

Yifan Shi

Portfolio



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基本信息



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个人简介

建筑与生物综合设计师，专注于**机器人制造、数字建造与可持续材料**。具备**跨学科协作与创新思维**，能够结合**参数化设计与机械臂技术**，推动建筑技术革新。擅长**3D 建模、快速原型制造与数据分析**，在跨文化团队中高效执行项目。

语言能力: 中文 (母语), 英文 (专业交流)

教育背景

2021 - 2023 建筑硕士 M.Arch - 生物综合设计 (Bio-Integrated Design)
英国伦敦 伦敦大学学院 巴特莱特建筑学院
• 研究方向: 参数化设计、可持续生物材料、机器人制造。
• 公开汇报: 参与学术演讲, 与国际团队及导师深度交流。
• 关键技能: 生物材料、机械臂编程、3D 打印、算法设计。

2016 - 2021 工程学士 BEng - 城乡规划
黑龙江哈尔滨市 东北林业大学 园林学院
主修课程: 课程涵盖建筑设计、城市规划、景观设计

2017 - 2020 文科学士 BA - 英语 (双学位)
黑龙江哈尔滨市 东北林业大学 外国语学院

工作 & 项目经验

2024.02 - 2024.06	机械臂交互艺术设计助理 - AATB GmbH / AATB Sarl	全职 线下
瑞士苏黎世 / 法国马赛		
与专注于人机交互的艺术家 AATB 工作室合作, 探索工厂车间之外的机器人和工业自动化。其旗下 Superposition 提供机械臂影像服务, 辅助剧组拍摄, 为运镜设计机械臂运动路径。		
• 展览设计与执行: · 领导 2024 米兰设计周 " Friendly Fire " 机械臂互动装置, 优化安全与交互体验 · 为 " Altered Views " 日内瓦 MappingFestival 展览重新设计 Unitree 机器狗头部外壳, 采用 3D 扫描 + 打印 技术, 提高结构稳定性		
• 影像制作: 用 Maya 为剧组提供机械臂运镜路径规划, 优化动态表现力 - Miles Greenberg at La Biennale di Venezia.		
2023.12 - 2024.01 & 2023.07 - 2023.09	建筑机械臂助理 - Studio BioCENE	兼职 线下
英国伦敦 • 智能制造研究: " Augmented Polycultures " 机器人粘土挤出项目, 助力 生物修复装置制造 (汉堡工艺美术博物馆 - "Water Pressure" 展览; 苏黎世设计博物 - "Water: Designing for the future") • 景观装置研究: " Garden Anthromes ", 探索 土壤健康恢复与机械臂冲击打印技术 - Barking Riverside stockpile garden 伦敦		
08/2024 - 现在	TikTok 直播 & 店铺达人运营 - SELLERY LTD	兼职 远程
英国伦敦 负责 TikTok 直播数据分析, 优化主播策略, 首月助力 Tik Tok 日用品商家直播业绩增长 51%; 管理 TikTok 头部宠物商店联盟运营		
2023.12 - 2024.02	TikTok 达人运营 - SELLERY LTD	兼职 远程
英国伦敦 搭建达人与电商合作模式, 基于数据分析优化选品策略, 提升达人增长效率		
2020.07 - 2020.09	建筑实习生 - Henan KDNEU International Engineering CO., LTD	全职 线下
河南郑州 参与工业建筑设计, 辅助完成 CAD 技术图纸以及建筑表达图纸绘制。加深了行业的工作流程和规范的理解。		

汇报与发表

2024.07	DigitalFutures & CDRF 2024 同济大学 - 中国上海	
学术汇报 《 Hygroflex: 水响应式外墙系统中的木材与生物聚合物集成原型设计 /Hygroflex: A prototype of a water-responsive facade system with an innovative integration of timber and biopolymer 》		
2023.12	Arup 奥雅纳 - 英国伦敦	
项目演讲 《Hygroflex: Advancing animate materials for environmentally responsive architecture》		
2019.03	《哈尔滨市中央大街色彩特征研究》 - 《山西建筑》期刊	
http://www.cqvip.com/qk/93913x/20193/7001107592.html		

获奖经历

2023	最佳实践奖 - Urban Shift for green innovations "Hygroflex" https://urbanshift.eu/?page_id=5078
2019	三等奖 - 全国高等院校大学生乡村规划方案竞赛 "乡村生活发生器" -- 户厕单元 山西省西岭村
2019	优秀奖 - 全国高等院校大学生乡村规划方案竞赛 -- 方案调研 山西省西岭村
2020	荣誉奖 - 园冶杯大学生国际竞赛 "乡村规划设计 居芳而栖, 临水而歌" —— 基于花文化塑造的黎明村
2019	荣誉奖 - UIA-HYP 霍普杯 国际建筑竞赛 "KING OF HUMOR"
2017	大学组二等奖 - 哈尔滨工业大学第八届建造节 "Clouds in the city"

专业技能

设计 & 建模: Rhinoceros 3D Grasshopper AutoCAD Houdini FX Fusion 360
可视化 & 渲染: Redshift Lumion Adobe Creative Suite
制造 & 机械臂: Robotics 3D Printing CNC Milling KUKA/UR10 机械臂操作
数据分析 & 规划: ArcGIS Autodesk CFD

数字建造 & 机器人制造

DIGITAL FABRICATION & ROBOTIC MANUFACTURING

- HygroFlex II
*M. Arch_June 2023
Biomaterial / Robotic manufacturing*

- HygroFlex I
*Apr. 2023_M. Arch_
Biomaterial / Robotic manufacturing*

- Augmented Policultures
*Dec. 2023_Robotic Fabricator Assistant_Studio BioCENE
Biomediation installation / UCL_Robotic 3D printing*

- Garden Anthromes
*Aug. 2023_Robotic Fabricator Assistant_Studio BioCENE
Biomediation installation / UCL_Robotic impact printing*

生物材料 & 可持续建筑

BIOMATERIALS & SUSTAINABLE DESIGN

- EcoMycAir
*M. Arch_Jan. 2022_
Interior_Computational design / 3D printing*
- Plastic Upcycling in Zhoushan Village
Aug. 2024_Gaau 1up / Plastic Upcycling

艺术 & 互动装置

ART & INTERACTIVE INSTALLATIONS

- Friendly Fire
*Apr.2024_Design Assistant For Robotic Art_AATB GmbH
Robot - Human interactive exhibition for Milan Design Week 2024*
- Altered Views
*May 2024_Design Assistant For Robotic Art_AATB GmbH
Robot - Human interactive exhibition for Milan Design Week 2024*
- AATB for Miles Greenberg at La Biennale di Venezia
*Apr.2024_Design Assistant For Robotic Art_AATB GmbH
Robot - Human interactive exhibition for Milan Design Week 2024*

传统建筑与概念设计

TRADITIONAL & CONCEPTUAL ARCHITECTURE

- Traditional Art Incubator
*Oct. 2020_Undergraduate_
Conceptual architecture design*

- King of humor
*Aug. 2019_Undergraduate_
Conceptual architecture design*

- Back to Country
*Dec. 2020_Undergraduate_
Conceptual SITE design*

其他作品

- Advanced computational design
- Photography
- Construction work

OTHER WORK

数字建造 & 机器人制造

DIGITAL FABRICATION & ROBOTIC MANUFACTURING



HygroFlex II | 机器人混合制造 | 2023

[Bpro Show 2023详情请点击](#)

技术: CNC 铣削 + 机器人 3D 打印 (ABB IRB1600)

材料: 工业废木屑 + 水凝胶复合材料

应用: 环境响应型立面系统, 可随湿度变化调整形态

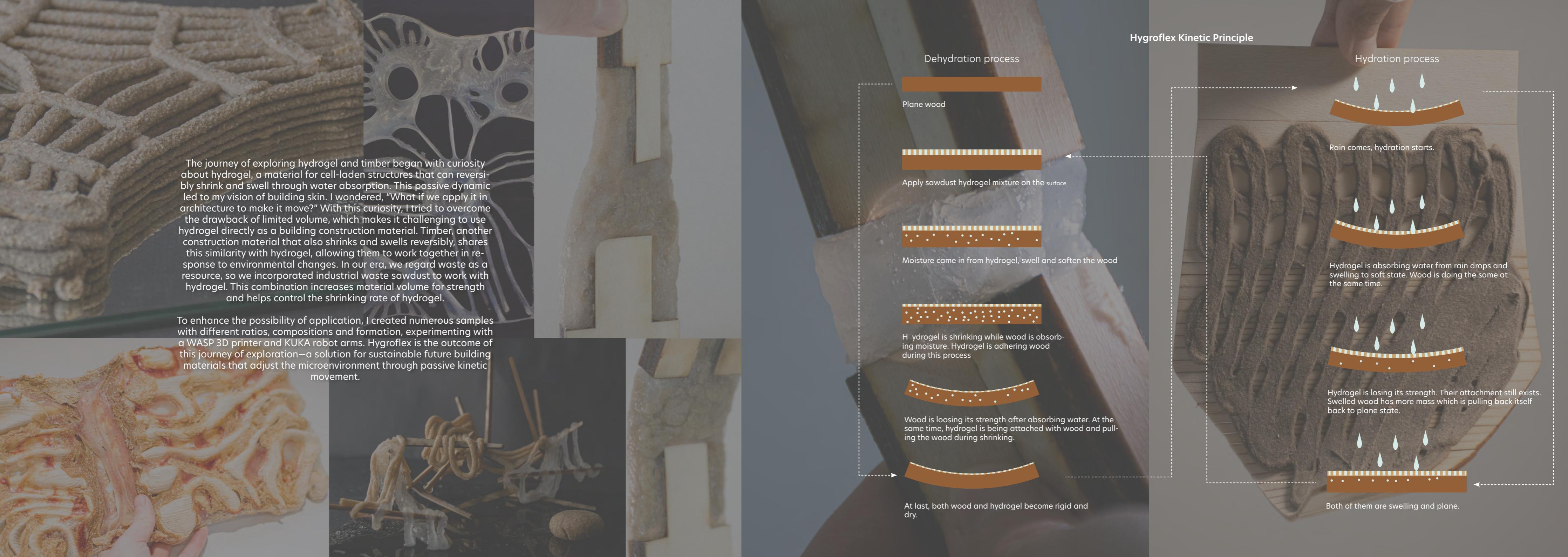
成果: - 在 B-Pro 2023 展览 展示

- 论文发表于 CDRF 2024 (上海同济大学)

-研究方向: 可持续建筑材料、机器人制造精度优化

Hygroflex II 研究了响应式形变立面系统。每个组件均采用减材制造与增材制造相结合的混合加工方法制成。形变模式通过计算机模型编程生成，并在大型平板 CNC 机床上进行铣削加工。随后，利用 ABB IRB1600 工业机器人，通过非平面路径沉积由工业废木屑制成的复合材料。

在这两个项目中，我探索了混合制造技术以及形变构件的设计，并研究其在建筑环境中的集成应用。



Hygroflex Kinetic Principle

Dehydration process

Plane wood

Apply sawdust hydrogel mixture on the surface

Moisture came in from hydrogel, swell and soften the wood

Hydrogel is shrinking while wood is absorbing moisture. Hydrogel is adhering wood during this process

Wood is losing its strength after absorbing water. At the same time, hydrogel is being attached with wood and pulling the wood during shrinking.

At last, both wood and hydrogel become rigid and dry.

Hydration process

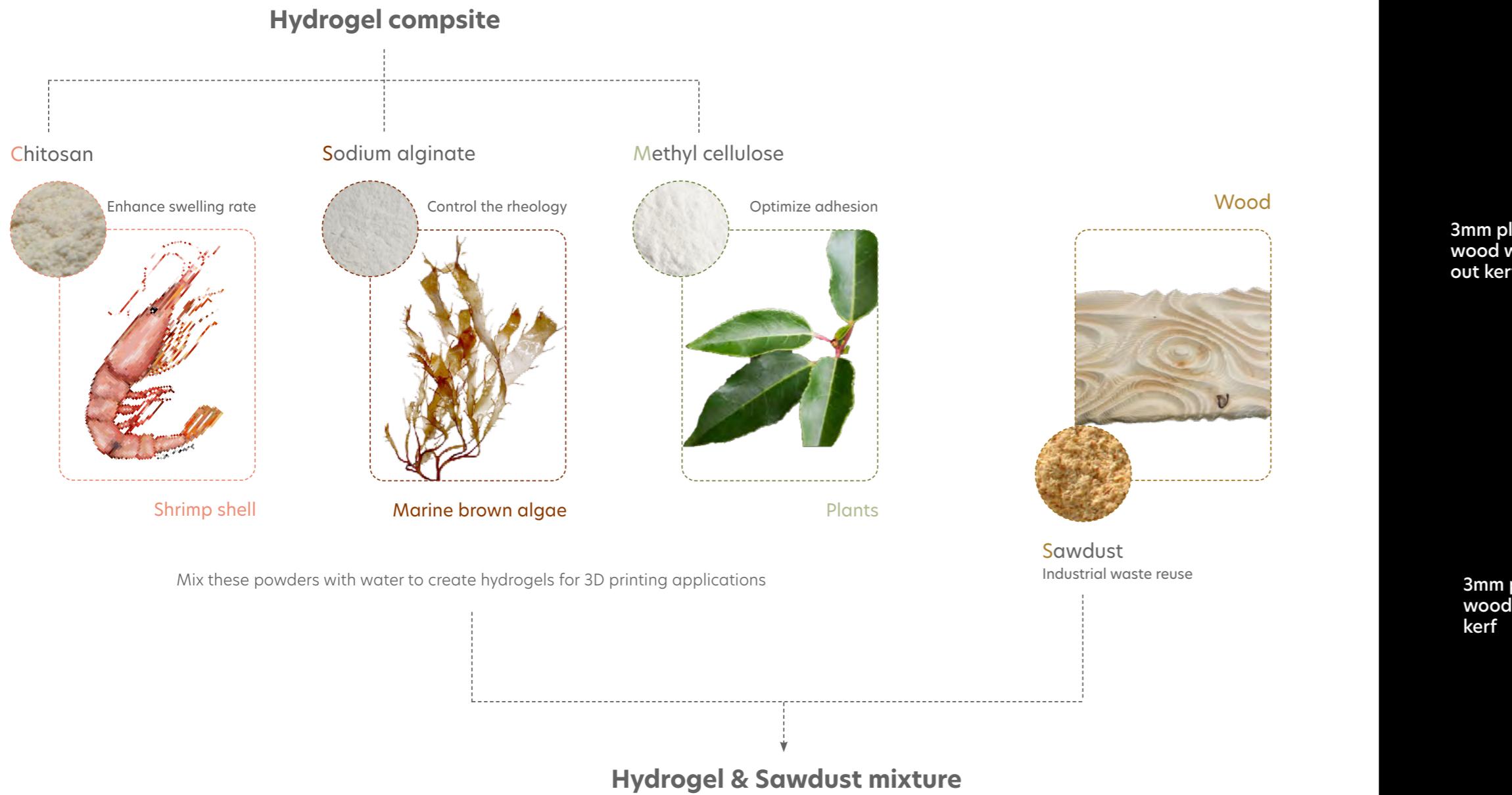
Rain comes, hydration starts.

Hydrogel is absorbing water from rain drops and swelling to soft state. Wood is doing the same at the same time.

Hydrogel is losing its strength. Their attachment still exists. Swelled wood has more mass which is pulling back itself back to plane state.

Both of them are swelling and plane.

