED TO BUILD ANY NUMBER OF STRUCTURES AT THE SAME TIME. ENTIRE COMMUNITIES CAN BE BUILT IN A FEW DAYS.



COST

COSTS A FRACTION OF THE CLOSEST COMPETITORS. USES COMMERCIAL-OFF-THE-SHELF (COTS) AND 3D PRINTABLE COMPONENTS INSTEAD OF COSTLY AND DIFFICULT TO SOURCE CUSTOM-MADE COMPONENTS.



ADAPTABLE & FLEXIBLE

**OUR 3D TECHNOLOGY
ALLOWS THE PRODUCTION OF
A VARIETY OF INNOVATIVE
STRUCTURAL SHAPES.**



ENVIRONMENTALLY FRIENDLY

**A WIDE VARIETY OF
CONSTRUCTION MATERIALS CAN
BE USED TO MANUFACTURE
STRUCTURES.**



STRONG, BUILT TO LAST

**OUR 3D STRUCTURES CAN BE
SIGNIFICANTLY STRONGER THAN
TRADITIONALLY BUILT STRUCTURES.
RESIST CATEGORY 4 HURRICANES AND
LEVEL 8 EARTHQUAKES.**

THE PALADIN GROUP 4D LLC.



LOW COST

CAN BE USED TO INEXPENSIVELY PRODUCE HOUSING THAT CAN COST 10%-35% LESS THAN TRADITIONAL BUILT STRUCTURES.



RAPID CONSTRUCTION

OUR 3D HOUSES TAKE A FRACTION OF THE TIME OF STANDARD CONSTRUCTION. A TYPICAL 3 BEDROOM HOME CAN BE CONSTRUCTED IN 3-5 DAYS.



UNLIMITED POTENTIAL

3D HOUSES CAN BE BUILT VIRTUALLY ANYWHERE. EVEN IN THE MOST REMOTE AND INHOSPITABLE PLACES.

NASA SPACE AGENCY ALREADY HAS PLANS TO USE 3D, AS THE PRIMARY CONSTRUCTION TOOL, TO BUILD PERMANENT COLONIES ON MARS.



PATENTABLE TECHNOLOGY

WE HAVE DEVELOPED THE FIRST PATENTABLE CABLE-BASED 3D CONSTRUCTION PRINTER AND PROPRIETARY SOFTWARE THAT ALLOWS DIRECT CONVERSION OF ARCHITECTURAL DRAWINGS INTO OUR APPLICATION SO DESIGNS CAN BE INPUT, UPDATED AND DOWNLOADED DIRECTLY TO OUR 3D PRINTER, REQUIRING LITTLE TO NO HUMAN INTERFERENCE.

