



**3D4Art**

# 3D4Art:

Beyond Traditional Construction

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## The Complete Ecosystem for 3D Construction

SINCE 2020



Тел.  
+971 50 399 5644



Email  
info@3D4Art.com



Web  
www.3d4art.com

# ABOUT US

## Our Journey

Founded in 2020, 3D4Art began with hands-on experiments and a clear vision: to revolutionize construction through 3D printing technology. We didn't just want to talk about innovation—we immersed ourselves in building real, record-breaking structures.

## Our Mission

To make construction 3D printing easy, fast, efficient, and waste-free by providing a fully integrated ecosystem that eliminates technical barriers and enables year-round construction in any climate.

## Our Experience

**6 years**

of pioneering construction 3D printing

**15+**

completed projects ranging from residential to complex public buildings

**1,600 m<sup>2</sup>**

maximum printed area of a single object

**50 km**

from the Arctic Circle  
location of the world's northernmost 3D-printed structure

# OUR ACHIEVEMENTS

## Numbers That Define Us

**40% faster**

construction speed

**60% less**

dependency on  
specialized labor

**3-5x faster**

wall construction vs.  
traditional methods

**60-75% savings**

on construction waste

**14-18 m<sup>2</sup>/hour**

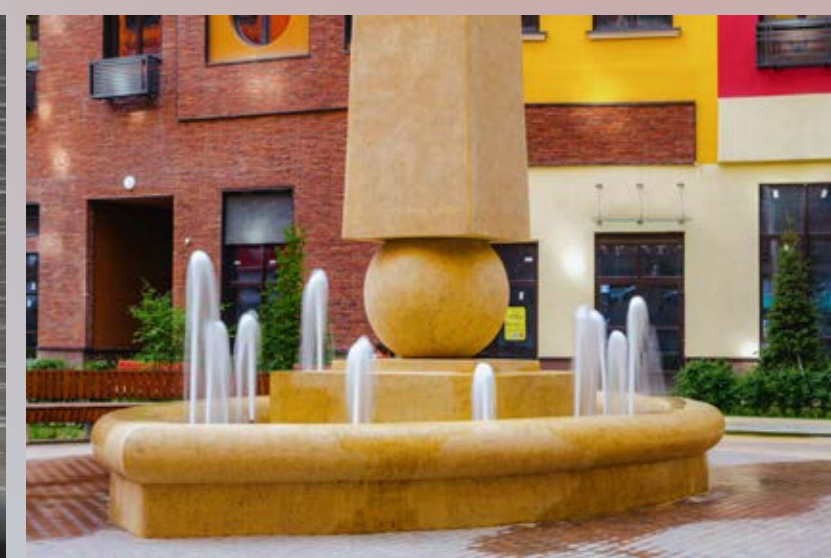
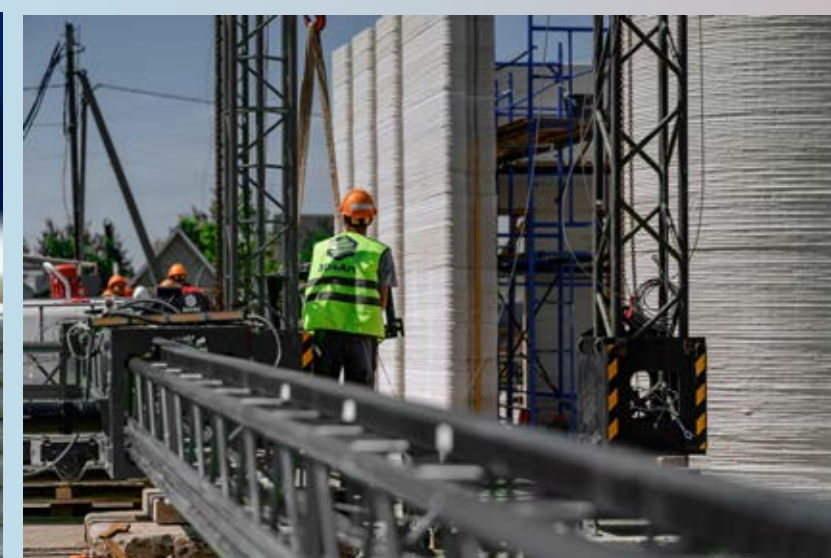
printing productivity