Formulation of materials for robotic extrusion



Small-scale handmade bending test



Material Bending Behavior Test Samples

Shape-changing test of sawdust hydrogel
Nozzle diameter: 5mm



100ml H₂O -
2% Chitosan
1.3% Sodium alginate
8.8% Methylcellulose
16.9% Sawdust
Layers : 2
Duration: 1.5h

100ml H₂O -
2% Chitosan
1.3% Sodium alginate
8.8% Methylcellulose
16.9% Sawdust
Layers : 4
Duration: 3h

100ml H₂O -
2% Chitosan
1.3% Sodium alginate
8.8% Methylcellulose
16.9% Sawdust
0.4% Glycerine
Layers : 2
Duration: 20min

100ml H₂O -
2% Chitosan
1.3% Sodium alginate
4.4% Methylcellulose
16.9% Sawdust
0.4% Glycerine
Layers : 4
Duration: 40min

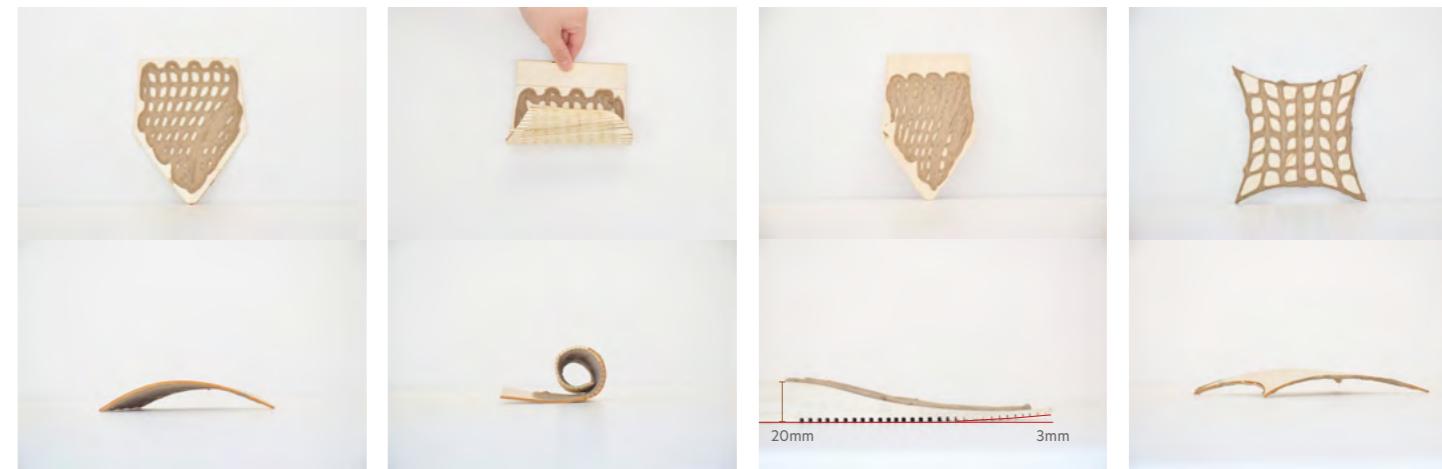
Bending test of sawdust hydrogel printed on plain plywood



4 layers deposition
6mm diameter
3mm plywood from bmade

5 layers deposition
6mm diameter
3mm plywood from bmade

Bending test of sawdust hydrogel applied to various treated plywood surfaces



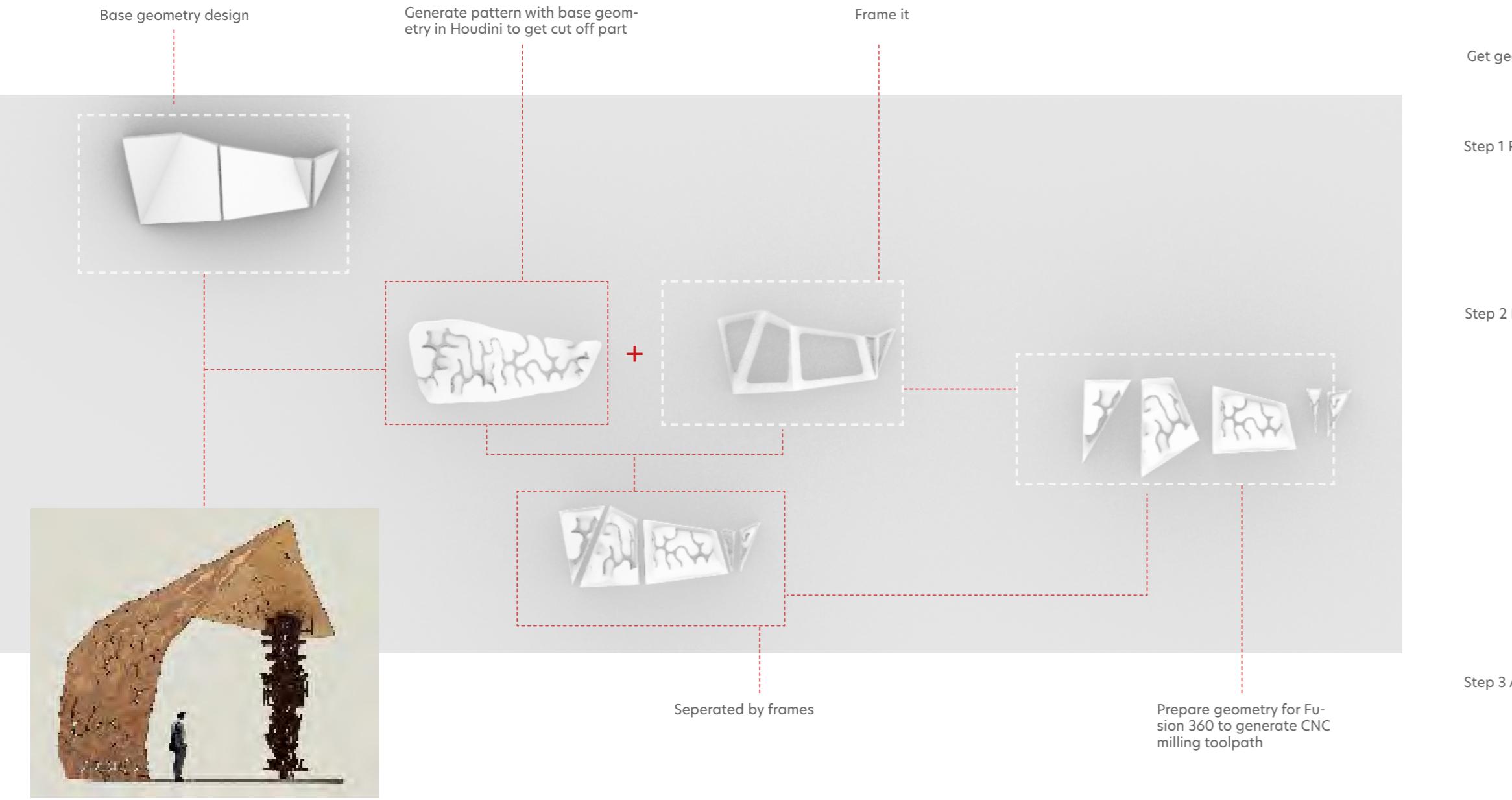
Base: 3mm ply wood

Base: 3mm ply wood with kerf

Base: pine wood with gradient thickness and kerf

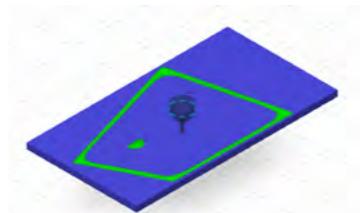
Base: 3mm ply wood

From design to Fabrication

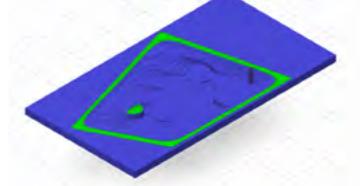


CNC MILLING programme
Machine: Felder (in Bmade Here East)

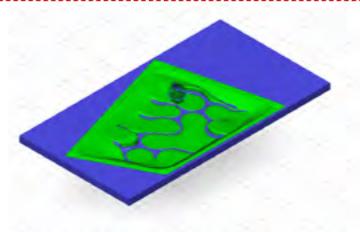
Get geometry ready



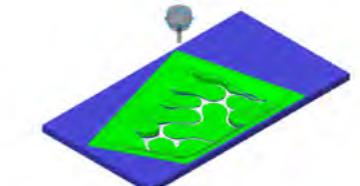
Step 1 Roughing



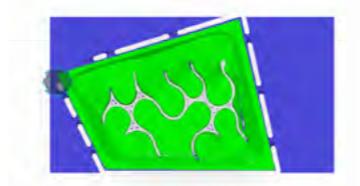
Step 2 Finishing



Contour



Step 3 Add tabs



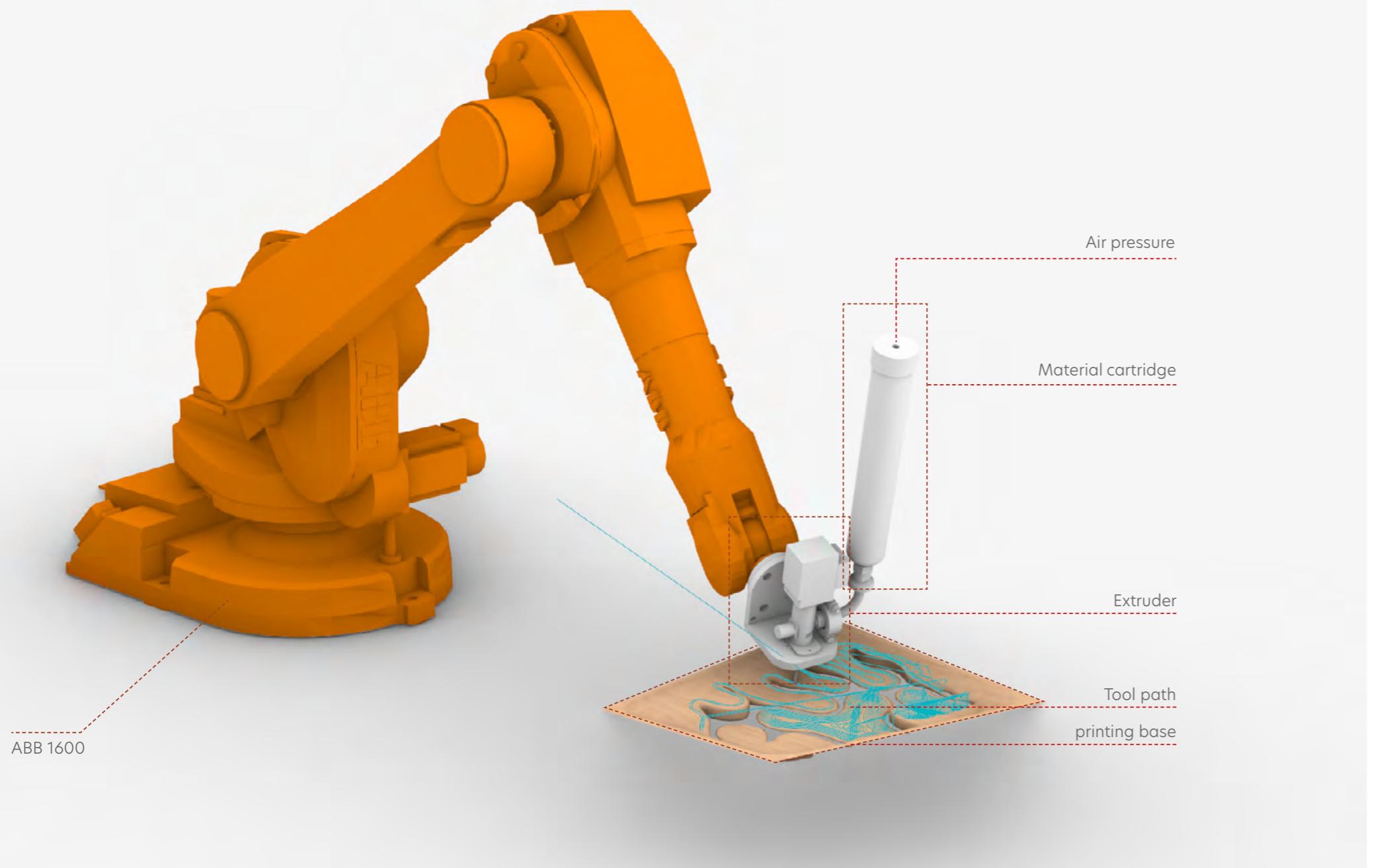
Fast clean the extra stock with bigger drill

1. Polish the surface.
2. To generate toolpath for robotic 3d printing

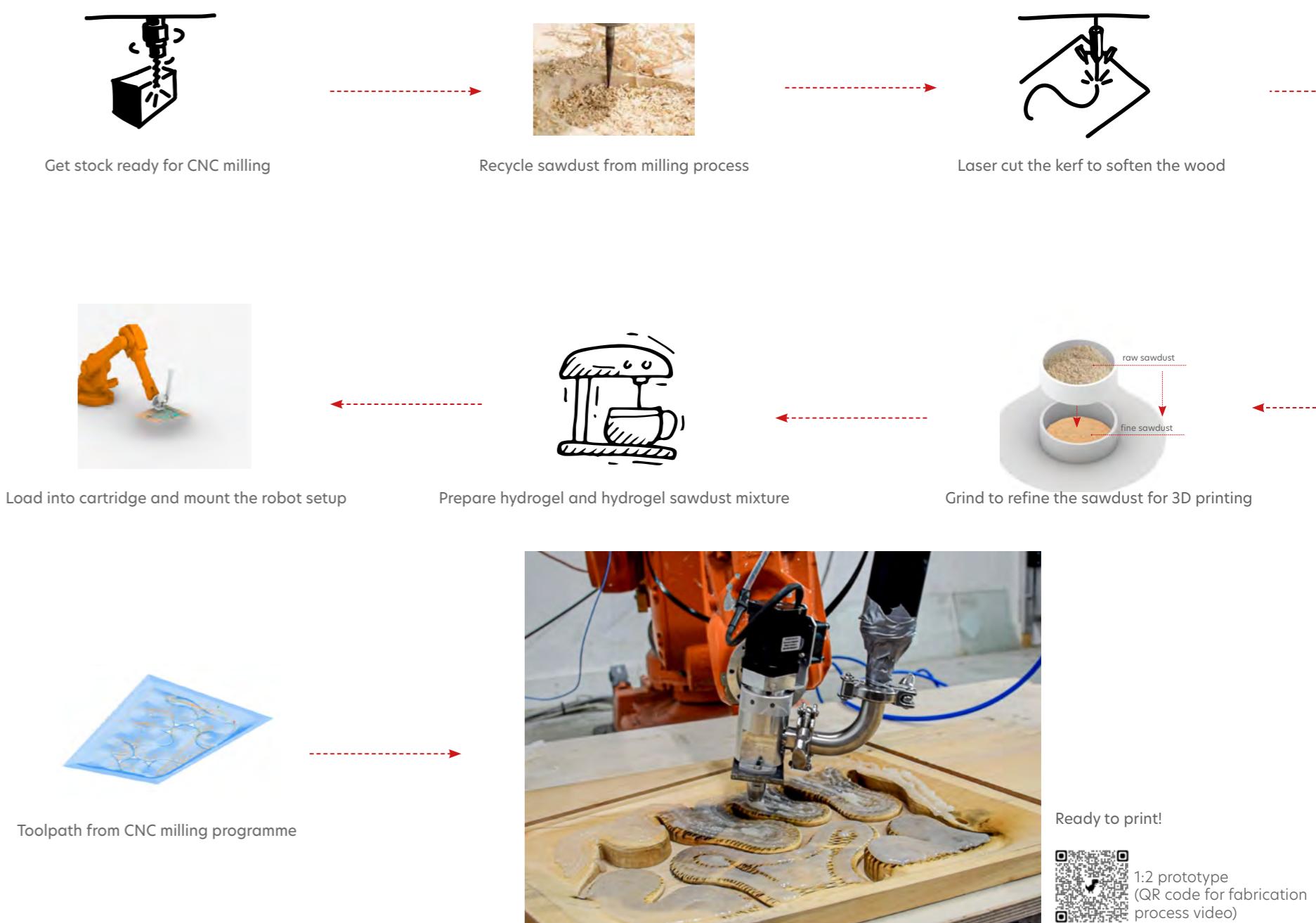
Use smaller drill to finish detail

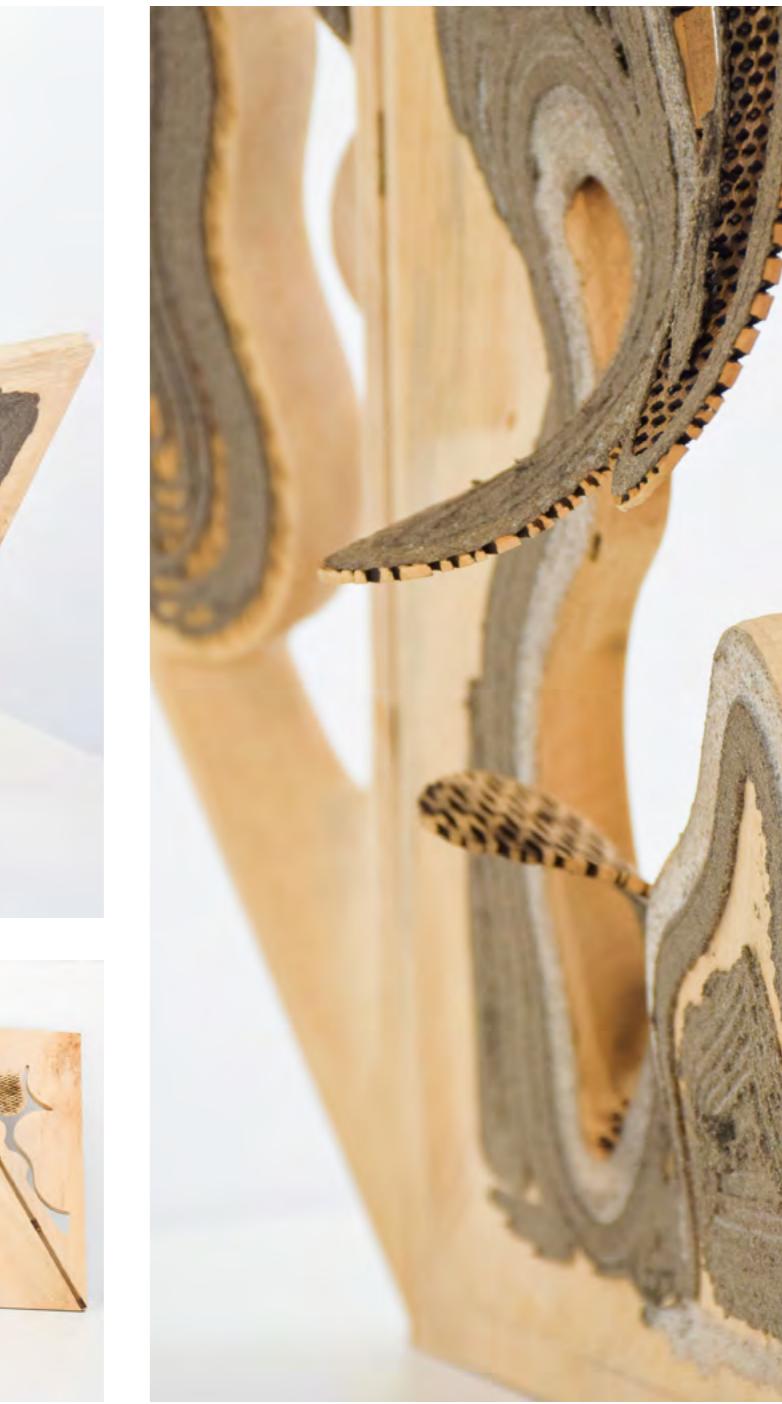
To clean out the boundary of the geometry with tabs for following refine steps

Multi-material Robotic 3D printing set up



Workflow - Subtractive to Additive manufacturing methods





Presentation and report



Presenting HygroFlex at Tongji University – Yifan on the left, Satyam on the right
Digital Future & CDRF 2024



Presenting HygroFlex at Arup – Yifan on the left, Satyam on the right
2023 Dec.