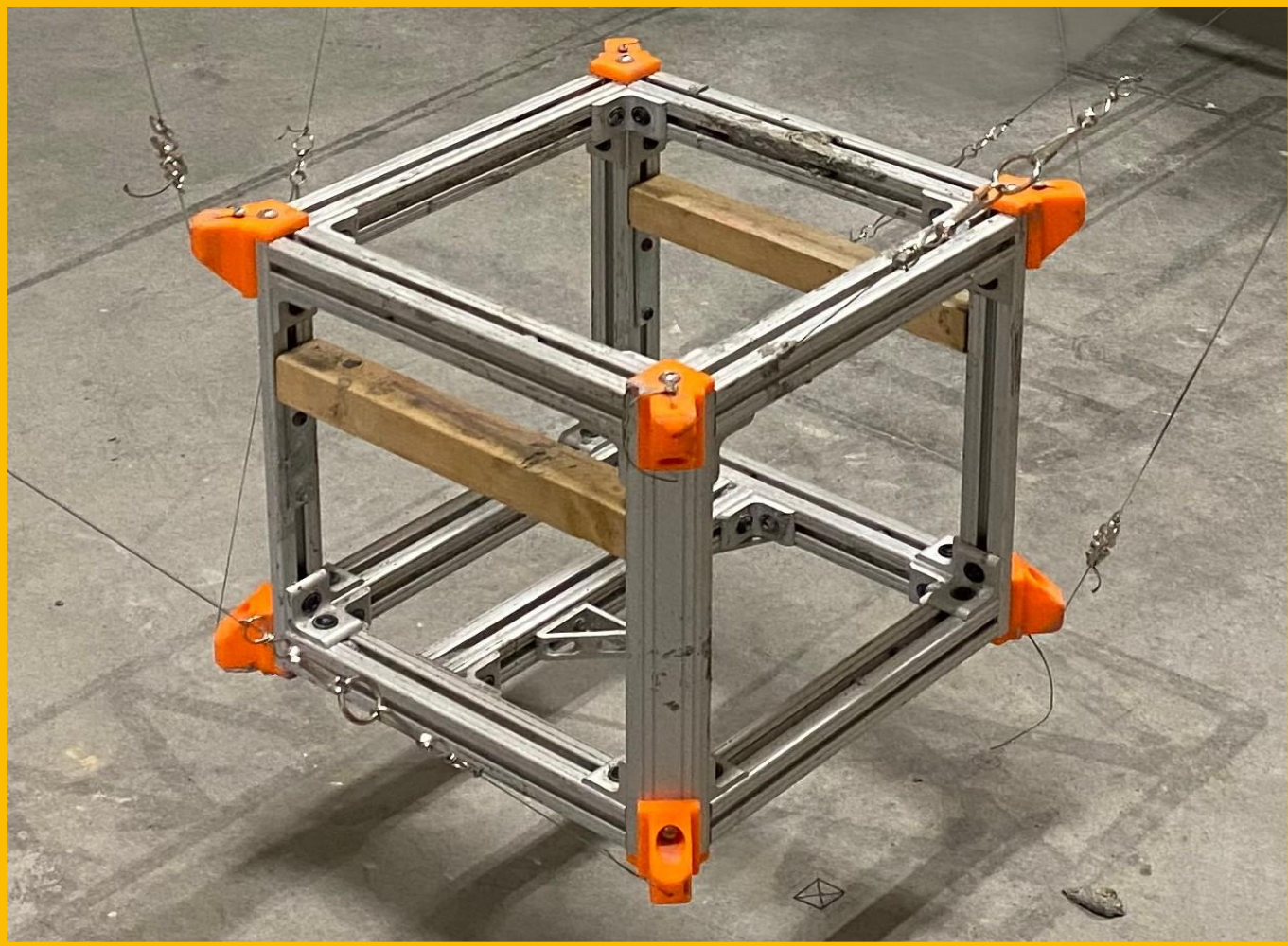


ARTIFICIAL INTELLIGENCE INTEGRATION

WE ARE WORKING WITH EXPERTS AT THE FOREFRONT OF MACHINE LEARNING, DEEP LEARNING AND REINFORCEMENT LEARNING TO ADAPT A NEW COMBINATION OF HARDWARE AND SOFTWARE THAT WILL INCREASE OUR ADAPTABILITY, AGILITY, CAPABILITIES AND ACCURACIES BEYOND ITS' ALREADY GROUNDBREAKING PERFORMANCE.

RESEARCH AND DEVELOPMENT

- **THE PALADIMN GROUP 4D IS CURRENTLY DEVELOPING A SERIES OF PROPRIETARY, MODULAR, EXPANDABLE AND EASILY TRANSPORTABLE LARGE-SCALE, 3D CONSTRUCTION PRINTERS THAT ARE CAPABLE OF MANUFACTURING A WIDE VARIETY OF STRUCTURES SUCH AS AUXILIARY BUILDINGS, MEDICAL BUILDINGS, COMMERCIALS BUILDINGS AS WELL AS RESIDENTIAL HOUSING.**



ADVANCED CONSTRUCTION MATERIALS

A core-product offering, FRP and Basalt Rebar, is a sustainable, lightweight, high strength, rust proof alternative to traditional steel reinforcement. Comparatively, it's only 25% the weight of steel, and has a Specific Tensile Strength that is 2.5 times greater! This equates to enhanced jobsite safety and ease of installation with significant savings in transportation and handling costs.



ADVANCED CONSTRUCTION MATERIALS

Building & Historic Preservation

- Historic Preservation - Restoration & Pinning of Stone Elements
- Architecture Concrete Elements
- Slabs



Masonry Strengthening

- Seismic, Wind or Blast Strengthening of Un-reinforced Masonry, increase flexural and shear strength
- Strengthening for "Event Loading" of Clay & Concrete Masonry



ADVANCED CONSTRUCTION MATERIALS

Exposure of Concrete to Marine Chlorides

- Coastal Construction Exposed to Salt Spray
- Sea Walls, Wharfs & Dry Docks
- Desalinization Intakes
- Port Aprons



ADVANCED CONSTRUCTION MATERIALS

Exposure of Concrete to High Voltages & Electromagnetic Fields

- Light & Heavy Rail
- High Voltage Substations
- Radio Frequency Sensitive Areas
- Cable Ducts & Banks
- Hospital MRI Areas
- Aluminum Smelters & Steel Mills
- High Speed Highway Tolling Zones
- Airport Radio & Compass Calibration Pads
- Nuclear Reactors (under research)
- Wind Turbine Foundations
- Solar Fields Footings



ADVANCED CONSTRUCTION MATERIALS

ADVANCED CONSTRUCTION MATERIALS

Our Complimentary Product Inventory includes:

Railroad Ties – In 2016 there were 20,796,130 ties replaced utilizing wood and concrete. Our system lasts longer and costs less over the long term.

Precast Wall Construction – The prefab building construction industry is an area of expansion where we have a unique IP for the construction of flat panel walls.

Light Poles – The replacement industry for light poles is another space where our products can extend the life of the poles.



ADVANCED CONSTRUCTION MATERIALS

Our Complimentary Product Inventory includes:

Concrete Restoration – Composites are increasingly being used to repair our nation's aging infrastructure with target applications such as bridge beams, bridge decks, parking garages, pipelines, and shoreline and underground systems.

High Tension Wire Support Cables - Our use of a fiber/high temperature resin pultruded cable introduces a higher quality, lower cost reinforcement to the utility industry. The market for such a product is huge. By 2030, the USA alone has to add an additional 300,000 miles of high-power cable just to keep up with demand.

Resin – Our proprietary resin coating will revolutionize the coating industry to protect all rebar and construction materials.

Specialized Concrete Paint – A long lasting, easy to apply paint product for roads.



ADVANCED CONSTRUCTION MATERIALS

Our Complimentary Product Inventory includes:

CSXtreme Concrete Additives to create Impermeable concrete
Infrastructure (Sewers, Seawalls, Bridges, Road, & Buildings)

ADVANCED CONSTRUCTION DESIGN | BUILD

We have in-house **architecture, engineering and research & development**

We can supply a wide variety of **FF&E (Furniture Fixtures and Equipment)**

- **Furniture:** Provide and Install All Types of Furniture
- **Material Handling & Logistics:** Provide and Install Racks, Forklifts, Shelving, Storage
- **FARO Technology** - 3D Laser Scanning measurement, imaging and realization solutions





PALADIN

3D PRINT CONSTRUCTION

THE PALADIN GROUP 4D LLC.

Thank you

Paladin Group 4D LLC

PMG4DLLC@GMAIL.COM

2307 7th Avenue, 2nd Floor,
New York, New York 10030

Lowell Lewis
917-547-6993
savnine1@aol.com