**15% cost reduction**

on materials and logistics

**20% increased**

project profitability



# OUR PROJECTS-1

## THE CAT HOUSE



**Features:** Complex sculptural architecture printed in modular parts

**Challenges Solved:** Printed off-site in workshop; assembled seamlessly on location

**Impact:** Showcased precision and flexibility of modular 3D printing

## MONUMENTAL FOUNTAIN

**Features:** Tallest 3D-printed small architectural form in Europe

**Challenges Solved:** Printed in controlled workshop environment with decorative concrete

**Impact:** Demonstrated capability for high-precision decorative elements



## THE ELEPHANT HOUSE



**Features:** Complex architectural form printed directly on-site

**Challenges Solved:** Tested proprietary concrete mixes in real conditions

**Impact:** Validated material formulations for complex geometries

# OUR PROJECTS-2

## ARCTIC CLIMATE CAPSULE



**Features:** Recreational facility printed 50 km from Arctic Circle

**Challenges Solved:** Successfully printed in extreme freezing conditions; proved technology viability in harsh climates

**Impact:** Demonstrated year-round construction capability with proper infrastructure

## MELLYA CULTURAL CENTER



**Features:** one of the largest and tallest 3D-printed public building in the world

**Challenges Solved:** First project to successfully pass rigorous state expertise; demonstrated viability of 3D printing for large-scale public architecture

**Impact:** Proved 3D printing can meet strict building codes and safety standards

## 3D-PRINTED MEDICAL CLINIC



**Features:** First printed medical facility

**Challenges Solved:** Met healthcare facility requirements; passed state expert review

**Impact:** Opened doors for 3D printing in social infrastructure projects

# OUR ECOSYSTEM

## Why We Created an Integrated Platform

### The Problem We Solved:

Through years of hands-on construction, we identified critical industry challenges:



Equipment required constant manual monitoring



Human factor caused quality inconsistencies



Seasonal weather stopped construction for 120+ days/year



No unified software understood concrete rheology



Setup and calibration took too long

### Our Solution:

We built a vertically-integrated ecosystem where every component works seamlessly together

### The Result:

A complete industrial platform that removes technical complexity, enabling 24/7 construction in any weather with minimal human intervention