HygroFlex I | 湿度驱动变形构件 | 2023

技术: 激光切割 + 3D 打印 + 机器人装配

材料: 木材 + 水凝胶混合物

研究重点: 形变行为参数化建模 (Houdini + Grasshopper)

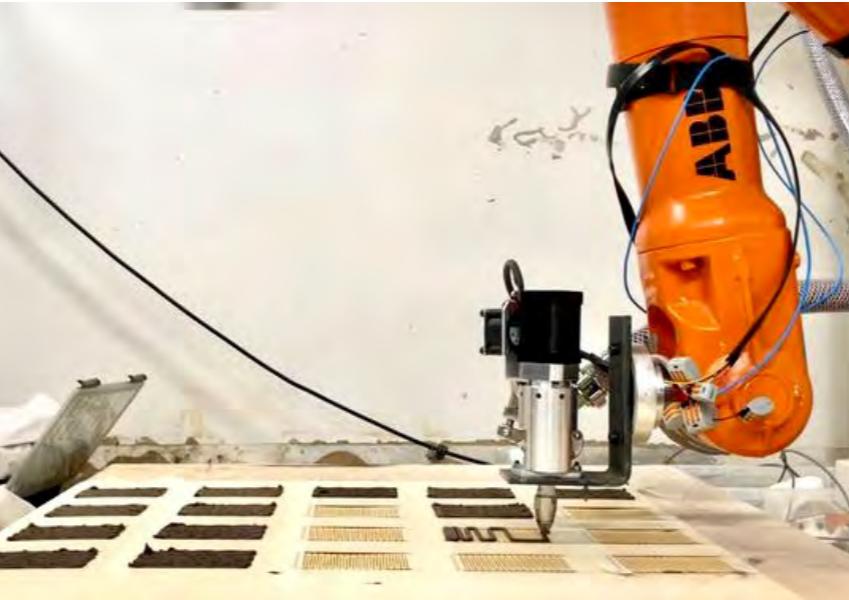
机器人路径优化 (Fusion 360 + Rhino)

材料吸湿-变形动态控制

本研究项目提出了一种创新方法，用于设计和制造能够被动响应湿度变化的可变形幕墙。该研究融合了先进技术，如机器人3D打印和激光切割胶合板，并结合木构榫卯拼接与刻痕技术，以增强木材的柔韧性。

幕墙的核心功能依赖于一种独特的材料组合——锯末与水凝胶的混合物。该复合材料对湿度变化表现出卓越的响应能力，使木质构件能够随环境湿度的变化发生弯曲和形态转变。

本研究重点优化设计参数、材料特性及制造工艺，以实现高度自适应且兼具美学价值的幕墙系统。研究成果在可持续建筑领域具有广阔的应用前景，通过被动环境响应提升能源效率和居住舒适度。本研究推动了环境响应型建筑围护结构的发展，展示了创新型被动变形幕墙在未来建筑设计中的潜力。



Rain simulation
(scan the QR code for hydration and dehydration process)



Water Pressure exhibition in MK&G, Hamburg. Photo credit: Marcos Cruz

Augmented Policultures

| 机器人陶瓷 3D 打印 | 2023

[详情请点击](#)

项目地点: 汉堡工艺美术博物馆 (MK&G)

应用: 生物修复装置, 可改善废水处理与微生物生长

制造技术: 机器人陶瓷 3D 打印 (KUKA KR60)

自适应水循环系统设计

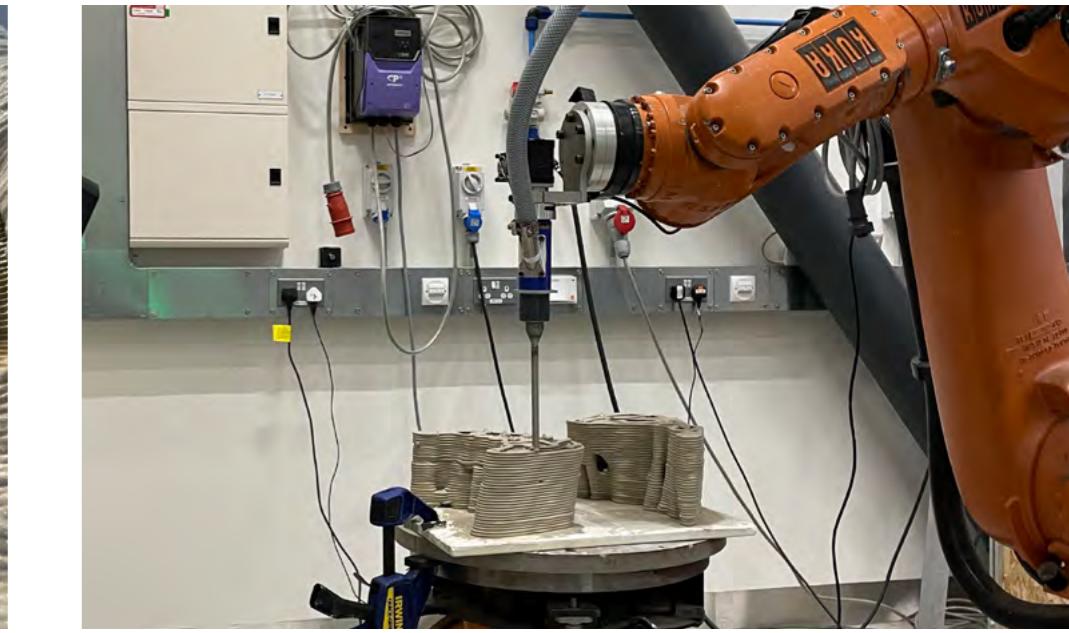
釉面调控微生物附着率

装置致力于灰水与地表径流的净化, 为未来的生物
纪之家 (Biocene House) 提供创新解决方案。该
结构作为一种分散式水处理系统, 能够高效降解并去除
表面活性剂、磷酸盐、重金属及其他有机污染物, 助
力水资源的可持续循环。

我们正在研发陶瓷系统, 通过精确控制孔隙率, 并结
合形态设计与釉面处理, 提升材料的生物亲和性, 从
而引导微生物的定向生长。借助计算设计与先进制造
技术, 我们构建了一种循环水机制, 不仅促进微生物
群落的繁衍, 还能将原本不适宜的环境转化为多样化
生态系统的一部分, 实现水资源的生态复苏与再生
利用。



Model in detail. Pic from Studio BioCENE



Robotic 3D printing Clay.





On-site view. Photo by author

Garden Anthromes

机器人冲击打印 | 2023

项目地点: 伦敦 Barking Riverside

研究目标: 通过可降解结构改善土壤健康

制造技术: 冲击打印 (Impact Printing)

现场土壤 3D 成型

结构随时间分解, 促进生物多样性

本项目探讨了建筑作为生物修复载体的潜力, 旨在通过临时性干预对污染土壤进行生态修复。项目选址于泰晤士河畔巴金区 (Barking) 的一处临时场地, 尝试利用建筑介入的方式促进土壤环境的恢复。

生物修复 (Bioremediation) 是一种利用生物系统去除环境污染物的过程, 可将有害污染物降解、转化或固定。本项目提出了一种结构概念, 其微生物群落在局部呈现出差异化分布, 以适应场地特定的环境交互, 形成建筑与场地之间的动态共生关系。

项目通过几何形态、材料成分及生物修复因子的空间布置的精细调控, 有序引导结构的降解过程, 使建筑随着时间推移逐步分解, 并在此过程中重塑场地生态。

该结构由本地采集的亚土 (subsoil) 与生物兼容聚合物混合而成, 后者能够为微生物提供栖息环境, 以修复场地特定的污染物。材料在水合状态下被塑造成单元体, 并采用冲击打印 (Impact Printing) 进行装配——这是一种受传统夯土建造启发的创新机器人制造技术, 可快速聚合可塑性材料单元, 以形成整体结构。



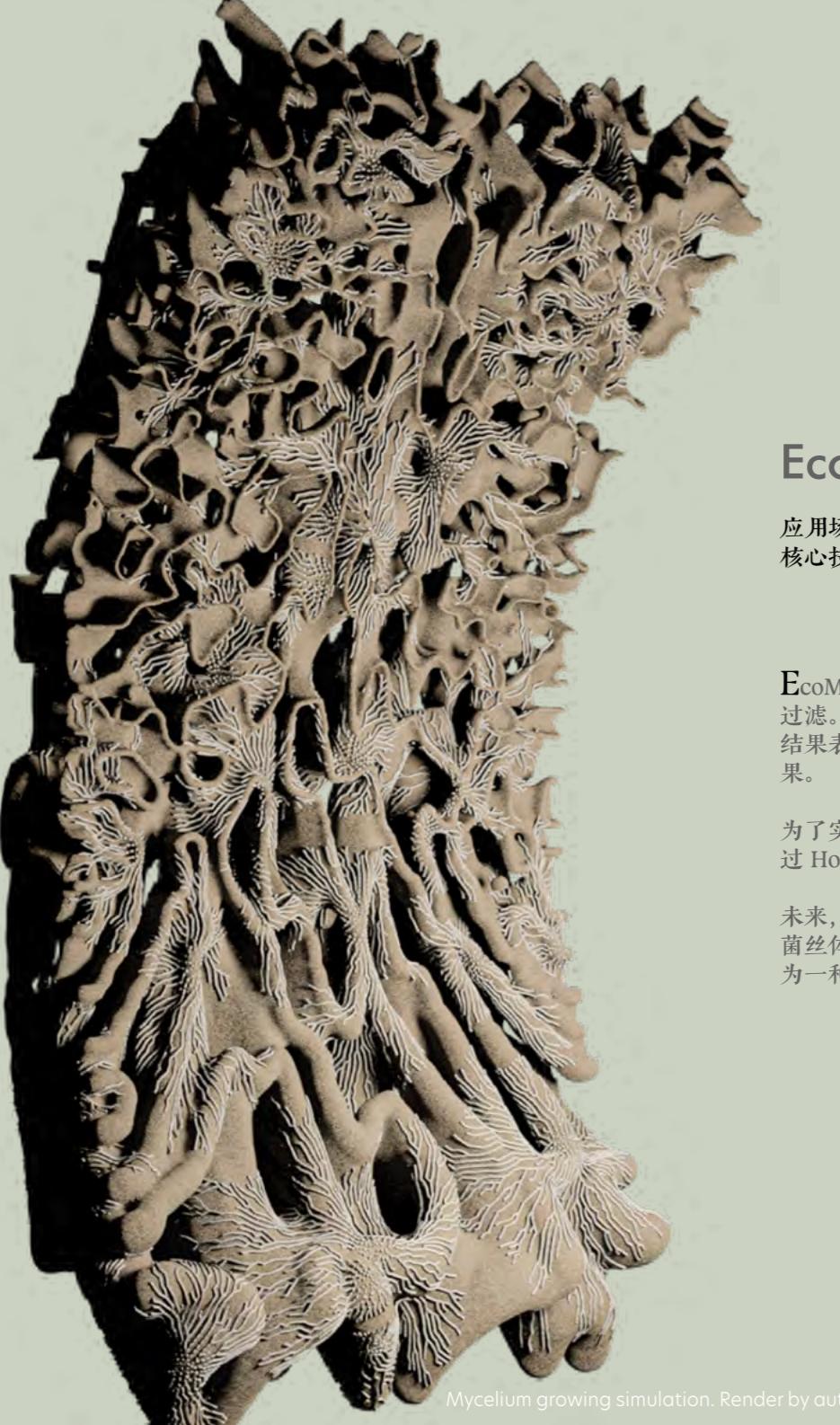
Fabrication process. Photo by Kenneth



On-site assembly.

生物材料 & 可持续建筑

BIMATERIALS & SUSTAINABLE DESIGN



EcoMycAir | 菌丝体空气净化系统 | 2022

应用场景: 地铁 & 隧道空气污染治理

核心技术: 菌丝体基材设计 (基于农业废料)
粘土 3D 打印 (WASP 3D Printer)
空气流动模拟 (CFD 分析)

EcoMycAir 旨在探索一种创新的空气净化方法，在地下车站环境中利用菌丝体 (Mycelium) 进行空气过滤。团队在设计中采用了三轴旋转 (Gyroid) 结构，通过最大化面板的表面积来优化气流流动。实验结果表明，菌丝体具有吸附空气中金属颗粒的能力，并能在制造的面板内持续生长，从而提升净化效果。

为了实现概念的实际应用，团队使用 WASP 3D 打印机打印了陶土，制造出一款原型。该原型的形态通过 Houdini 生成，并在 Grasshopper 中进一步优化，以确保结构性能和空气流动效率。

未来，团队计划采用由农业废弃物制成的复合材料，并通过相同的 3D 打印工艺进行沉积，以创造适合菌丝体生长的环境。这一复合材料不仅提供可持续的生长基质，还将增强系统的空气净化能力，使其成为一种高效、环保的解决方案。

