CORAL ARCHITECTS

3DCP DESIGN & ENGINEERING

The end of the copy-paste era.
Welcome to scalable originals.

VISION & MISSION

ARCHITECTURE FOR 3DCP

To shape a 21st-century architecture born from the marriage of humans and robots — where design intelligence and digital fabrication work together to create spaces that are more efficient, better performing, more beautiful, and cost-effective.

We strive to build an architecture that is conscious and responsible, one that respects materials, the environment, and human life.

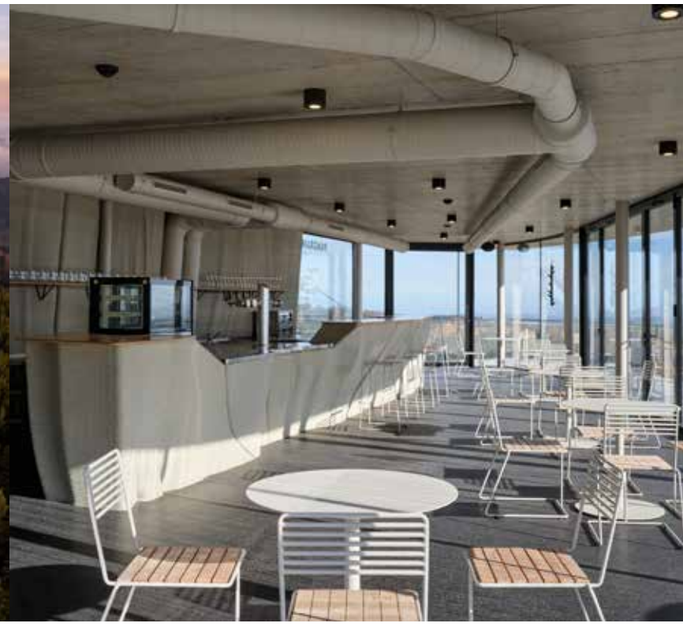
Our ambition is not only to create buildings, but also to craft a new architectural narrative.
We believe technology does not replace humanity, it strengthens it.

Unite human creativity with robotic precision, transforming how architecture is conceived and built, prioritize human experience, designing spaces that support life, movement, orientation, and emotion. Embed intelligence directly into structure, integrating performance, services, comfort, and form into one coherent architectural body, reduce waste and optimise material, letting matter flow only where it is needed, make innovation real, buildable, scalable, and economically accessible, and act responsibly, designing architecture that is meaningful for people and considerate toward the world we inhabit.

We do not use new tools to repeat old ideas.
We use them to build a more conscious, efficient, and beautiful future.

ENTERPRISE

THE FIRST 3D PRINTED CABLE CAR STATION IN THE WORLD

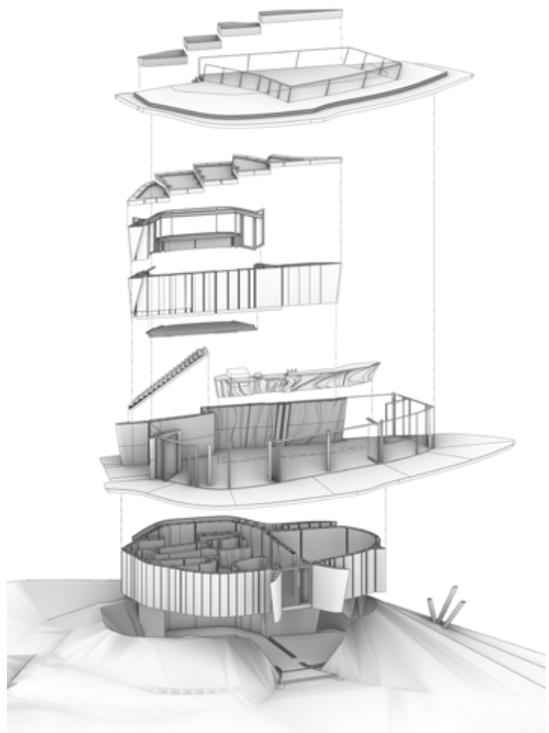


DESIGN AND CONSTRUCTION OPTIMIZED FOR 3D PRINTING

Enterprise is a public building realized using 3D Concrete Printing (3DCP) technology. The two-storey structure is partially embedded in the slope, with a maximum footprint of 29 × 13.8 m and a height ranging from 5 to 8.7 m. The building accommodates the cable-car control cabin, an information centre, public restrooms, technical facilities, an outdoor terrace, and a walkable roof with a viewing platform.