# OUR SOLUTIONS

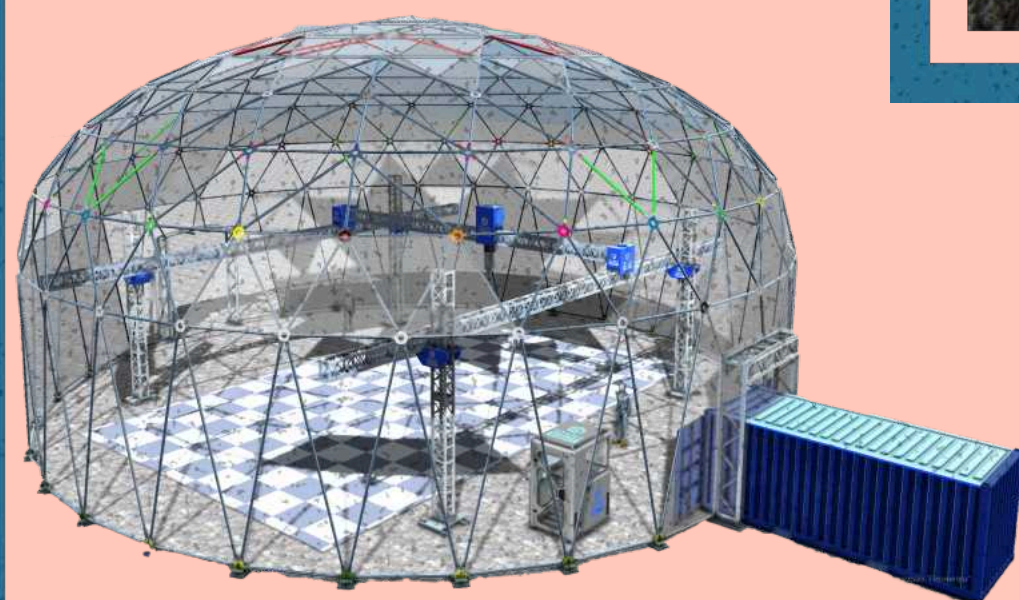
## Proprietary Mixes

tested concrete formulations



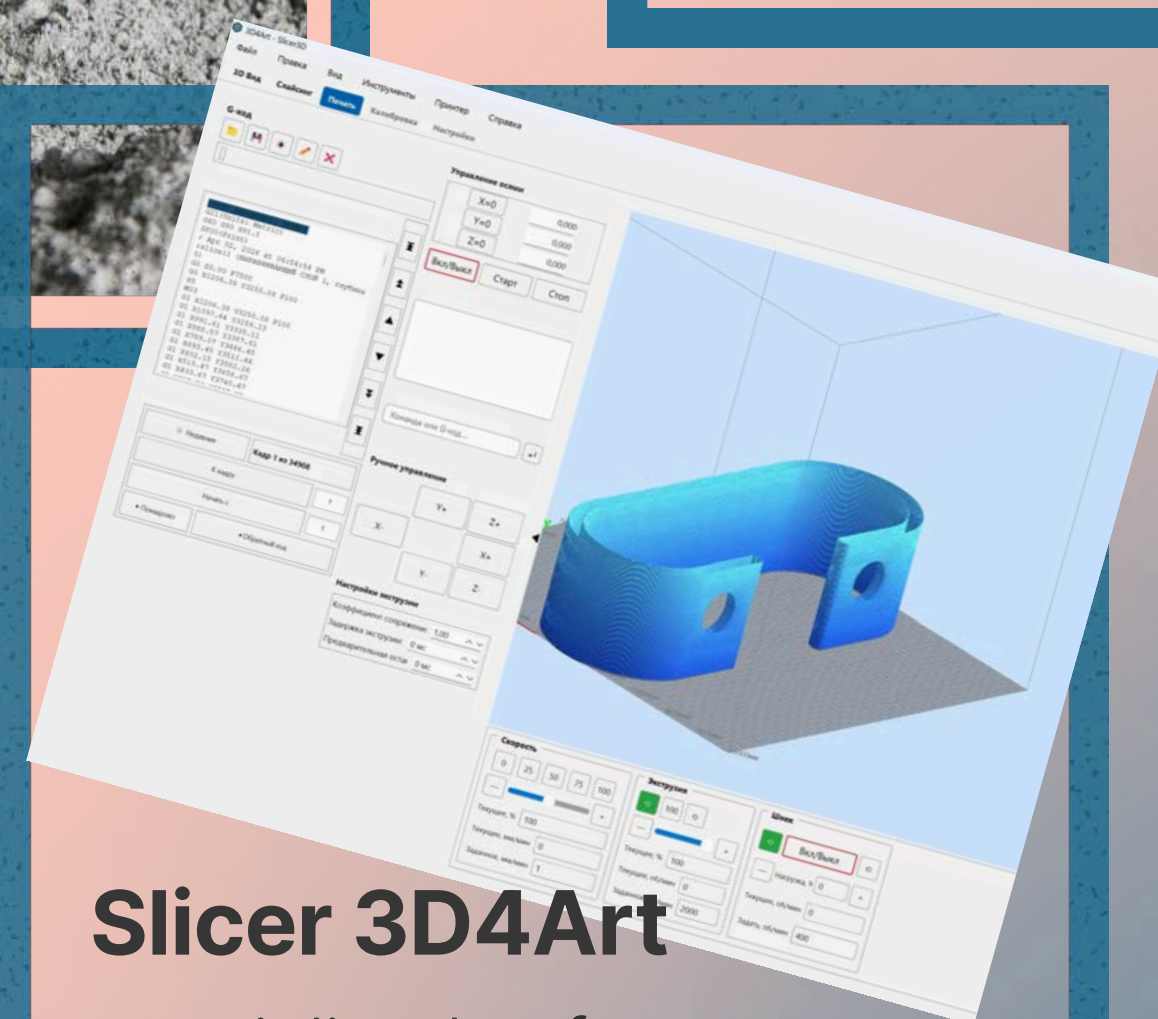
## DomeGuard

all-weather  
protective enclosure



## Robot-3D4Art Printer

intelligent construction robot  
with AI vision



## Slicer 3D4Art

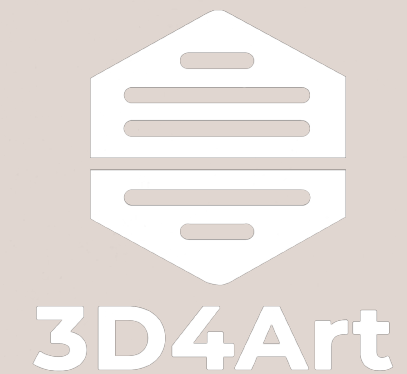
specialized software  
for construction 3D printing



## Training & Support

certified operator programs

# ROBOT-3D4ART PRINTER



## Overview:

### The Intelligent Construction Robot

A large-format portal 3D printer designed by builders, for builders. Not just equipment— an intelligent partner on your construction site with lightweight design.