Mycelium growing simulation. Render by author

Background



Heavy Metals Prevalent in the Underground



Mycelium Amazing Properties



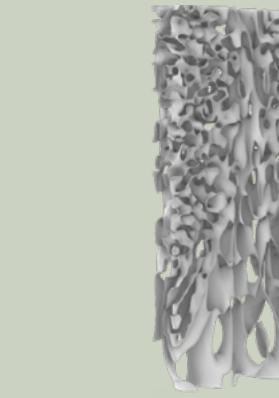
Formation



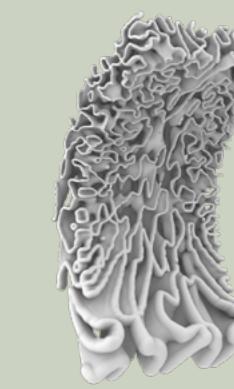
Start with a simple panel



Try to use gyroid to maximum the surface area



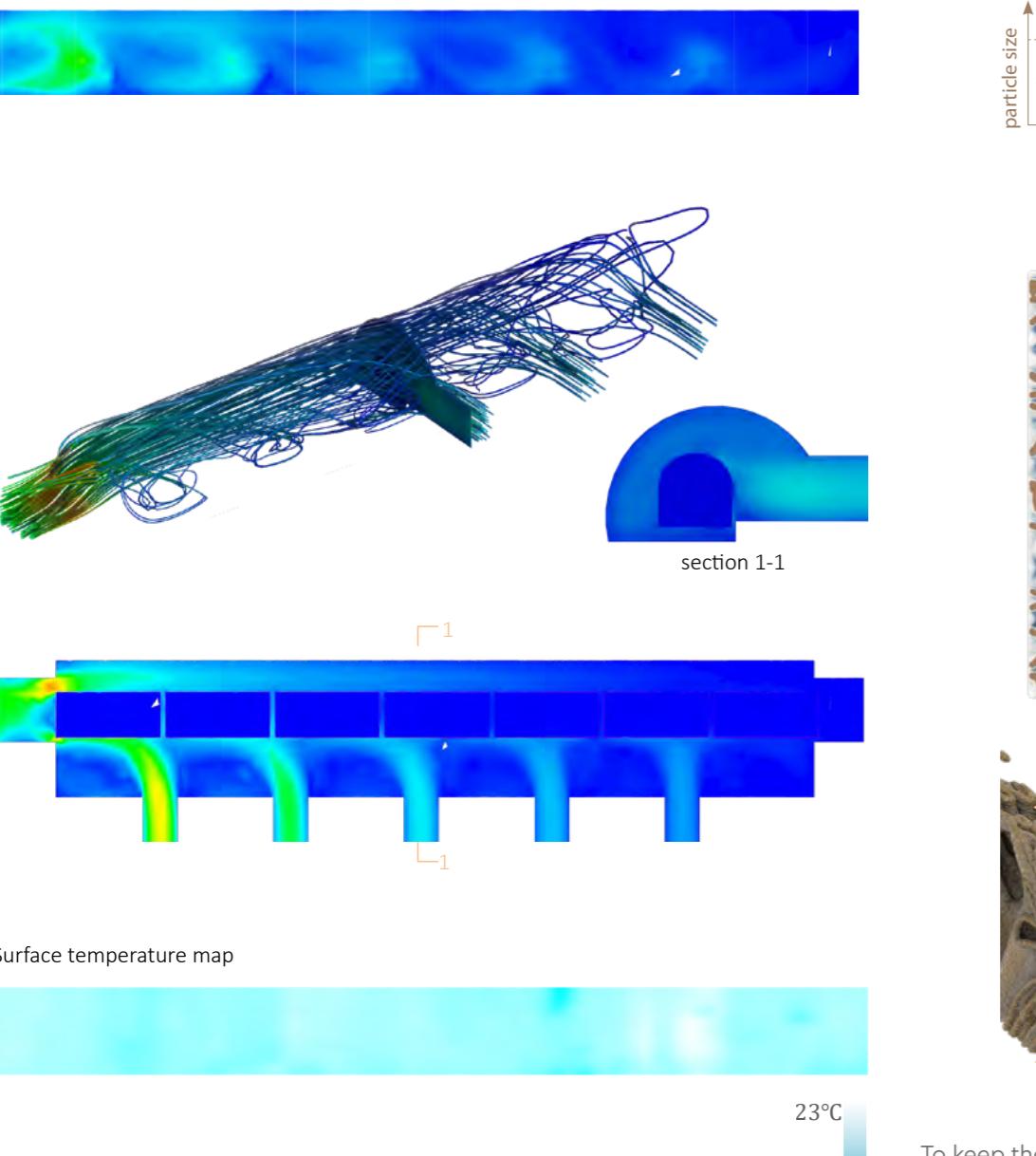
Adjust the density of ventilation hole



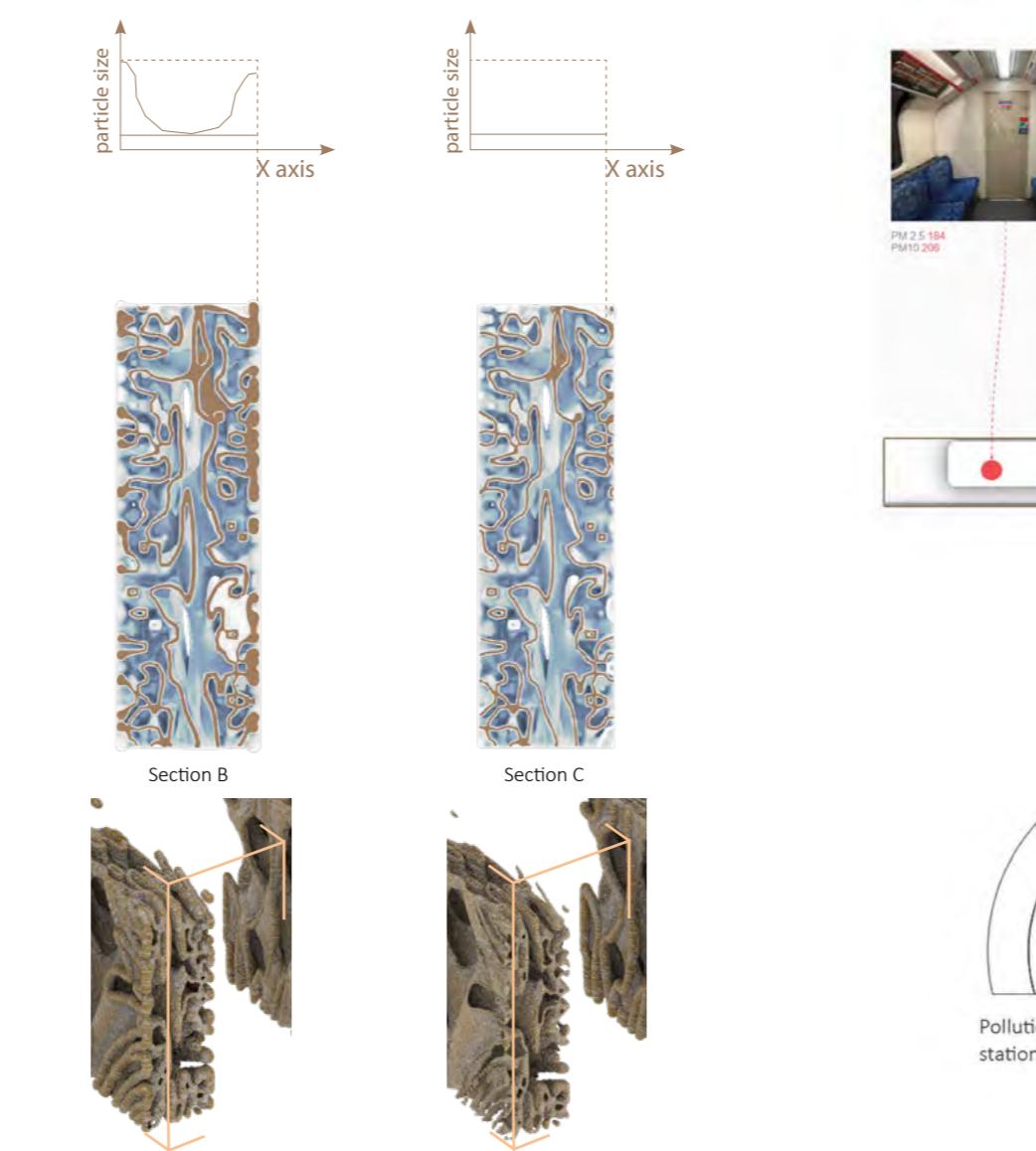
Adjust the thickness according the amount of PM2.5 and PM10
Bend the shape to adapting the tunnel

Environment analysis

Simulation of the wind path in Tunnel

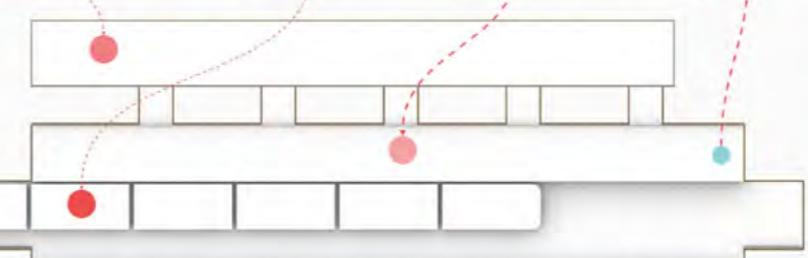


Particle size parameter of geometry

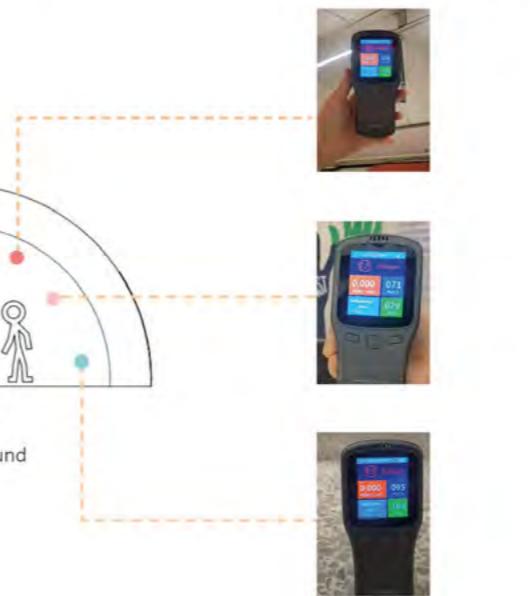


To keep the humidity, we are trying to manipulate the geometry particle size. From section B, we can see the larger outside particle can provide more inner space which has more shadow and we assumed it can keep the humidity and temperature to provide a better environment for mycelium.

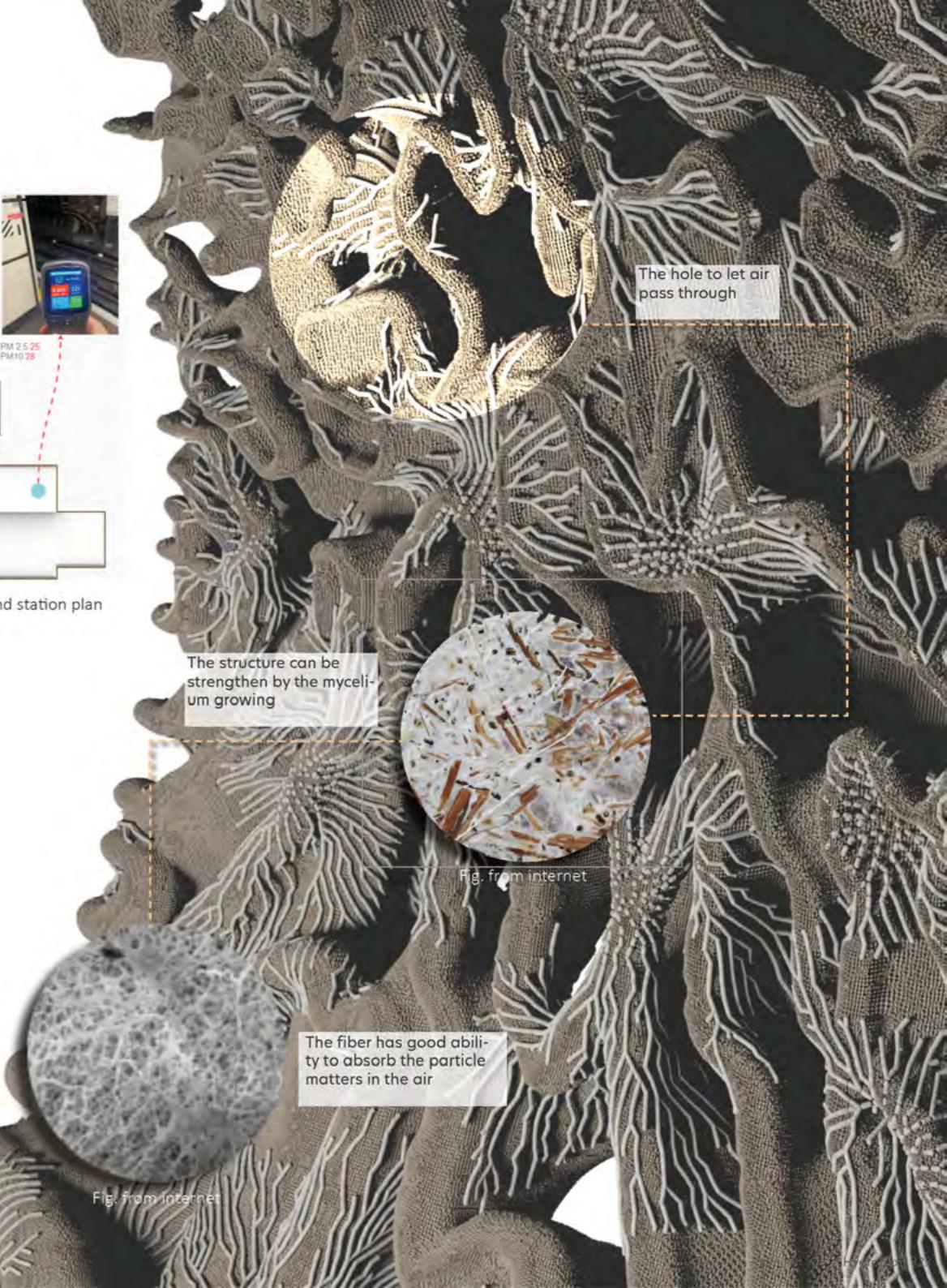
Site pollution research



Pollution map of underground station plan



Pollution map of underground station-section

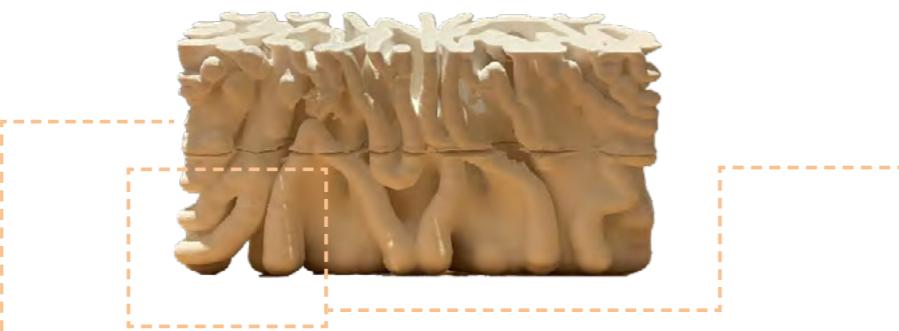


Due to the limitation of time and other situation, we failed to make the whole pollution map. But this pollution map can be compared with wind simulation which can tell that the pollution usually exists in the area with less wind.

Prototyping



Model generated using Houdini



Plastic Upcycling in Zhoushan

乡村塑料循环再生 | 2024

合作团队：香港 Gaaau' Up
成果：设计并制作 PET 瓶编织家具
建立村镇 塑料回收站
举办材料回收 & 再利用工作坊

在河南省郑州市登封市的周山村，我们开展了一场为期两周的工作坊，探索创新的塑料再生方法，推动乡村可持续发展。我与香港知名塑料回收工作室 Gaaau' Up 合作，为项目引入专业知识与创新视角。

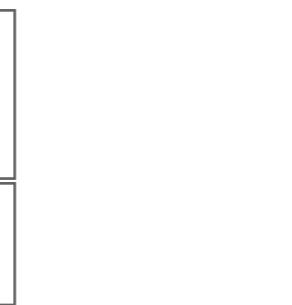
在此次工作中，我发挥了关键作用，提出了PET 瓶编织的创意方案，该方法在实践中取得了出色的效果，并广受欢迎。此外，我还负责设计与制作功能性家具，如长凳和凳子，并采用回收聚丙烯（PP）材料进行建造，实现了材料的高效再利用。

工作坊的意义远不止于模型制作，我们还组织了多场互动活动，为当地村民普及塑料再生技术，鼓励他们养成可持续生活方式。这些实践性强的动手课程让参与者掌握了环保知识和实用技能，使其能够在日常生活中践行绿色理念。

作为本次项目的长期成果，我们协助建立了村内的永久性塑料回收站，这一设施成为回收与处理塑料废弃物的中心枢纽，为社区搭建起可持续发展的基础设施。我们的核心目标是让可持续发展理念深植于村民的日常生活，从而在社区内培养长期的环保意识与资源保护意识。

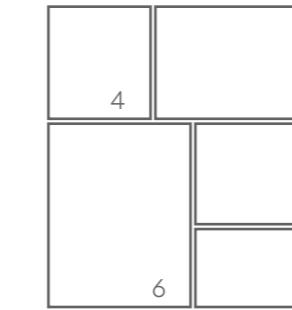
[GAAU']UP

IN SITU
PROJECT



PET Upcycle Method and Sample Made

1. Sample of recycled PET bottle woven samples and custom-made strip-making tools
2. Presenting the recycling craft method to village people
3. Upcycled PET woven bag as container



PP Upcycle Method and Sample Made

4. Set up workshop with shredding machine and extrusion machine
5. PP material bench sample made
6. Traditional stool made with PP extruded material
7. Bench-making process
8. Small bowl extrusion deposit making



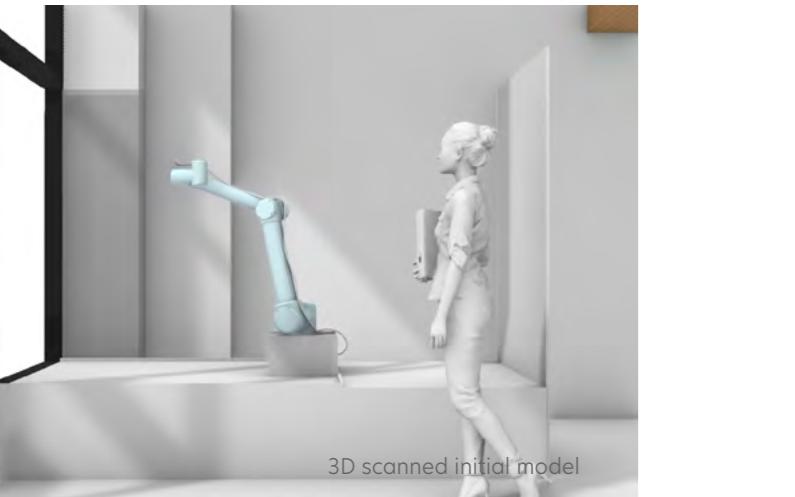
艺术 & 互动装置

ART & INTERACTIVE INSTALLATIONS

Collaboration Projects with AATB



Milan, Italy
<https://www.aatb.ch/archive/friendly-fire>



3D scanned initial model



Mock-up at studio

Friendly Fire | 米兰设计周 | 2024

职责: 机械臂互动装置设计
机器人路径编程 (Maya)
水泵 & 机械臂协同系统集成

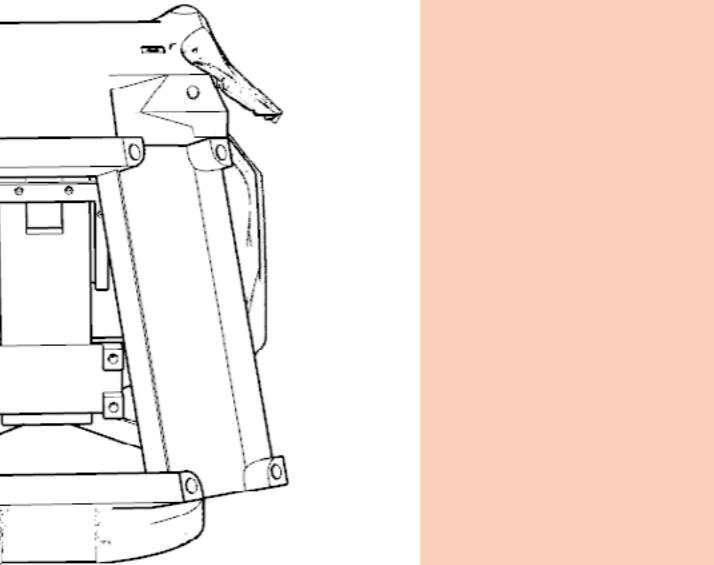


Altered Views

日内瓦 Mapping Festival | 2024

项目: 重新设计 Unitree 机器人狗头部

技术: 3D 扫描 & 3D 打印 (Fusion 360 + Rhino)