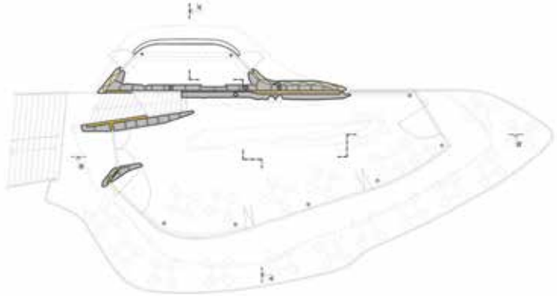
The architectural concept is based on a continuous spatial envelope derived from topological morphogenesis, replacing the conventional separation of wall, roof, and façade with a single integrated structural form responding to the surrounding terrain.

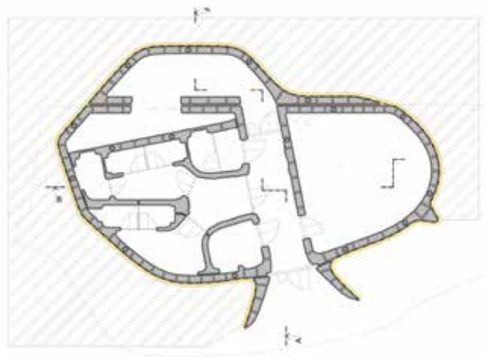
Ski Resort Koprivna, CZ
Design by jiri vitek, ATELIER3M, Coral Architects
Photography by BoysPlayNice



The load-bearing system combines prefabricated 3D-printed reinforced concrete walls with cast-in-place concrete elements. The printed walls act as permanent formwork with internal cavities subsequently filled with structural concrete, forming a hybrid system compliant with national standards and Eurocodes. Floor and roof slabs are rigidly connected to the printed walls and locally supplemented with steel elements.

A total of 55 prefabricated segments were printed in a controlled factory environment and assembled on site in phases while maintaining continuous cable-car operation. The building envelope meets thermal performance requirements according to standards, achieving a “very energy-efficient” classification (EPC: 90 kWh/m²·year). Building services include mechanical ventilation with heat recovery and an air-to-water heat pump.





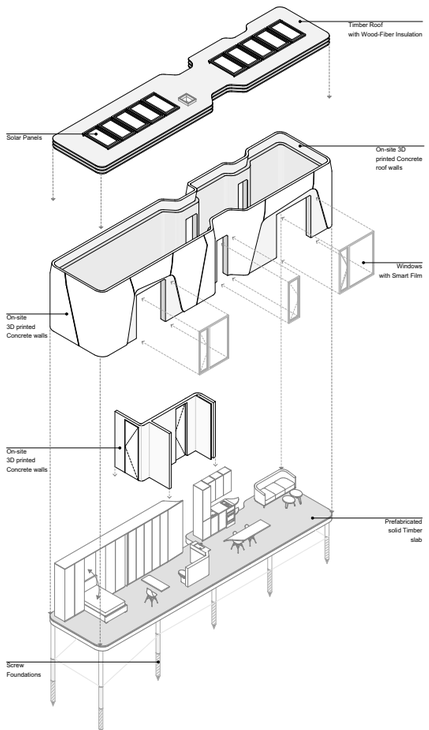
TINY HOUSE LUX

FIRST 3D-PRINTED HOUSE ON-SITE IN LUXEMBOURG

Project Details
Size: 56 m2
Usable floor area 47 m2
project documentation included: 317 000 EUR
Concept and architecture: ODA Architects
3DCP design and data coordinator:
Coral Architects
Photography: BoysPlayNice

FACING HOUSING CRISIS WITH INNOVATION

Luxembourg faces a severe housing shortage, producing only about half of the 7,000 homes needed each year, with very few affordable options. The Tiny House project transforms leftover urban plots into opportunities for compact, sustainable living. Designed as permanent, high-quality homes for young residents, it offers a socially and environmentally responsible response to today's housing challenges.



HOUSE CORAL 01

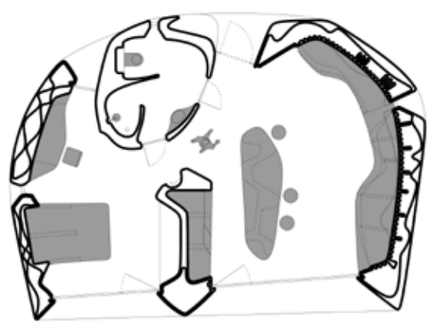
FIRST FULLY 3D PRINTED HOUSE FROM LOCAL CONCRETE IN CZECHIA

ARCHITECTURE NATIVE TO 3DCP

The 3D-printed house demonstrates how advanced construction technology can translate into real business value. Robotics and automation enable highly customized design without the cost penalties traditionally associated with bespoke architecture.