## Performance:

- Working field: 16.7 × 13.2 × 8 m (up to 440 m<sup>2</sup> two-story buildings)
- Printing speed: up to 15 m/min
- Productivity: 1.35 m<sup>3</sup>/hour (14-18 m<sup>2</sup> of surface per hour)
- Positioning repeatability: 2 mm
- Aluminum and carbon fiber beams

## Intelligent Control System:

- AI-powered positioning and computer vision
- Real-time layer geometry tracking
- Automatic speed adjustment based on trajectory
- Sensors for extruder position, concrete level, and rack positioning
- Microwave volume sensors for quality control

## What It Solves:

- Eliminates manual layer-by-layer monitoring
- Reduces setup time from days to hours
- Removes dependency on highly specialized operators
- Enables 3-shift operation without quality loss



# SLICER 3D4ART (SOFTWARE)

Complete Control From Model to Walls

## Overview:

Specialized software engineered specifically for construction 3D printing.  
 Unlike generic slicers, Slicer 3D4Art understands concrete rheology and construction realities.

### Intelligent Slicing:

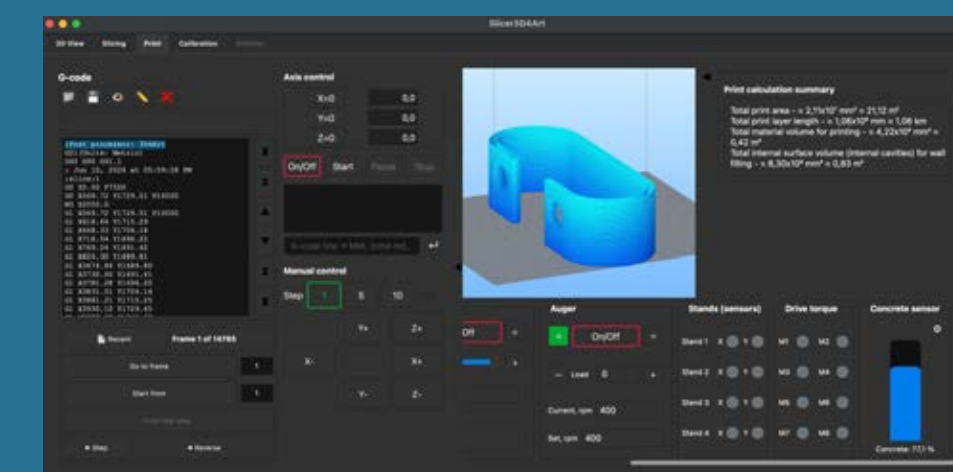
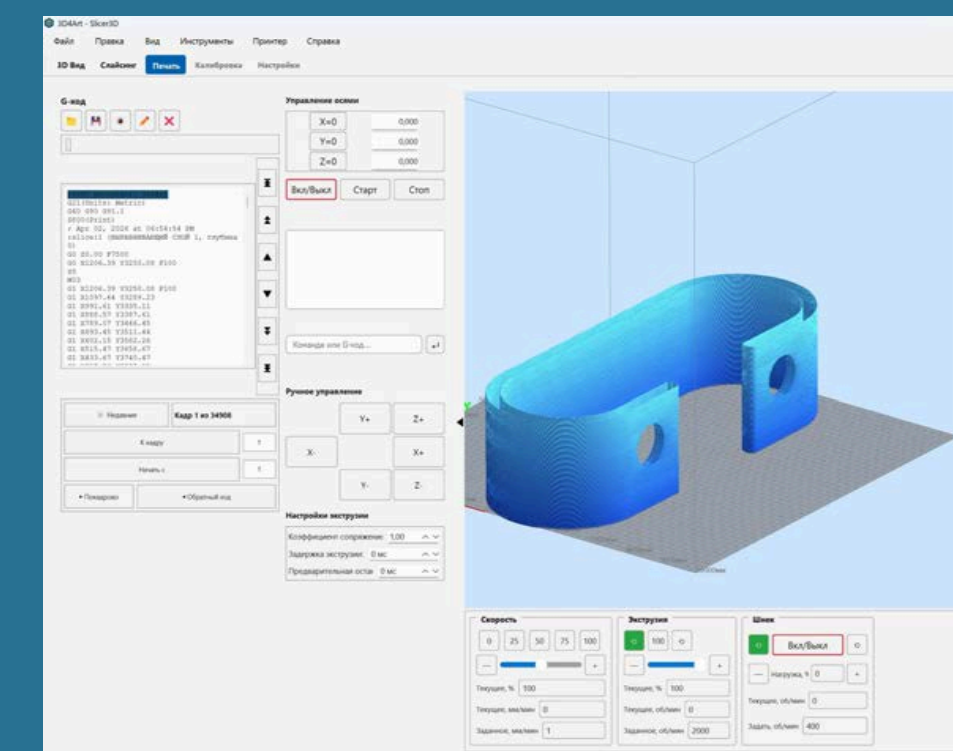
- Adaptive algorithms accounting for concrete mixture properties
- Automatic optimization of extrusion speed, layer thickness, and nozzle trajectory
- Ensures optimal strength and surface quality