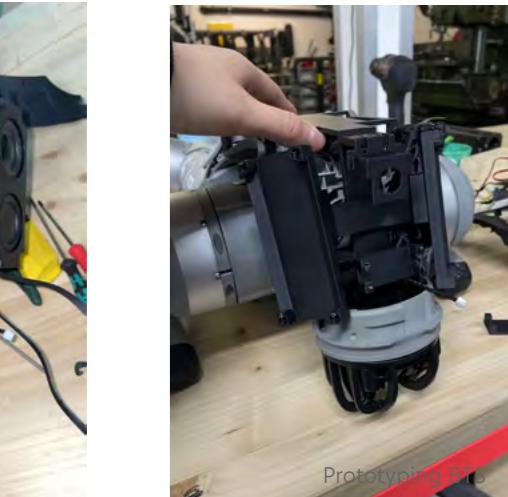
Modified version in Fusion 360 and Rhino



Geneva, Switzerland
<https://www.aatb.ch/archive/altered-views>



3D scanned initial model



Redesigned Unitree Dog head

Prototyping BTG

AATB for Miles Greenberg | 威尼斯双年展 | 2024

作品内容：机械臂动态装置辅助设计
机器人路径编程 & 交互测试



Mock-up at studio



Venice, Italy
<https://www.aatb.ch/archive/aatb-miles-greenberg>

在法国和瑞士的 AATB Studio 工作期间，我参与了多个项目，不仅提升了团队协作能力，还积累了在高强度时间压力下完成高质量设计的经验。

“Friendly Fire” 项目中，我独立负责整个系统的设计与制造，包括展览搭建及水泵与机器人运动的协调，并在四周内完成全部工作。

“Altered Views” 项目中，我利用3D 扫描与打印技术重新设计了机器狗的头部。同时，在 “AATB for Miles Greenberg” 作品中，我使用 Maya 协助机器人手臂的运动设计。

AATB 是我在欧洲的第一份工作，这段经历不仅富有启发性，更令人感动。他们以家人般的包容让我全身心投入创作，并为我打开了人机交互 (HCI) 领域的大门，使我得以深入探索科技与艺术融合的创新实践。

传统建筑与概念设计

TRADITIONAL & CONCEPTUAL ARCHITECTURE

Traditional Art Incubator

恩宁路文化复兴 | 个人学生作业 | 2020

项目背景：广州老街区更新，
支持传统工艺复兴

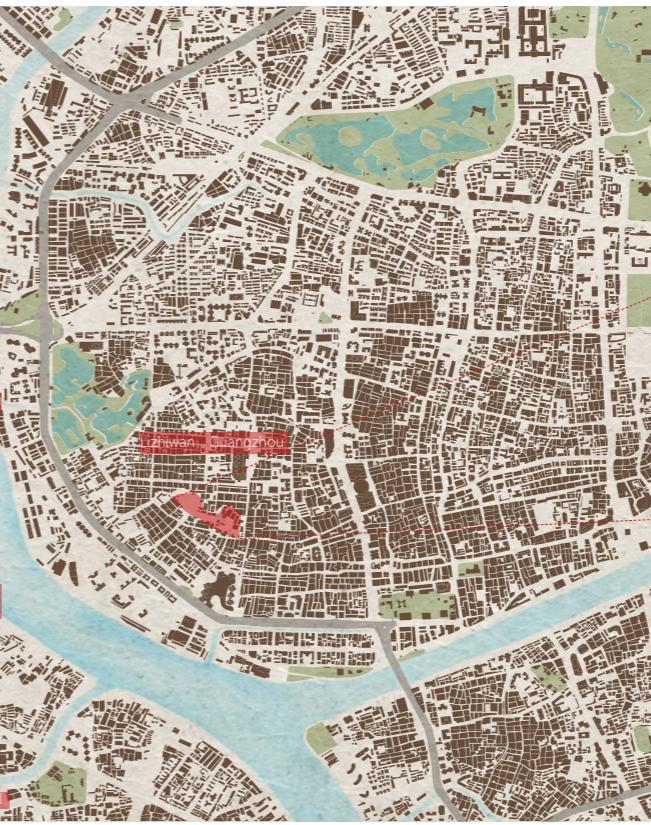
核心策略：

- 保护与改造并行：保留骑楼建筑，内部空间重新规划
- 公共空间激活：融入艺术家工作室 + 展览空间

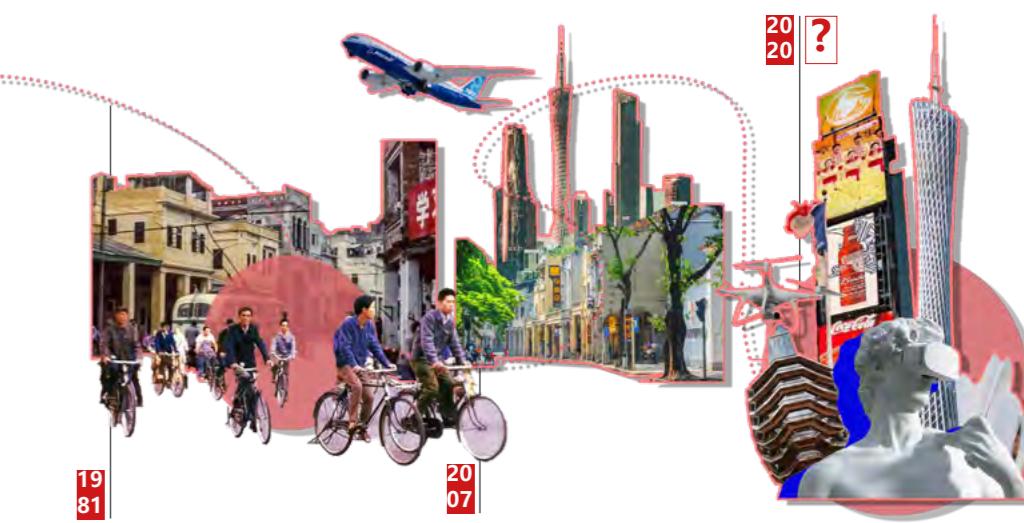
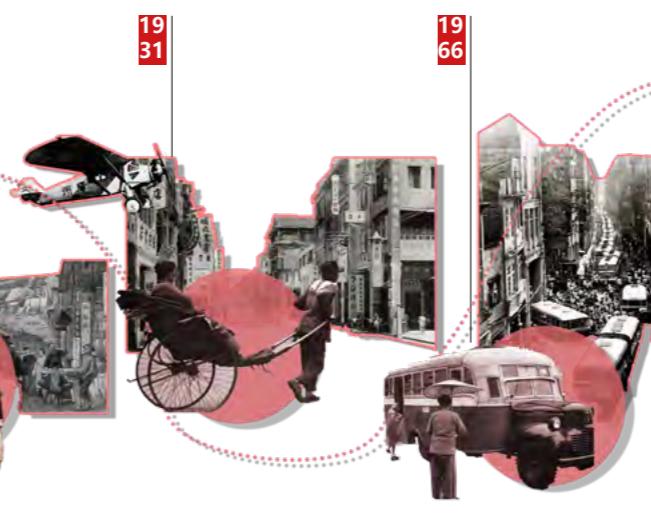
恩宁路，这条拥有百年历史的广州传统街区，一直以来都是岭南文化与百年手工艺的汇聚地。然而，如今它正面临衰败与消失的风险。

为应对这一挑战，我们计划改造恩宁路上的一座废弃建筑，将其打造为一个艺术与传统工艺融合的创意空间。这一空间不仅将为艺术家提供创作与合作的场所，还将支持广州传统手工艺人的发展，助力非遗文化的传承与创新。

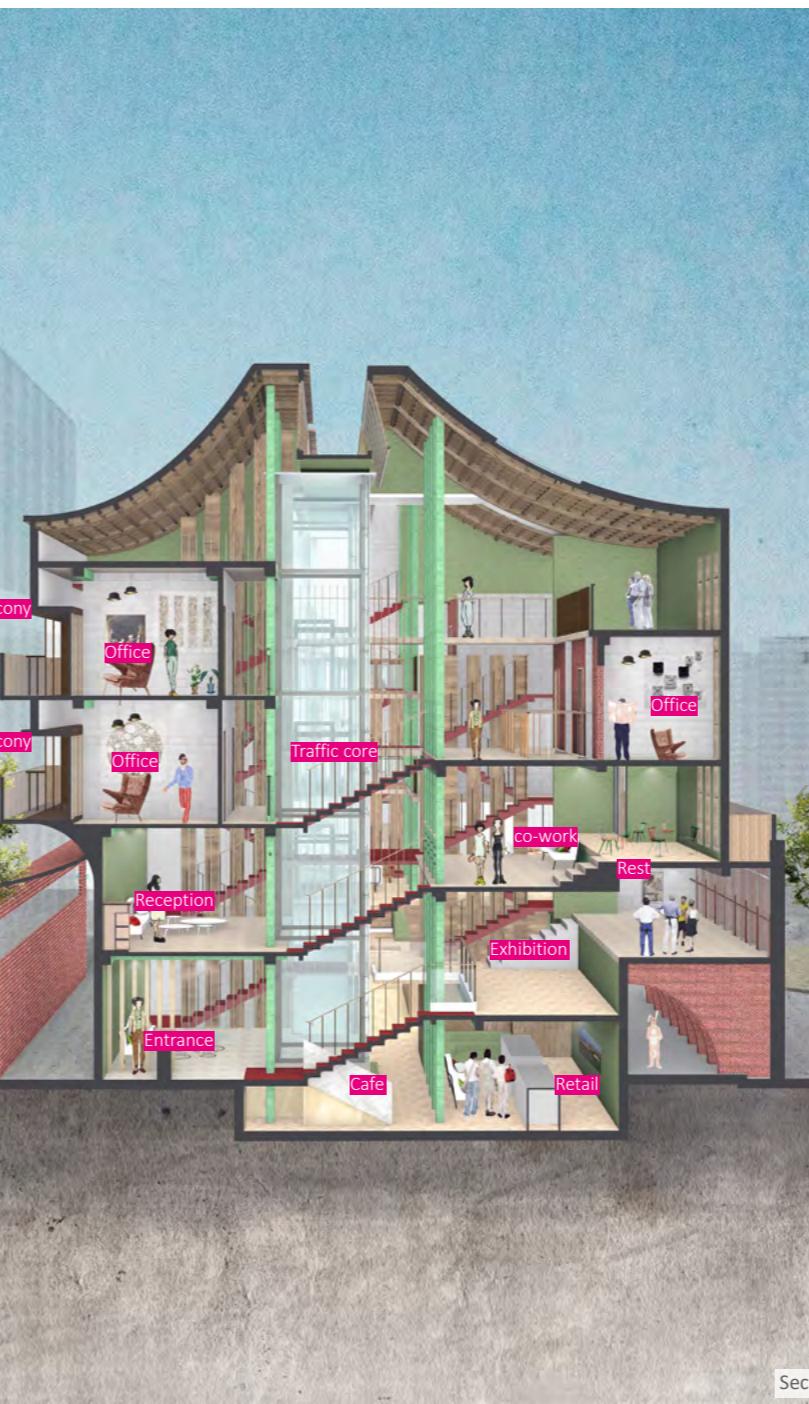
未来，该空间将融合艺术工作室与公共活动区域，打造一个充满活力与互动的文化场所，让传统与当代创意在此交汇，共同赋予恩宁路新的生命力。