By moving away from prefabricated components, we reduce material consumption, production time, transport, and on-site labor. The result is an efficient, scalable construction model that delivers unique architectural solutions at the cost level of standardized construction.

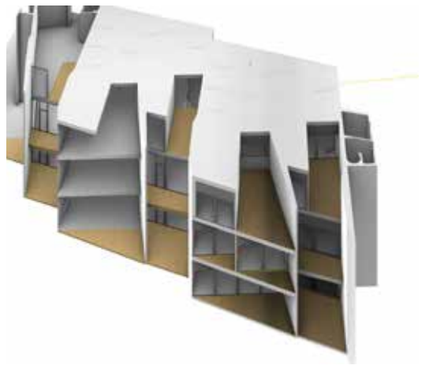
Project Details
Built-up area: 84 m2 / 905 ft2
Usable space: 69 m2 / 743 ft2
3DCP material used: 16 m3/ 565 ft3
Printing time: 16 hrs.
Design by Coral Architects
Visualization by Miss3



RESIDENCE MEANDERS

RESIDENTIAL DEVELOPMENT DESIGNED FOR 3D CONCRETE PRINTING

A new model of residential development combining fast, cost-efficient construction with a high level of architectural customization. Designed specifically for 3D concrete printing. It delivers unique architecture at the speed and cost of standardized construction, without the premium of bespoke construction.



Design and project by Coral Architects

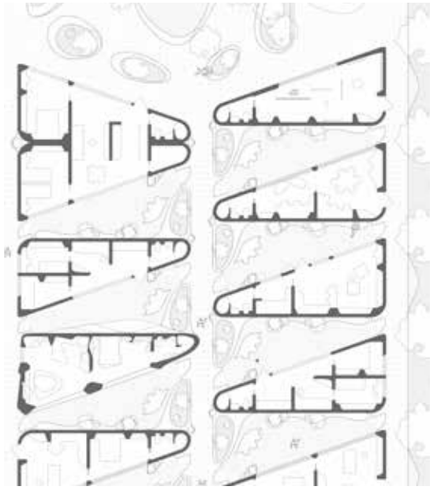
TRINITY

REDEFINING URBAN LIVING WITH 3D-PRINTED TINY HOMES

Trinity is not just a single tiny home. It is a generative system that adapts to different needs, from individual homes to multi-unit clusters for communities, co-living spaces, and even classrooms or places of worship.

Project Details
Print Area: capped at 100 x 38 ft
Estimated Price: $99,000 per structure
5 house-yard pairs (5BC) on a single print bed
Young couple / Single person unit, 390 sq ft

Design by Coral Architects
Visualization by Miss3



BUS STOP

URBAN SHELTER WITH A UNIQUE TAILOR-MADE DESIGN

3D-printed concrete bus stop is a masterclass in functional adaptation. Its elliptical, tilted shell responds to pedestrian flow and sun exposure. At the same time, a minimalist steel-and-glass roof uses heat-reflective glazing to support year-round comfort. A distinctive layered texture evokes natural formations. The shelter includes integrated lighting and custom 3D-printed seating, finished in larch wood, for a refined, user-centric experience.

Project Details
Size: 7,3 x 2,5 x 3,3 m / 24 x 8 x 11 ft
Printing time: 12 h
Number of parts: 4
Integrated reinforcement and conduits

Realization of 3D printing:
Coral Construction Technologies
Design by Collarch
Design consultation: Coral Architects
Photography by BoysPlayNice

BETWEEN CONFLICTS

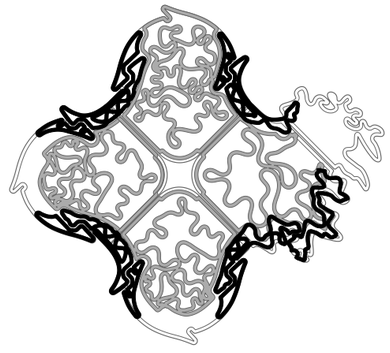
MODULAR PAVILION

At Designblok 2022 in Prague, we presented a pavilion expressing our stance on the war in Ukraine. Its design is based on a modular protective structure originally developed to protect soldiers and civilians during armed conflicts, adapted here to an exhibition and architectural context.