### Optimized G-Code Generation:

- Clean, efficient, error-free code
- Minimized idle movements
- Collision detection and path optimization
- Customized for your specific printer model

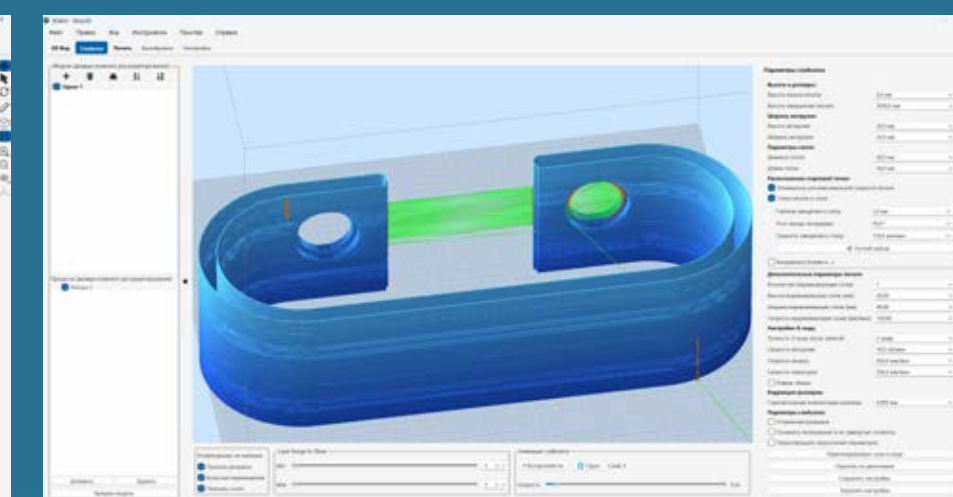
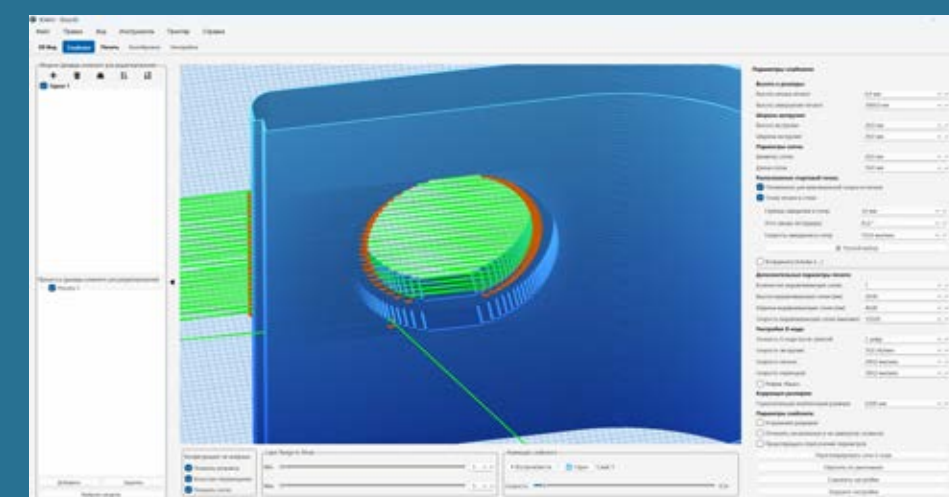
### Powerful Host with Visualization:

- Real-time printer control
- 3D visualization of the printing process
- Manual axis control (jogging)
- Pause and resume with layer-level precision
- Print queue management



### What It Solves:

- Eliminates software errors that cause print failures
- Reduces preparation time by 50%
- Bridges digital model to physical wall without interruptions
- Enables precise control over every aspect of printing



# DOMEGUARD ENCLOSURE

## Year-Round Construction, Any Weather

### Overview:

All-weather protective shelter designed specifically for construction 3D printing. Create a controlled microclimate and eliminate seasonal downtime.

### Technical Specifications:

- Diameter: ~22.3 m
- Height: 11.6 m (center), 5.5 m (walls)
- Volume: 3,400 m<sup>3</sup> total / 2,380 m<sup>3</sup> usable
- Shape: Modified arch design with developed vertical walls
- Frame: Steel tube (powder-coated/galvanized)
- Covering: PVC tarpaulin (standard, blackout, or combined)
- Snow load: From 240 kg/m<sup>2</sup>
- Wind load: Up to 70 kg/m<sup>2</sup>

### Assembling:

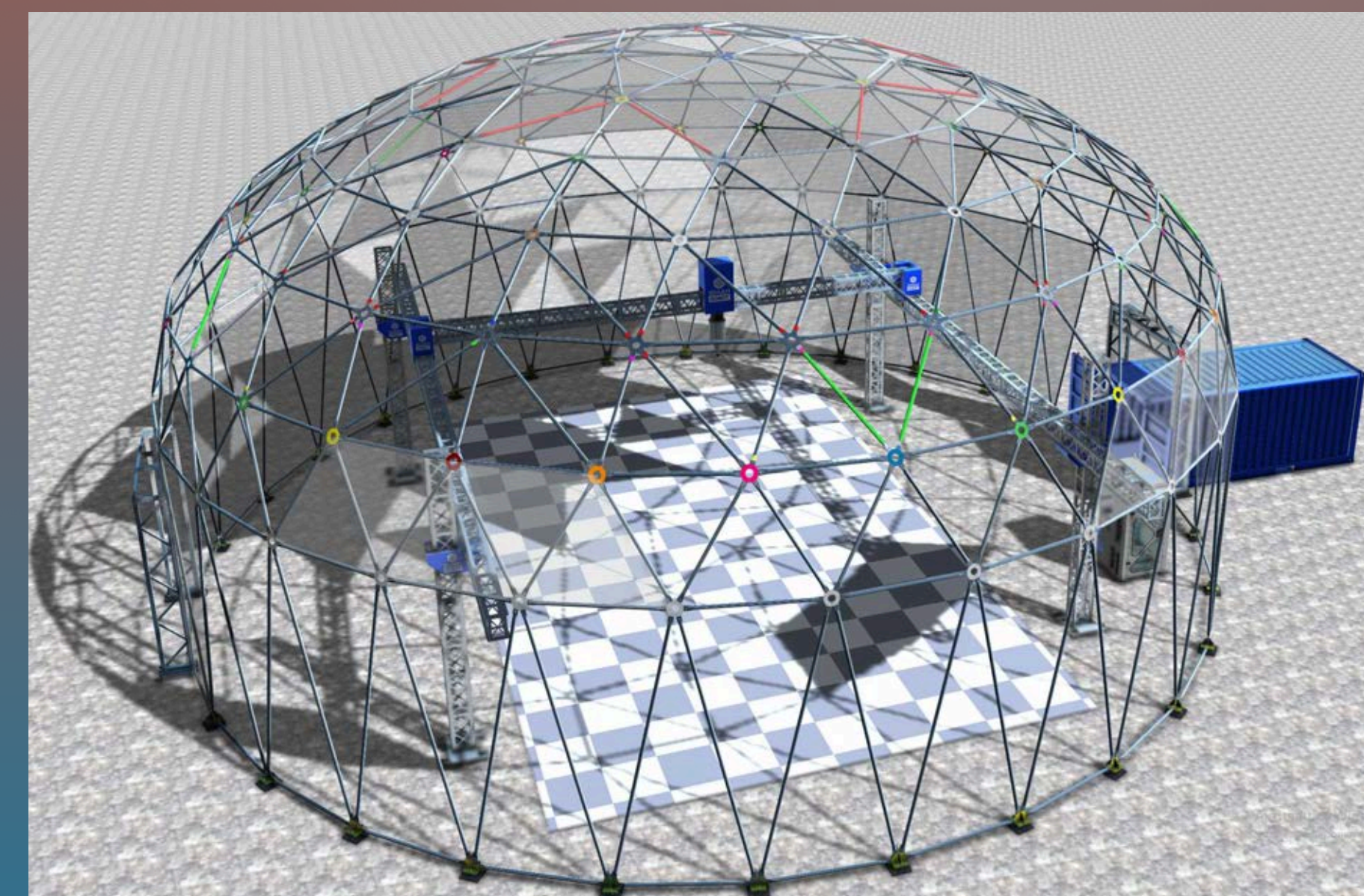
- Assembly in 3-7 days by 3-6 person crew
- No foundation required (temporary structure)
- Dismantlable and relocatable