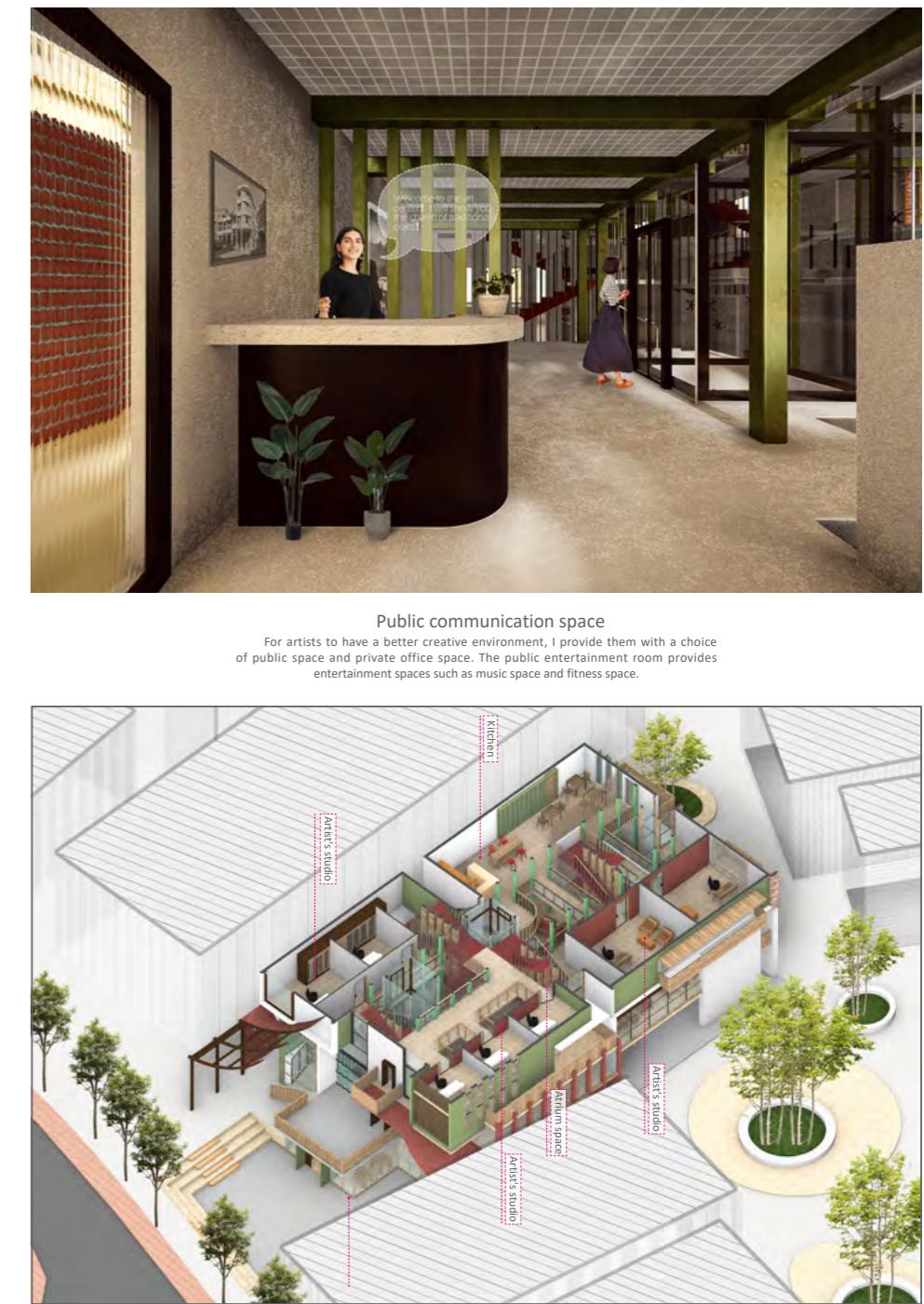
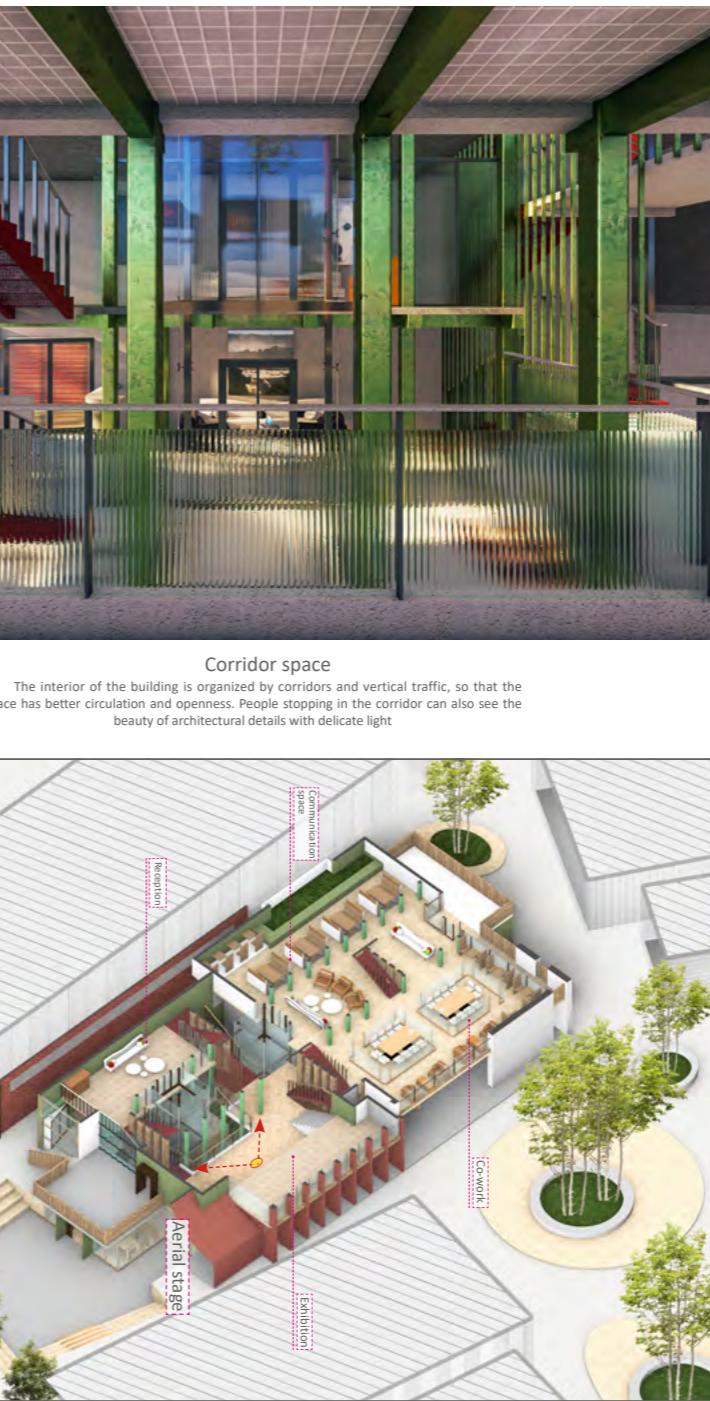
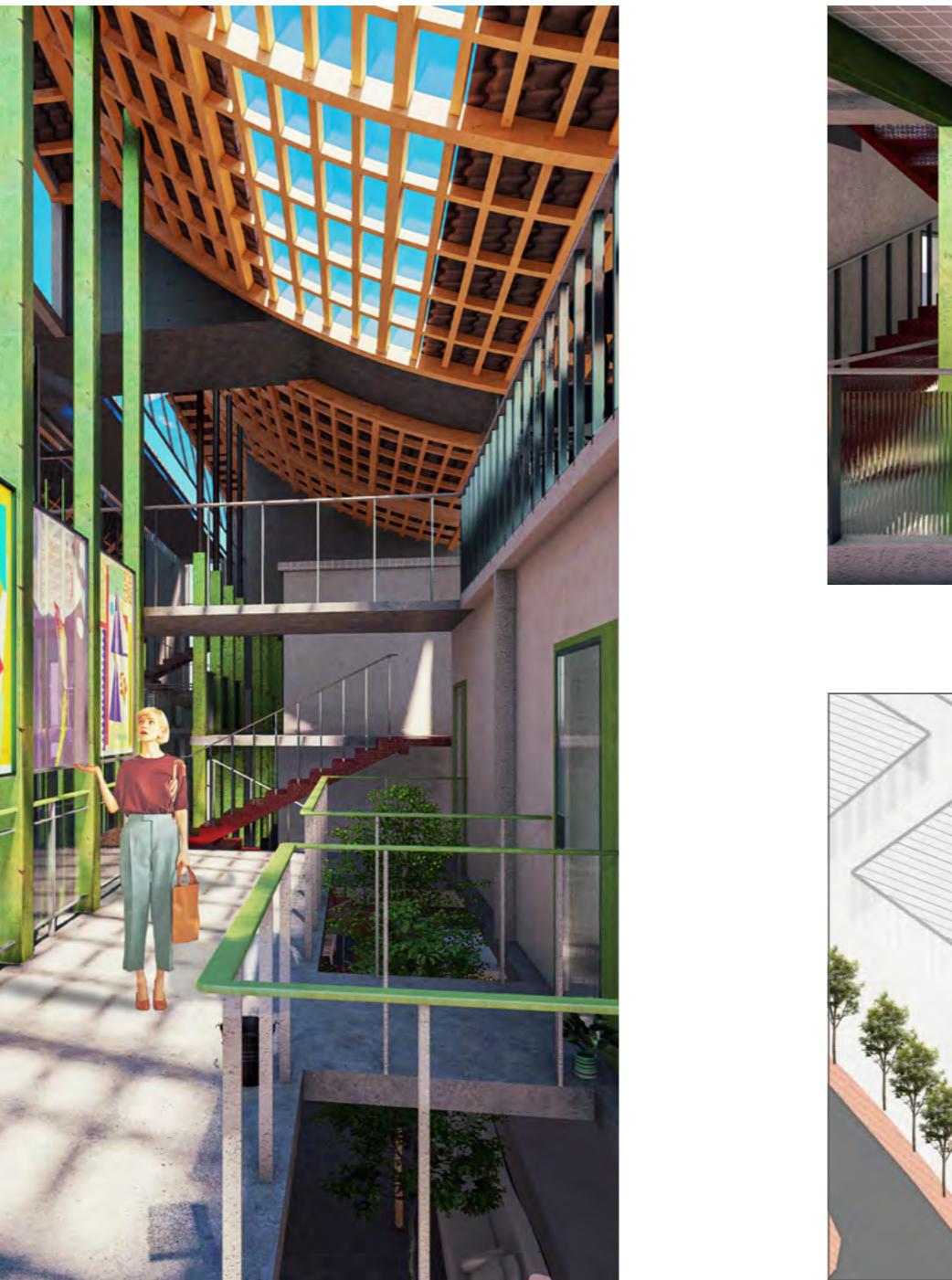
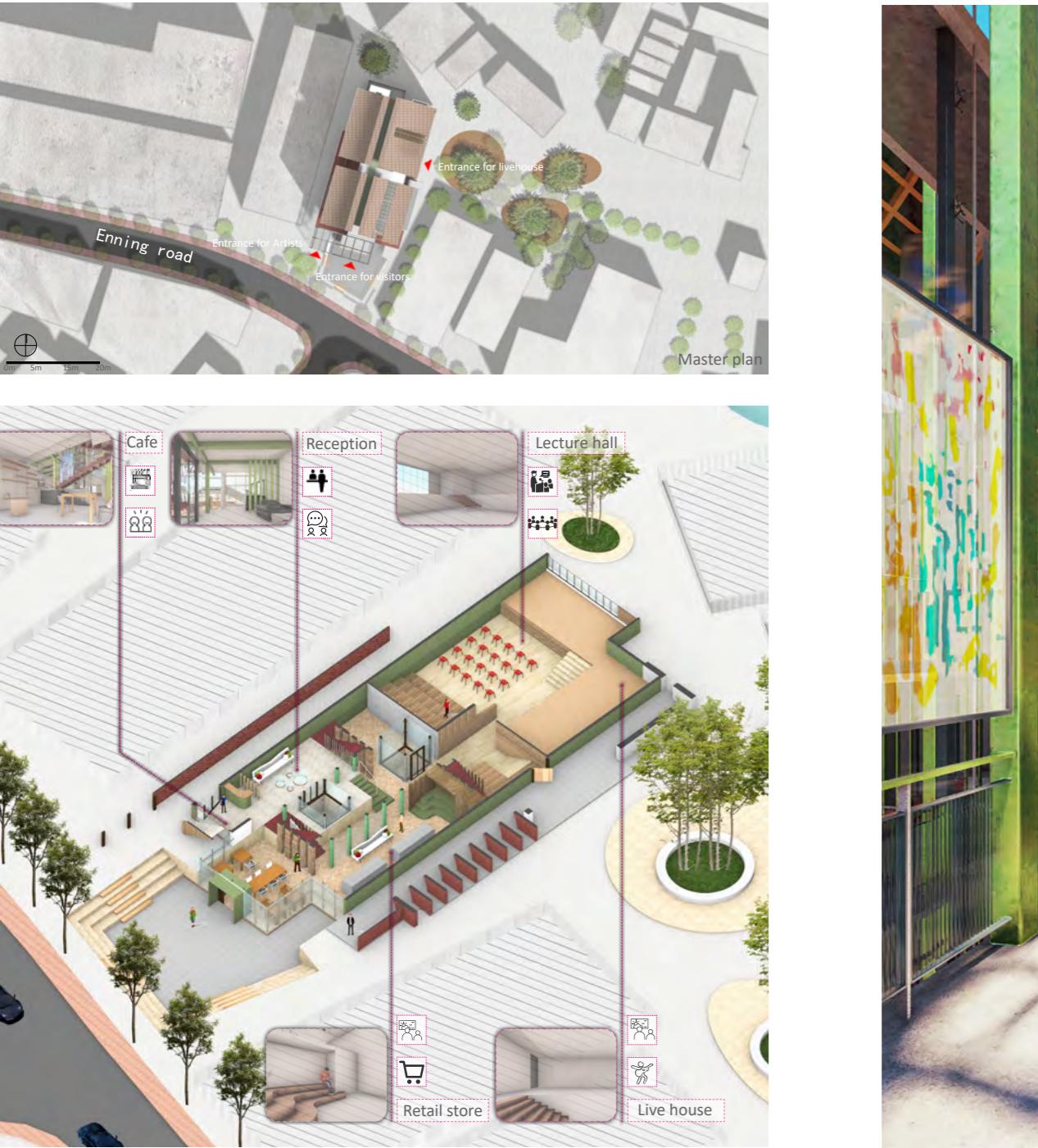


History timeline



Concept







King of Humor

纽约时代广场 | UIA-HYP 霍普杯竞赛 | 2019

奖项: UIA-HYP 国际建筑竞赛2019 荣誉奖

概念: 采用球形住宅单元, 增强互动性
居民可通过智能屏幕定制建筑外观

团队: Yifan Shi (Author: Design & Modeling 90%, Render 50%, Interior design 100%) Yujia Cao,

Hiter Wang , Song Jian

软件: 3D modelling-Rhino; 2D graphic - Adobe Illustrator, Adobe Photoshop; Rendering - Vray

Location



WHO YOU ARE?

Traditional residential buildings adopt frame structure shear wall system with uniform elevation profile and cold and expressionless.

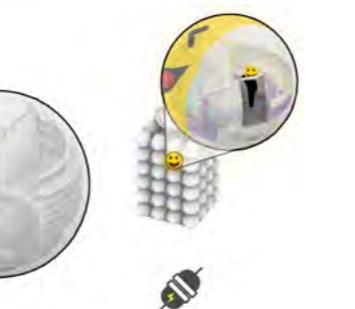
WHERE ARE YOU?

Most of the buildings in modern cities are just like this one. They have no features, they are easy to forget. When you throw this building in the city, it's hard to tell the difference between them.

A NEW APARTMENT!

We have created an new apartment building with new concepts that everyone in the building can express themselves through the apartment.

Vision



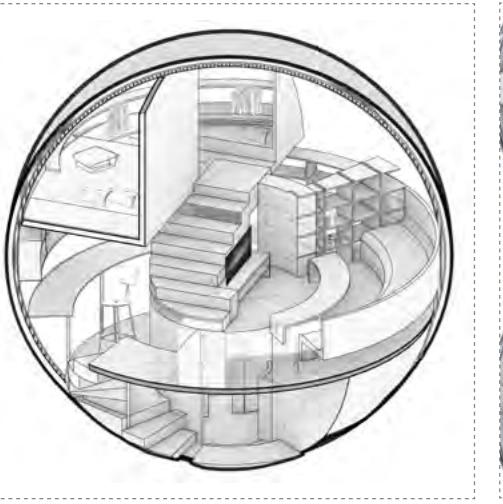
Nowadays, we are in an era of tremendous change. At its core, this change involves rebuilding our cognitive structure. Various Internet-related industries are reimaging concepts, and we are redefining the architecture of the future. **When the Internet and architecture are integrated**, buildings become mediums for interaction and can create virtual spaces for activities, giving them a trans-era significance. In this context, humor becomes a powerful way to connect with people. **When has architecture ever been humorous?**

I AM COMING!

The smiling faces of the residents will appear on the front of the building, so the building will have a high-profile dialogue with other buildings in the city.

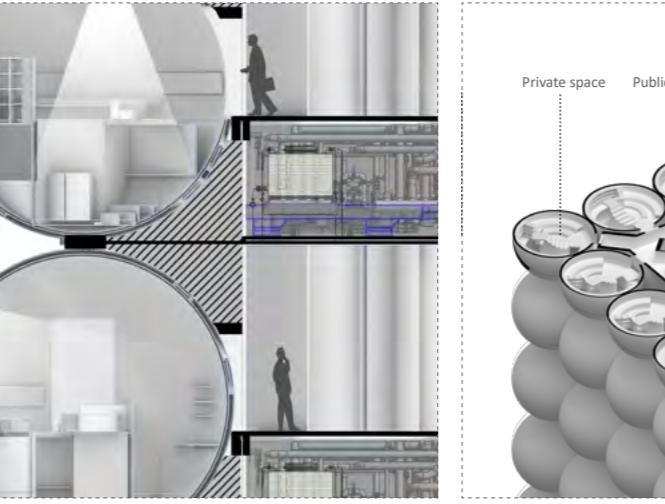
I AM HERE!

This new building provides the possibility of communication and interaction between the people in the building and the people in the surrounding city through a humorous way, thus infecting the people living in the dull and expressionless city, bringing them pleasure, and a happy building makes the city happy.



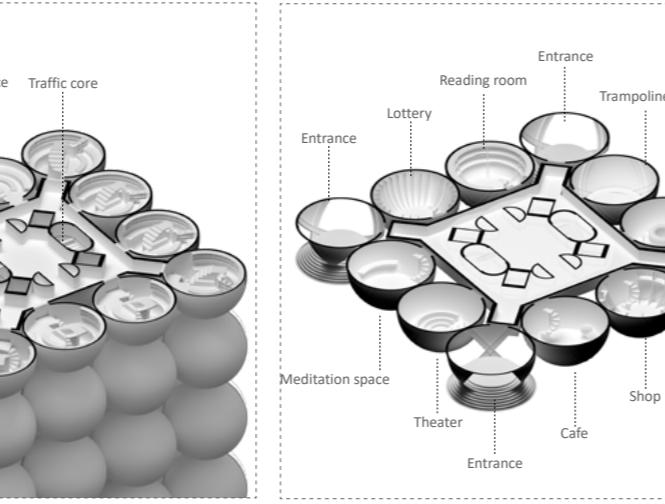
Layout of the apartment

Residential units are spherical with a diameter of six meters. We separate the interior space into two layers, dynamic and static, which is rich and interesting. The exterior of the residential unit consists of a three-layer spherical structure. The upper floor is communication space for residents to receive friends, while the lower floor is bedroom and toilet.



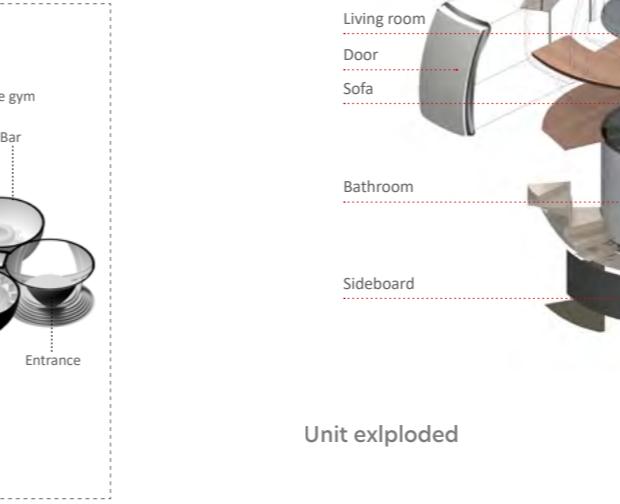
Architectural details

The architectural structure may appear simple, but in reality, it is sophisticated and complex. The exterior of the residential unit consists of a three-layer spherical structure. The upper floor is communication space for residents to receive friends, while the lower floor is bedroom and toilet.



Standard floor section

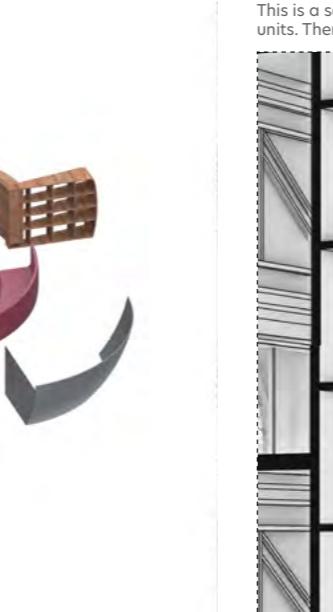
The standard floor consists of a traffic tube and residential units. The traffic tube is divided into two parts using the plane layout of elevators, fire staircases, and other vertical transportation facilities. The outermost layer is a high-resolution spherical environmental screen. The middle layer is a steel framework, and the innermost layer is a wall.



First floor section

The first floor of the building is designed as a public space with four entrances and exits. It includes various amenities such as a laundry area, vending machines, a kitchen, a gym, a cinema, a bank, a church, and a trampoline. These facilities provide ample communication space for the apartment residents.