In 2023, the project was nominated for the Czech Architecture Award, selected by an international jury from 241 entries.

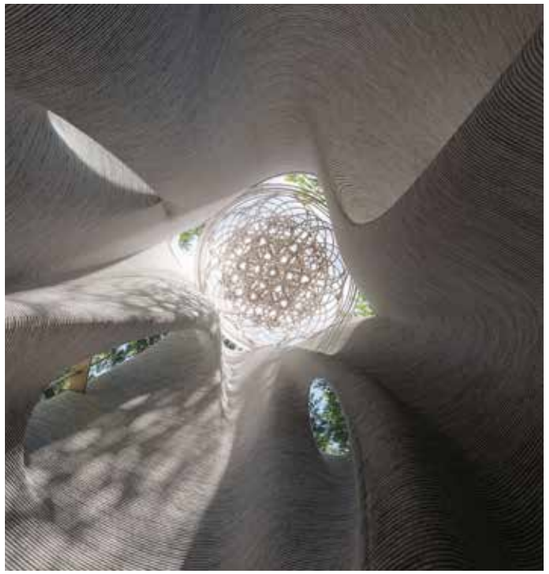
Project Details
Size: 6 x 6 m / 20 x 20 ft
Printing time: 20 h
Volume of material:
printed: 12 m3 / 423 ft3
poured: 5 m3 / 176 ft3
Number of parts: 16

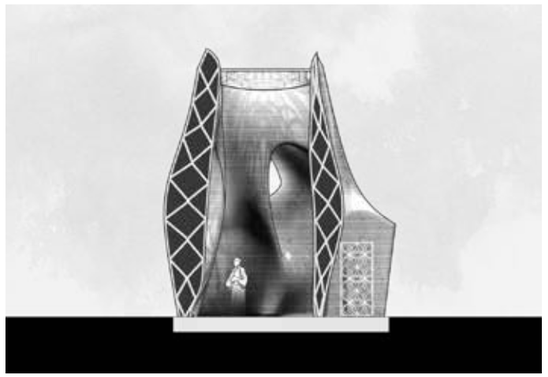
Design by Coral Architects
Photography by Alex Shoots Buildings