### Design:

- Accommodates printers with beams up to 6 m height
- Two gate openings (3.3 m × 2.7 m) for equipment access
- Increased vertical wall height adds 15-30% more usable space
- Space for containers, storage, workshops around perimeter

### What It Solves:

- Eliminates weather-related downtime
- Removes winter surcharges and heating costs
- Ensures consistent print quality year-round
- Protects materials, equipment, and personnel



# PROPRIETARY CONCRETE MIXES

## Materials Tested on Real Projects

### Overview:

We don't just sell mixes—we build with them daily.

### Our Approach:

Since 2020, we've developed and continuously refined proprietary concrete mixes specifically for construction 3D printing. Every formulation is:

- Tested in real construction conditions
- Developed with research institutions
- Adapted for various weather and temperature ranges
- Optimized for workability, strength, and aesthetics

### Performance:

- Optimized rheology for smooth extrusion
- Rapid layer adhesion without deformation
- Consistent quality batch after batch
- Compatible with various printer models

### What It Solves:

- Eliminates trial-and-error with generic concrete
- Ensures predictable results in any season
- Reduces material waste
- Enables complex architectural designs

# TRAINING & CONSULTING

## Knowledge Transfer for Success

### Overview:

We don't just sell equipment—we ensure your success through comprehensive training, consulting, and ongoing support.

### Services:

- Detailed project consultation
- Site assessment and configuration planning
- Business model development
- ROI calculation and project planning
- Regulatory compliance guidance

### Operator Training Program:

Developed by practitioners with 6+ years of field experience  
 Certified curriculum covering theory and hands-on practice  
 Quick onboarding — get specialists productive fast

Topics include:

- Printer setup and calibration
- Slicer software operation
- Mix preparation and quality control
- Troubleshooting and maintenance
- Safety protocols

### Our Commitment:

- Quality: Only solutions we use ourselves
- Innovation: Continuous R&D and improvement
- Support: Partnership beyond the sale
- Transparency: Fixed pricing, no hidden costs
- Results: Your success is our success

### Why Choose Our Training:

- Real-world experience — we've built what we teach
- Proven methodology — refined through hundreds of projects
- Continuous updates — curriculum evolves with technology
- Industry recognition — certified by construction authorities
- What It Solves:



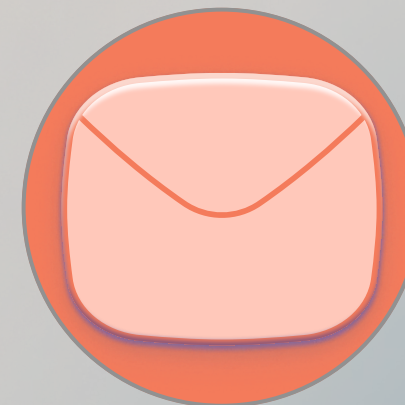


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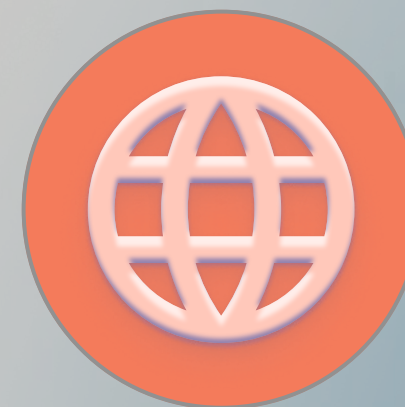
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