Interior exploded

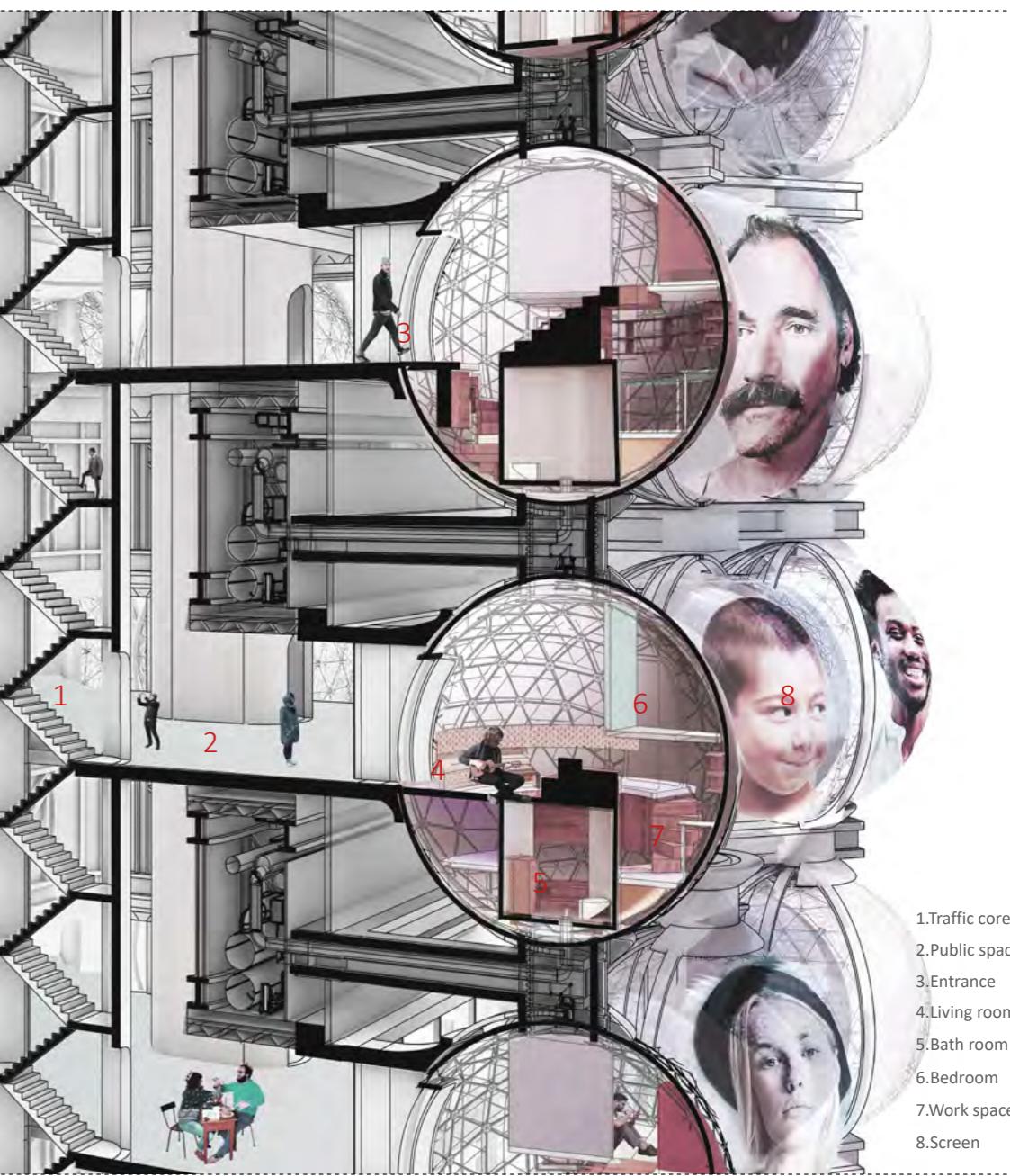


Unit exploded

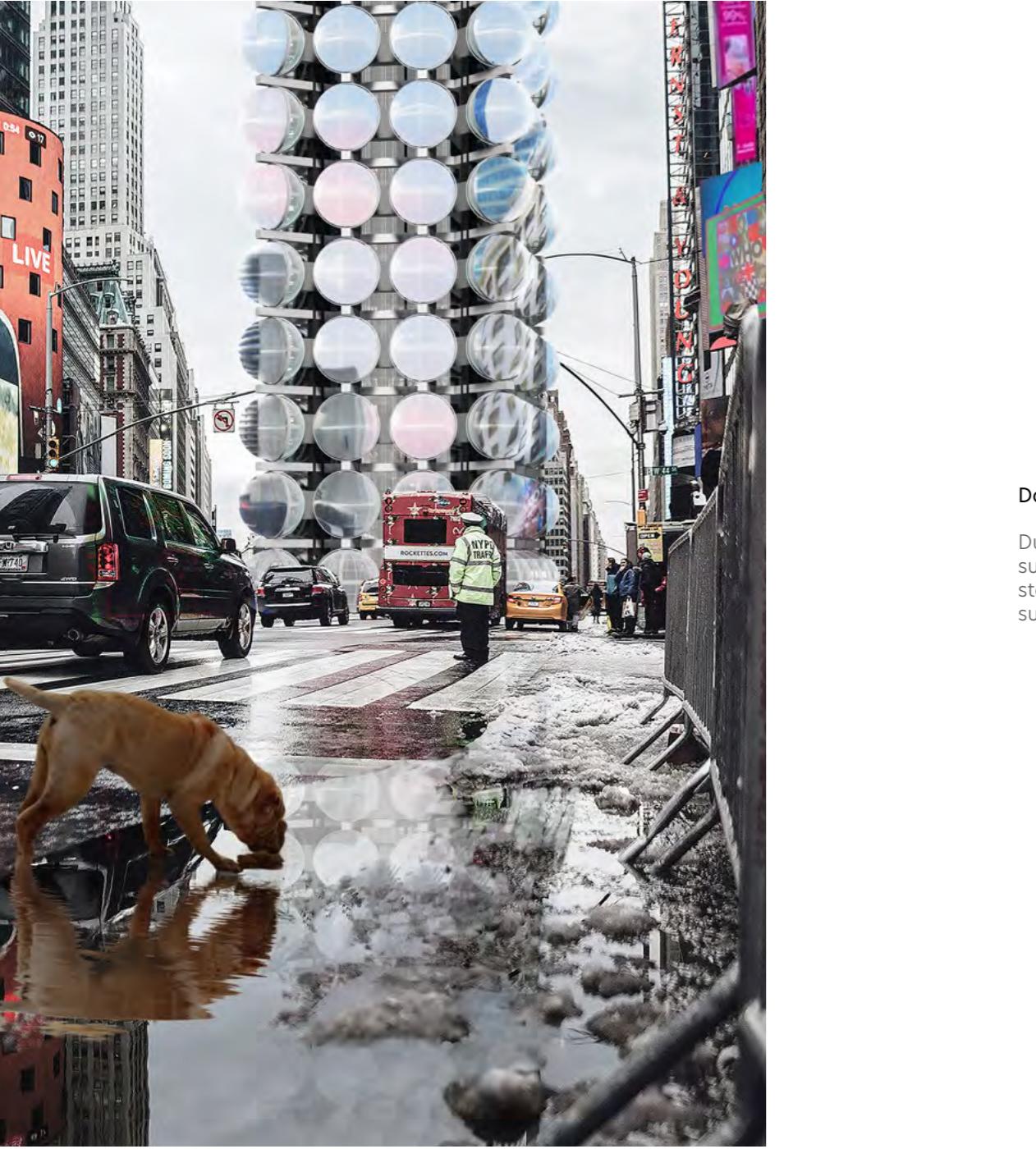


Section

This is a section view of the standard floor. You can see the structural connection between the vertical space of the traffic core organization and the residential units. There are corridors at the transition between private space and public space.



- 1.Traffic core
- 2.Public space
- 3.Entrance
- 4.Living room
- 5.Bath room
- 6.Bedroom
- 7.Work space
- 8.Screen



Daytime street scene

During the day, the building reflects the surrounding environment to achieve a state of vanishing and better integrate the surrounding environment.

Scene 1

A man was passing Times Square while playing with his mobile phone. Suddenly a huge face appeared upstairs beside him. He was frightened. His mobile phone even dropped out. It seemed that the building was playing a joke on him.



APPEARING



SHOCKING



Scene 2

When a person passes Times Square and wants to know someone in the building, he just needs to take out his cell phone, open a specific app, scan it, and interact with the people in the building through social media. Architecture is also part of the media.



PHOTOGRAPH



SOCIAL MEDIA



Scene 3

When a billionaire wants to pass his personal message through the building at a certain time, he rents all the balls, and the facade of the balls forms a huge image of him. His purpose can also be achieved. He used the building to further expand his influence.



RICH



STATUS



Scene 4

Times Square attracts global attention, making it a coveted advertising space for companies. The new building in Times Square will further enhance its appeal. Advertisers can utilize the space when it is unoccupied to recover their investment through advertising on the facade.



BILLBOARD



OPPORTUNITY





Back to country

| 哈尔滨中老年活动中心 | 个人学生作品 | 2019

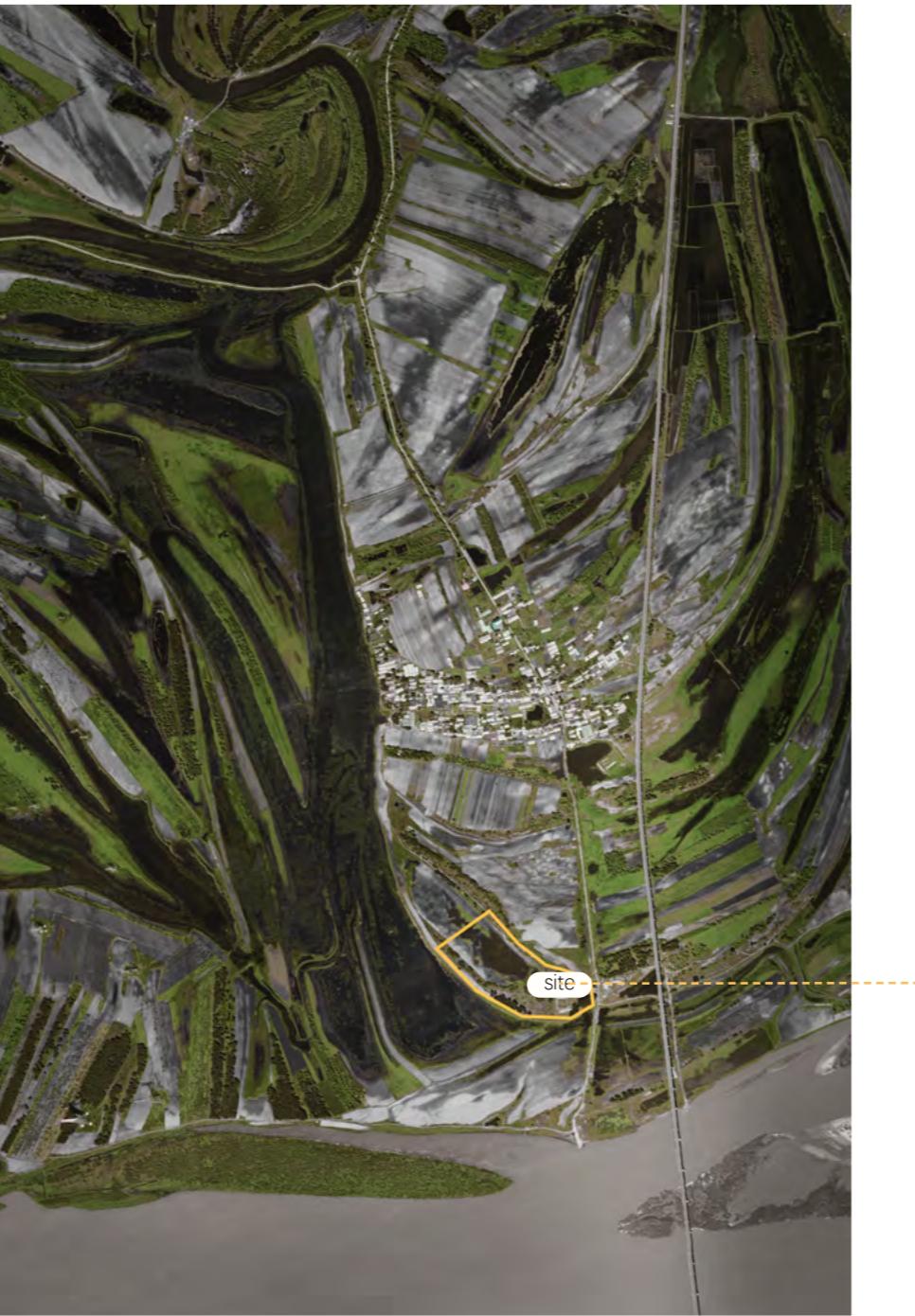
哈尔滨正经历严重的人口流失，排名全国第四。许多中老年人被留在当地，缺乏社交活动，面临孤独问题。本项目设想建立一个社区驱动的活动中心，通过包容性和可持续设计，促进社交互动、个人发展和身心健康。
设计概念

社区融合：该中心由当地教堂资助，为中老年人提供一个安全且互动的空间。
通过各种教育和娱乐活动，鼓励社交参与。

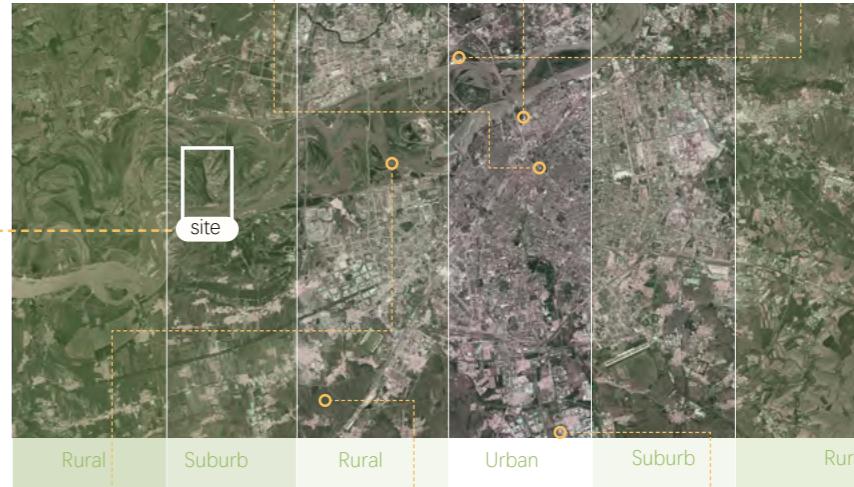
可持续与自然互动：设有种植区、手工艺坊和文化空间，让老年人保持活跃并与自然相连。
采用本地建筑材料，结合传统建筑元素，营造熟悉而温馨的环境。