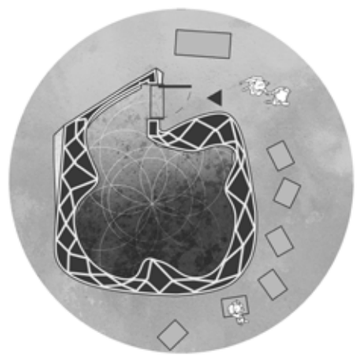


CHAPEL OF CONVERGENCE

REVIVING HERITAGE THROUGH TECH INNOVATION



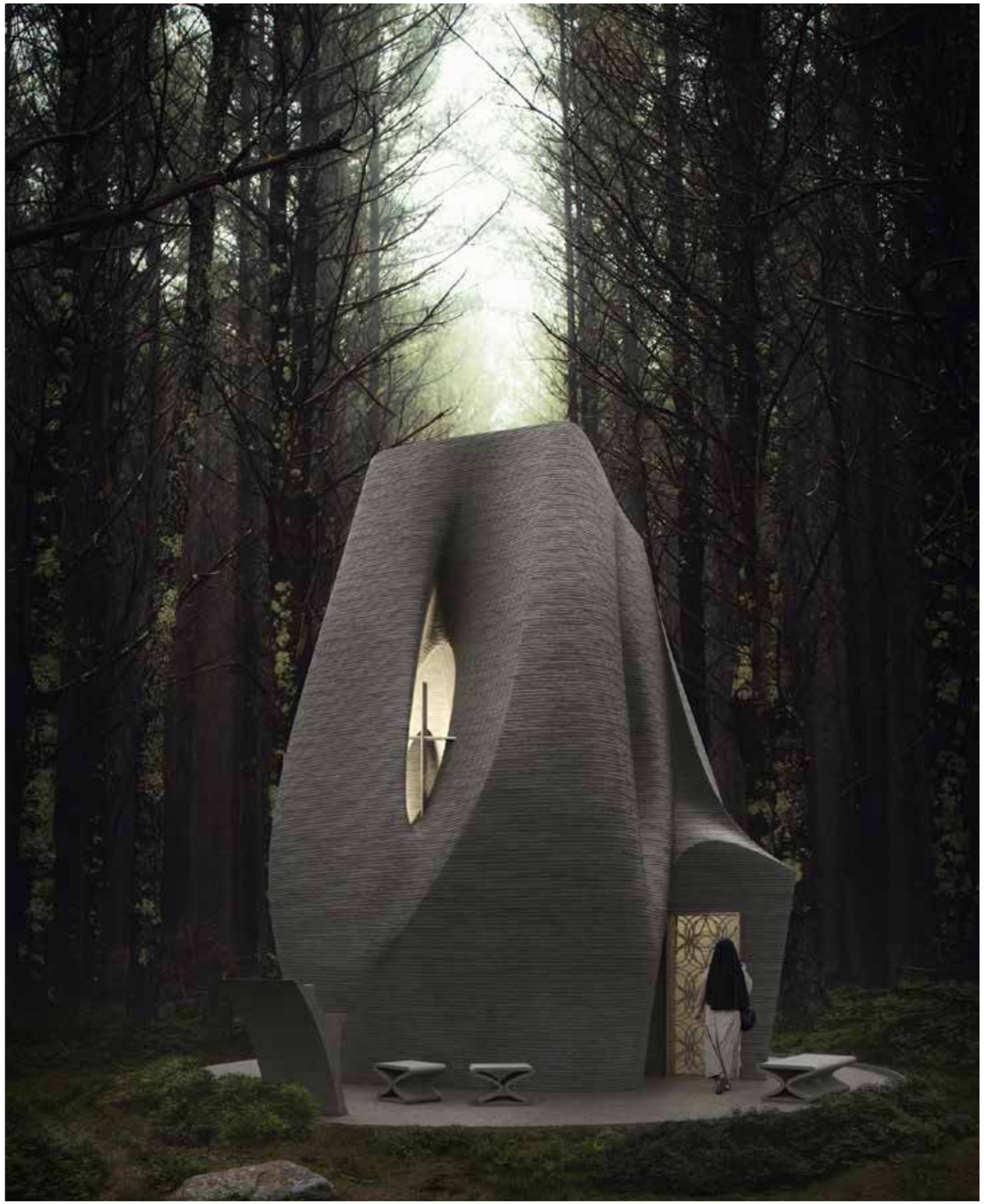




The Chapel of Convergence bridges 300 years of architectural history by evolving Jan Blažej Santini-Aichel's Gothic Baroque principles through cutting-edge 3DCP technology. We transform his complex spatial geometry into a modern architectural language, leveraging new tools to achieve what was once impossible.

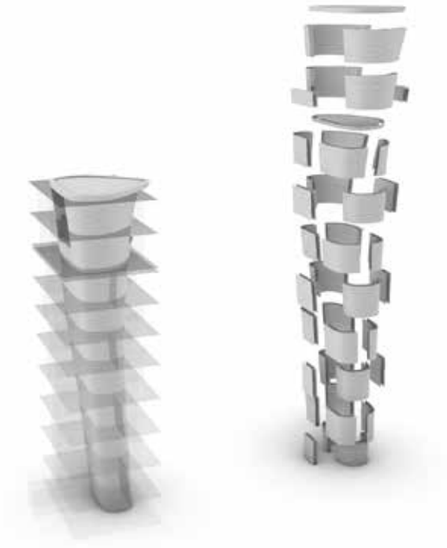
At Coral Architects, we apply advanced diagrammatic construction and stereotomy to create immaterial, light-filled spaces that redefine the relationship between structure and environment. This project demonstrates our ability to merge historical depth with high-tech execution, delivering unique, meaningful architecture.

Design by Coral Architects
Visualization by Flying Architecture



CHURCH OF HOLY TRINITY

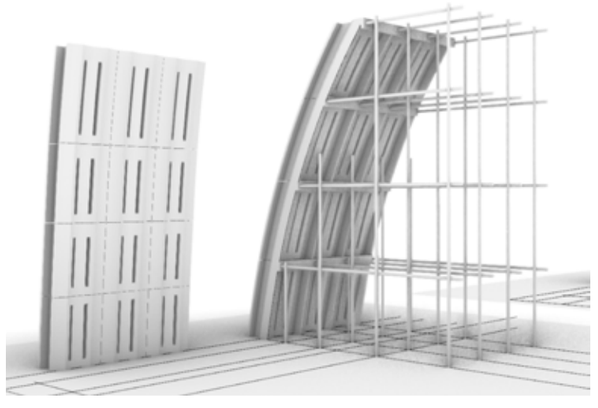
INNOVATIVE SACRED ARCHITECTURE SHAPED BY 3D PRINTING



Design by architect Zděněk Fránek

The Neratovice church embraces cutting-edge a 3D concrete printing to realize its unique double--shell geometry. This advanced method allows for precise, curved forms that would be costly or impossible with conventional techniques. It enables seamless integration of functional spaces within the structure while minimizing material waste and reducing construction time—bringing efficiency, sustainability, and architectural ambition together in one spiritual landmark.

CHURCH NAVE WITH UNIQUE INNER PATTERN

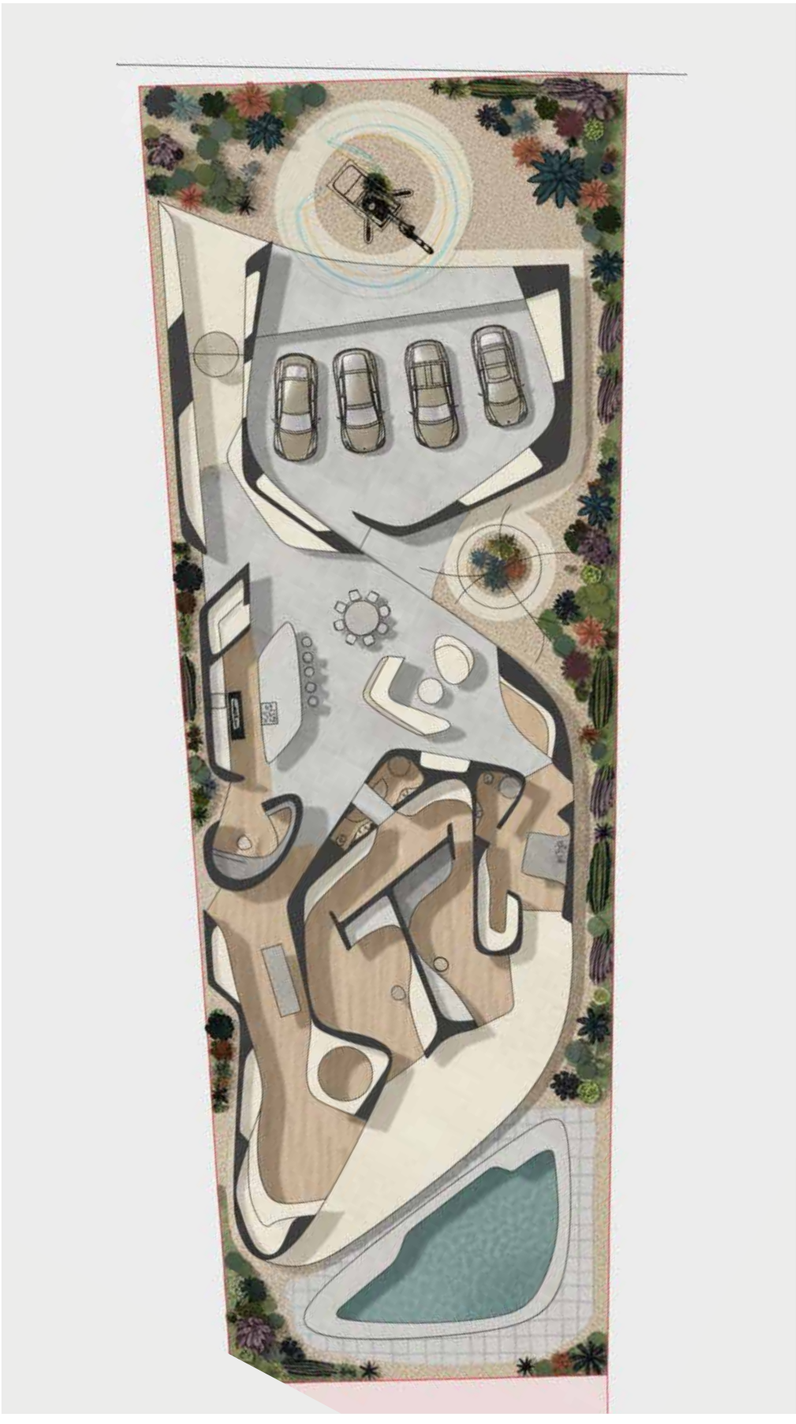


CASA YUCATAN

LUXURY VILLA
MEXICO

UNIQUENESS & TRADITION

The Mexico Villa is a clear manifestation of architecture designed for 3D concrete printing. The proposal is based on three key concepts: ergonomic space, structural efficiency, and a new architectural language enabled by digital fabrication.
The villa integrates vegetation and works with varying wall thicknesses to naturally incorporate furniture, niches, and intimate secondary spaces. Fluid interiors guide users intuitively, adapting to different functions and situations. The result is a luxurious yet inclusive example of architecture—demonstrating that advanced, expressive design made possible by 3DCP can be accessible and meaningful for all.



MODULAR SCHOOLS

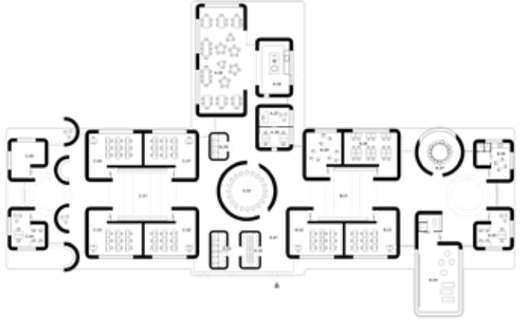
FROM CUSTOMIZED PREFABRICATED MODULES

Project Details
Project of 3D Printed Modular School
Built-up area 2,750 m2 / 3 290 yd2
140 students
Design by Coral Architects

FLEXIBLE, FAST, COMMUNITY-DRIVEN

3D-printed modular buildings offer bespoke design flexibility to suit unique needs. Our proposal addresses the school shortage with a focus on shared spaces that foster community and interaction.

By assembling prefabricated modules on-site, we significantly reduce construction time and costs. This efficient system allows for rapid adaptation and easy expansion, providing a scalable solution for modern education.



ZOO PAVILON

LANDSCAPE ARCHITECTURE

Inspired by the Tasmanian landscape, this pavilion immerses visitors in a simulated burrow, offering eye-level views of the animals.

The structure consists of 18 unique, 3D-printed concrete modules treated with a hydrophobic coating. To seamlessly blend with the environment, these prefabricated parts are filled with soil and covered with greenery, hiding the zoo's background while creating a natural habitat.

Design by Coral Architects

MANIFESTO

PURPOSE

We did not choose 3D Concrete Printing to repeat the past. We chose it to take responsibility for the future.

At CORAL, we do not mimic old houses with new tools. We design structures for living and being, where technology serves clarity, not spectacle.
3DCP is not an aesthetic choice. It is a decision to rethink architecture at its core.

SPACE

Architecture becomes intelligent when it stops being layered.

In 3DCP, walls are not partitions. They are orientation, furniture, infrastructure, and structure.
We design spaces that guide movement, organize life, and integrate MEP, furniture, and façade into one continuous system.

When elements merge, architecture becomes

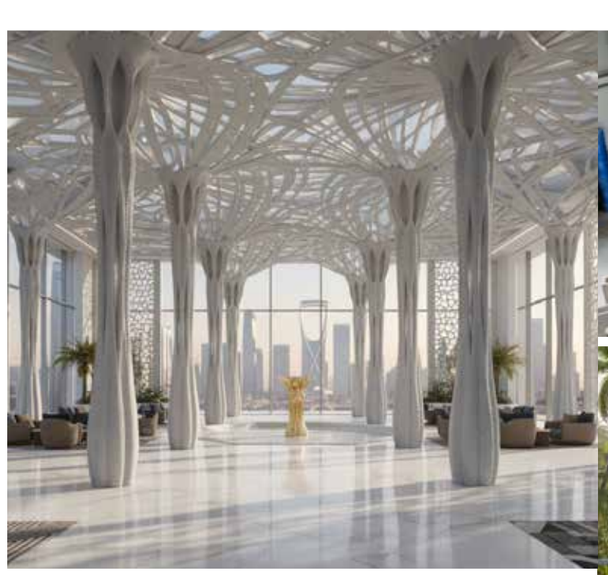
STRUCTURE

Efficiency is not less material. Efficiency is material where it matters. 3DCP allows structure to follow force, not convention. Different situations demand different solutions — and we accept that.

We work with: variable structural logics, material flows shaped by stress, geometry driven by performance. This is not optimization.
It is architectural specificity made possible

by technology. Optional closing line (only if you want one strong ending)

3DCP is not the future of construction. It is the present of architectural responsibility.




WHO WE ARE

We are Coral Architects, the creative division of Coral, where imagination meets automation. We design architecture native to 3D concrete printing, translating vision and dreams into data, then into buildable form.

WE DESIGN

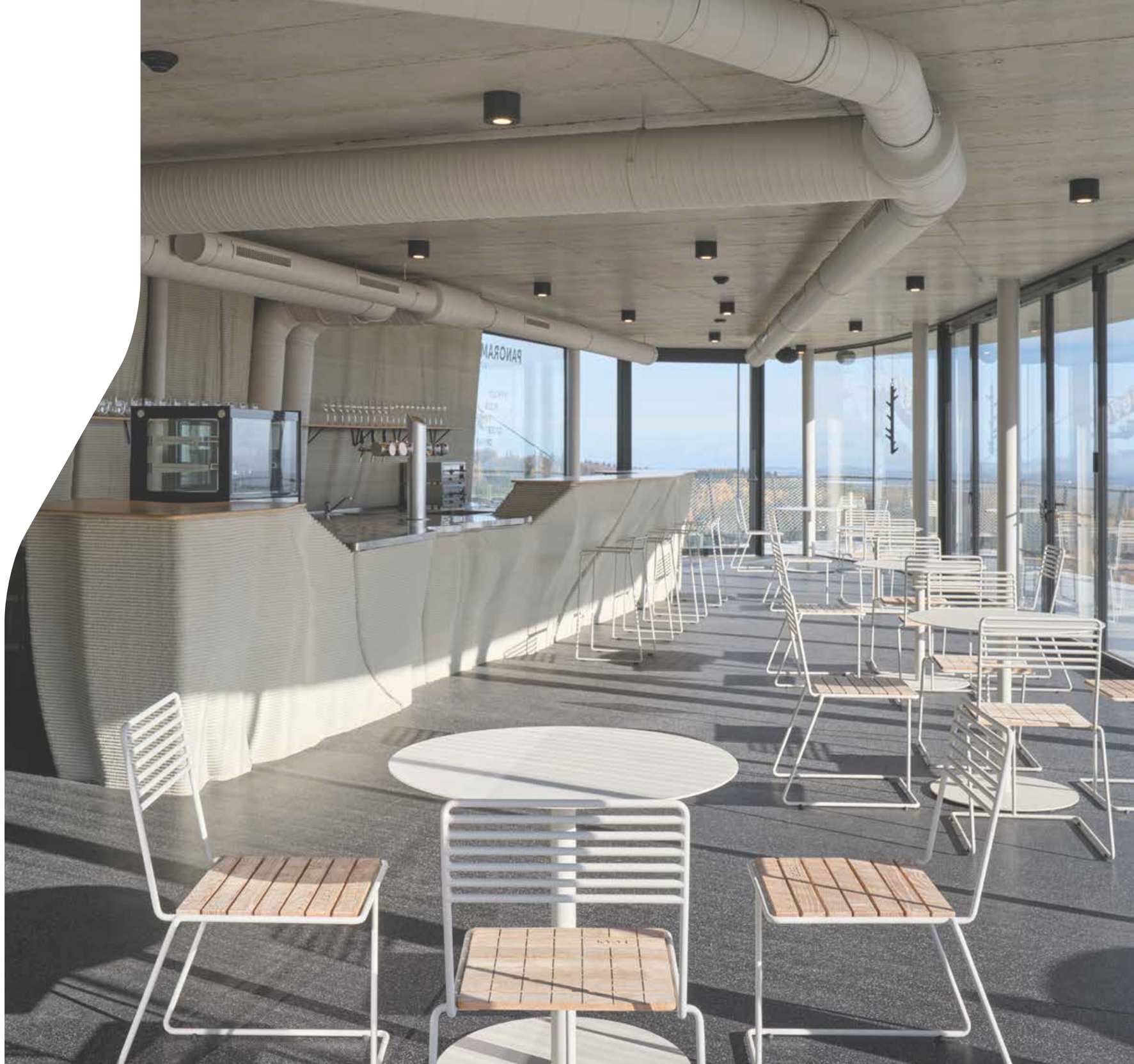
We create architectural and spatial concepts tailored to your needs, spanning initial ideation through a production-ready model.

WE PRINT

Do you want to turn your project into 3DCP? We collaborate with architects, studios, and developers to turn projects into 3D-printed reality.

WE EDUCATE

We share our knowledge and experience through tailored courses, workshops, and consultations.



CORAL CONSTRUCTION TECHNOLOGIES ECOSYSTEM

ROBOTIC CONCRETE PRINTER
SALES & LEASING

3D CONCRETE PRINTING
AVAILABLE AS A SERVICE

CORAL ARCHITECTS
3DCP DESIGN & ENGINEERING

CONSTRUCTION AUTOMATION
SYSTEM INTEGRATION

Coral Construction Technologies
Global 3DCP Ecosystem

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