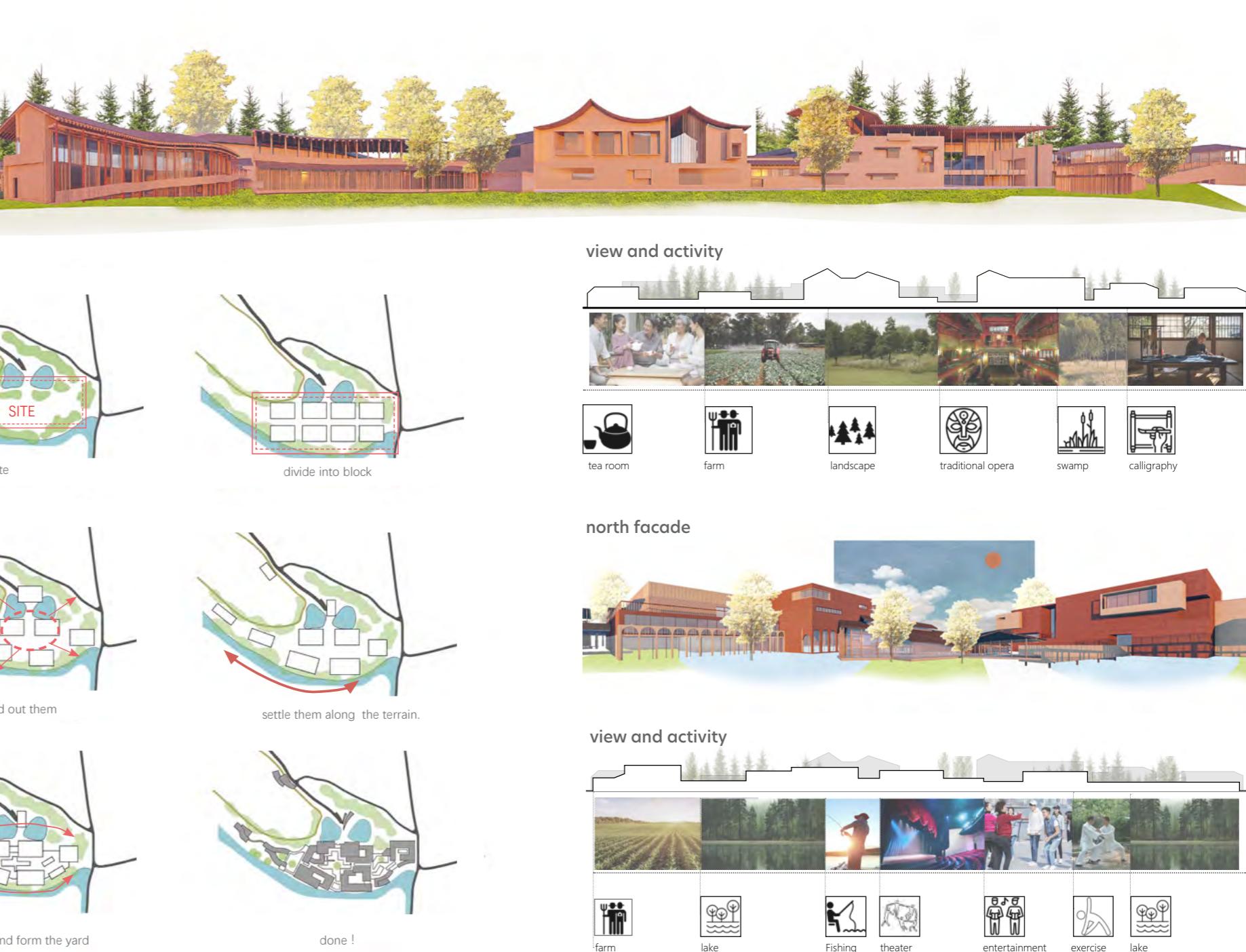
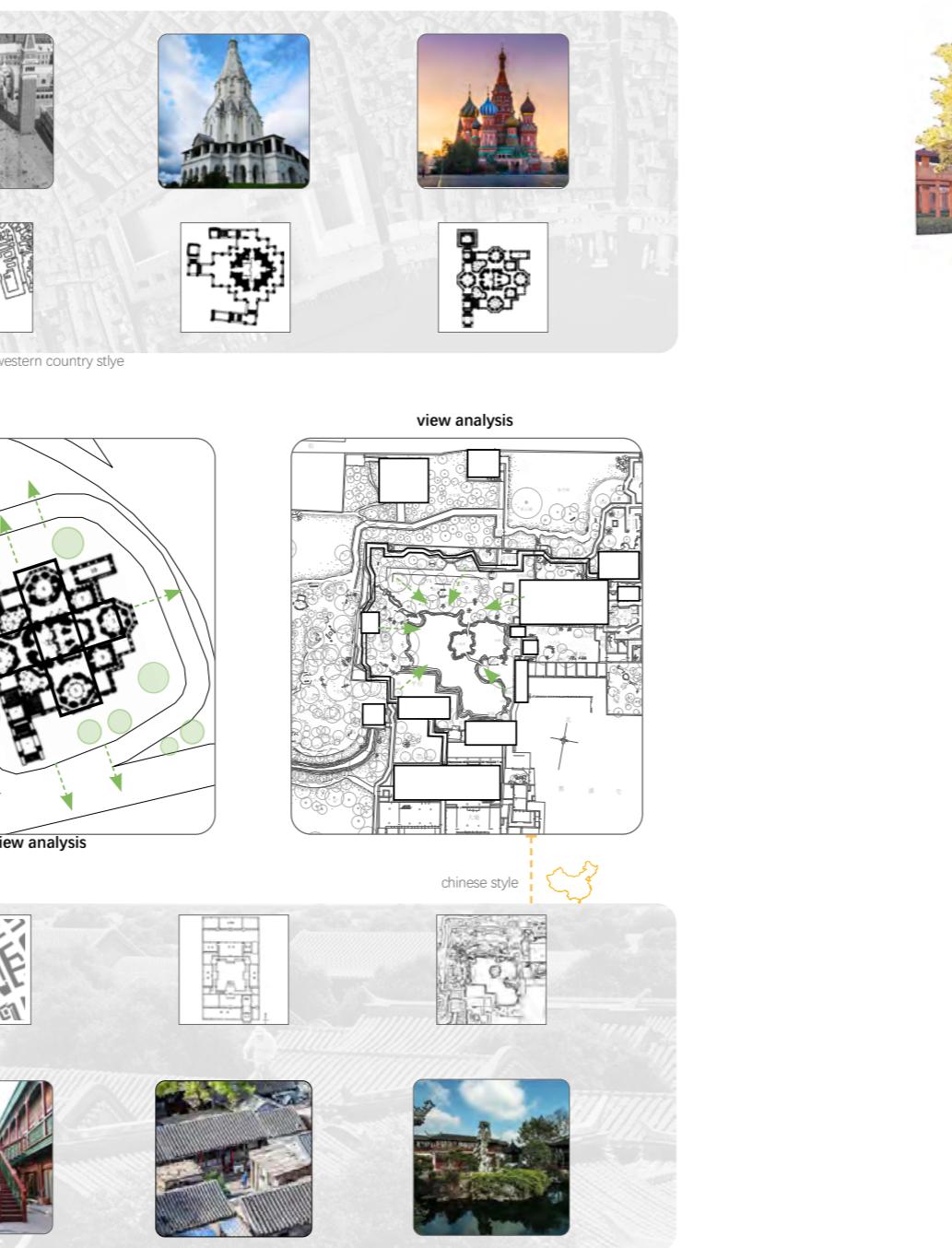
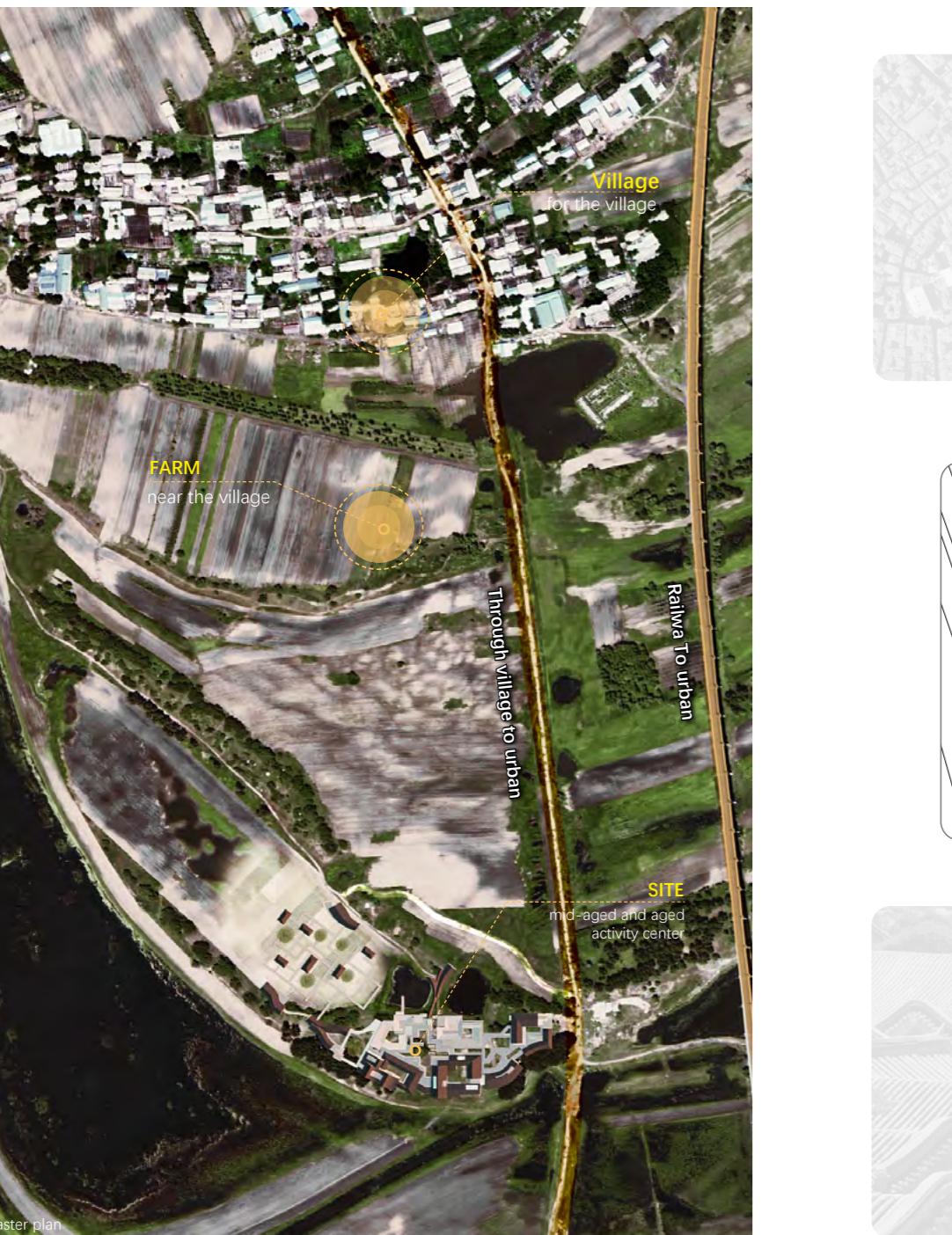
健康与福祉导向设计：设有冥想、健身和心理健康空间，提供全面的老年护理方案。
无障碍设计与友好基础设施，确保安全便捷的出行体验

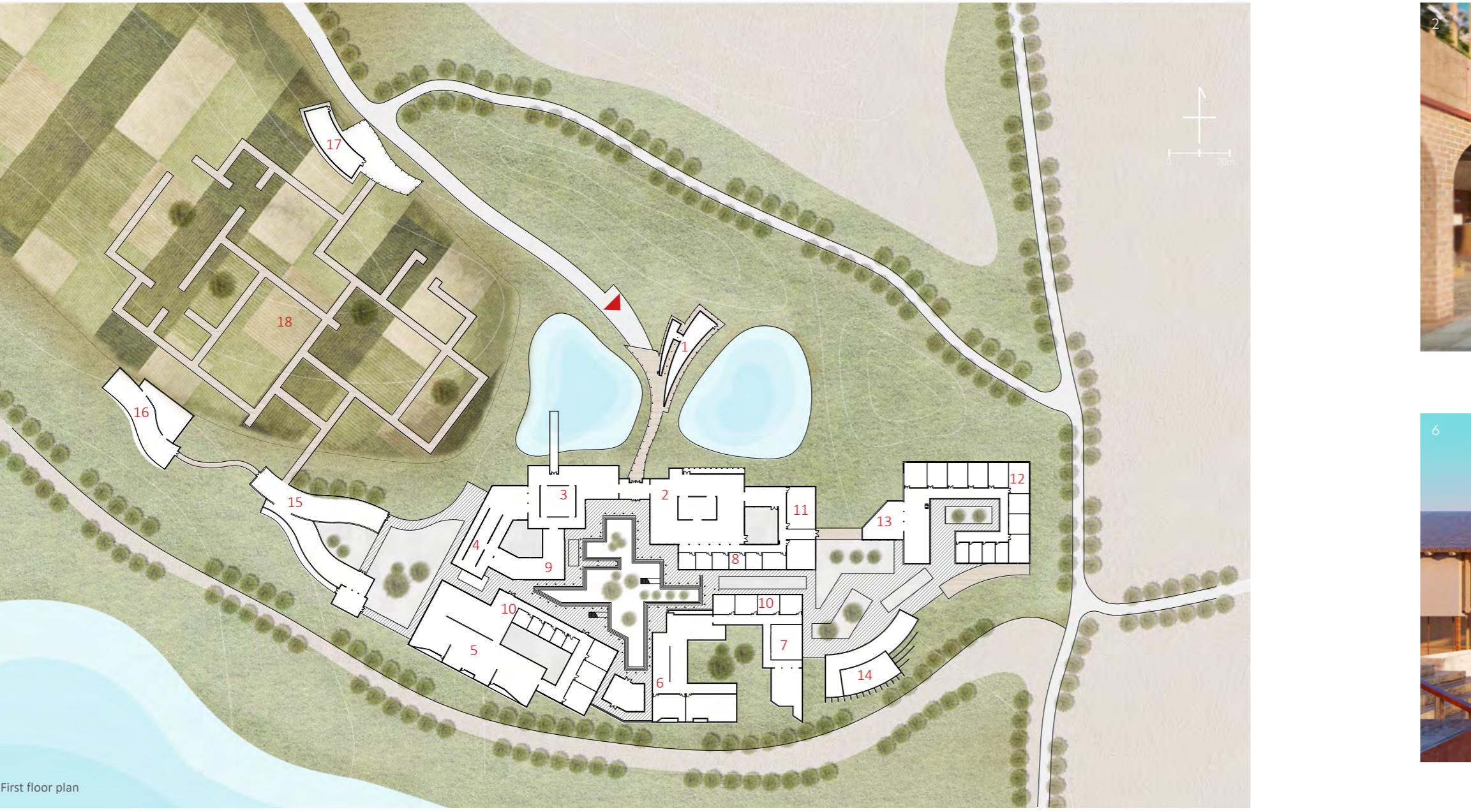
location



site analysis







- 1.Reception Center
- 2.Cafe
- 3.Exhibition Center
- 4.Art Gallery
- 5.Traditional Opera Center
- 6.Music Center
- 7.Sports Center
- 8.Retail Store
- 9.Restaurant
- 10.Offices
- 11.Lecture Hall
- 12.Hotel
- 13.Infirmary
- 14.Calligraphy Center
- 15.Tea Room
- 16.Meditation space
- 17.Farming Learning Room
- 18.Planting Space





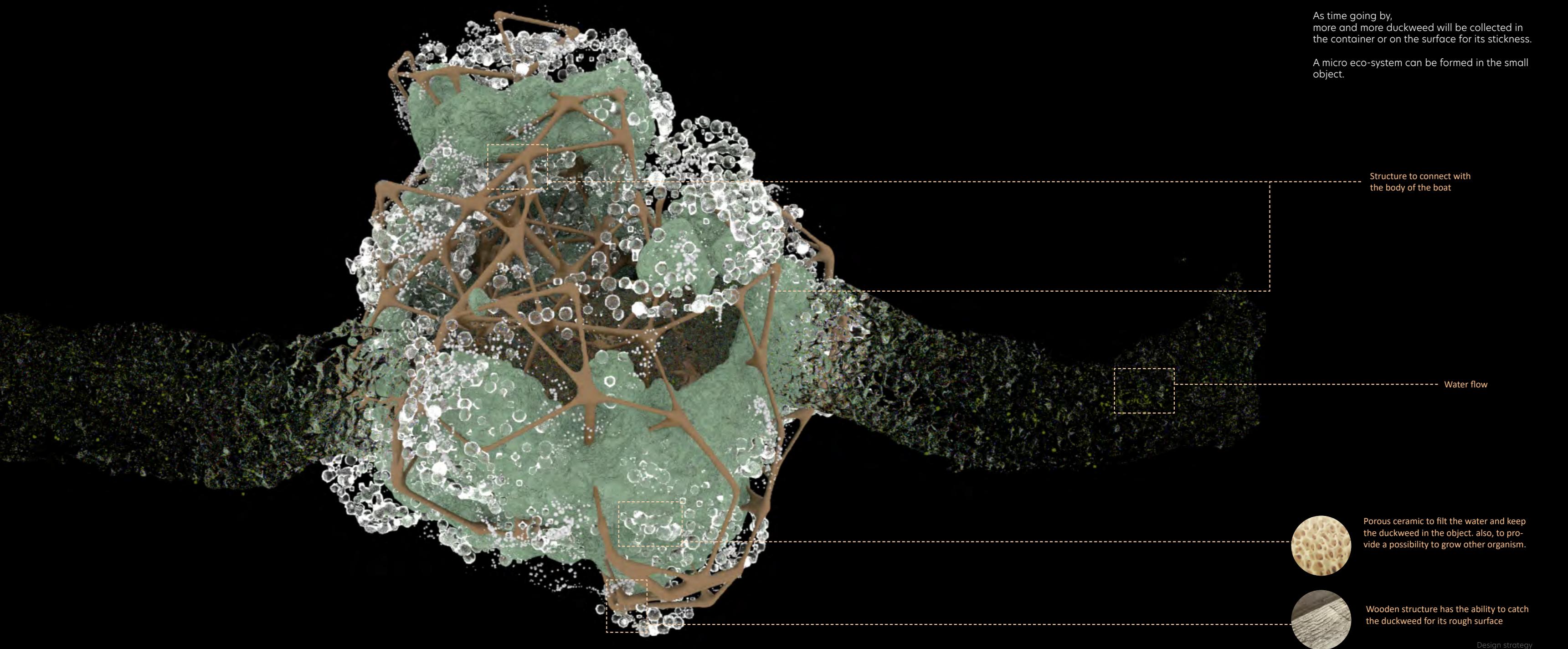
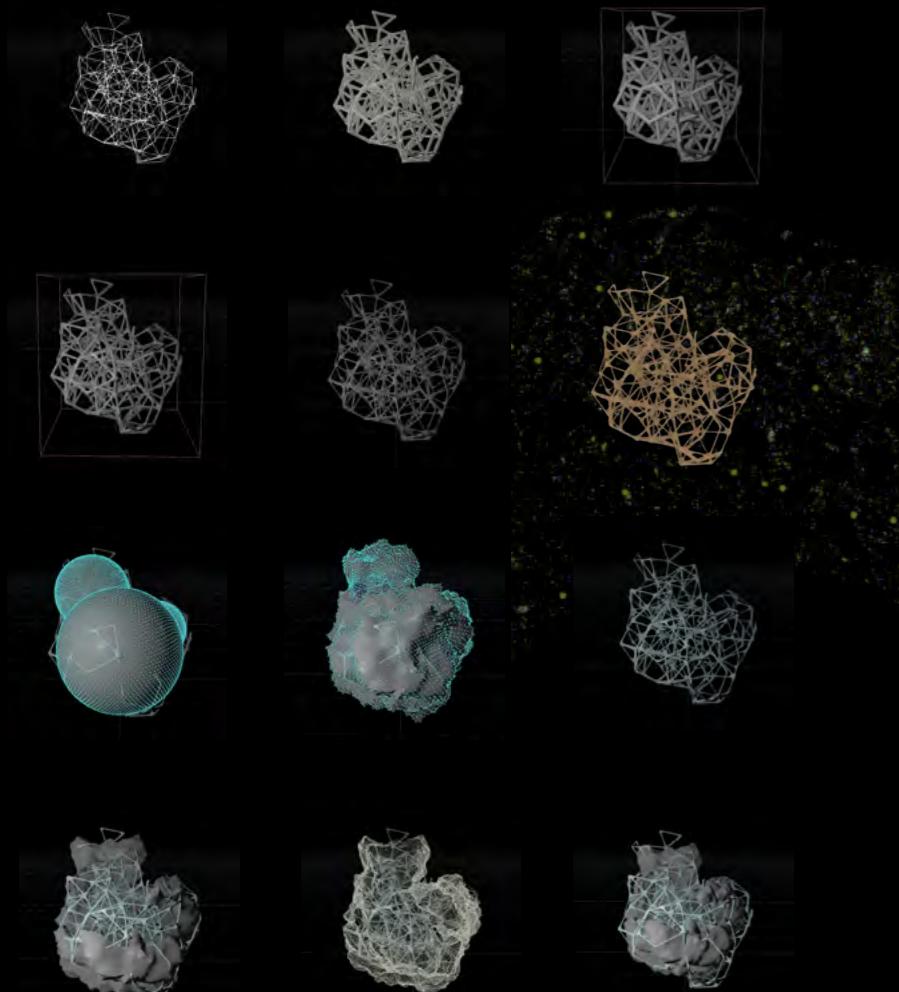
其他作品

OTHER WORK

Advanced computational design

Canal Duckweed Collector (Generated by Houdini)

A boat-mounted device was created to gather duckweed from the River Lee. This system aims to enhance the ecosystem during the summer months when excessive duckweed growth occurs. This growth reduces light penetration into the water, leading to a lack of oxygen for underwater creatures, impacting their well-being.

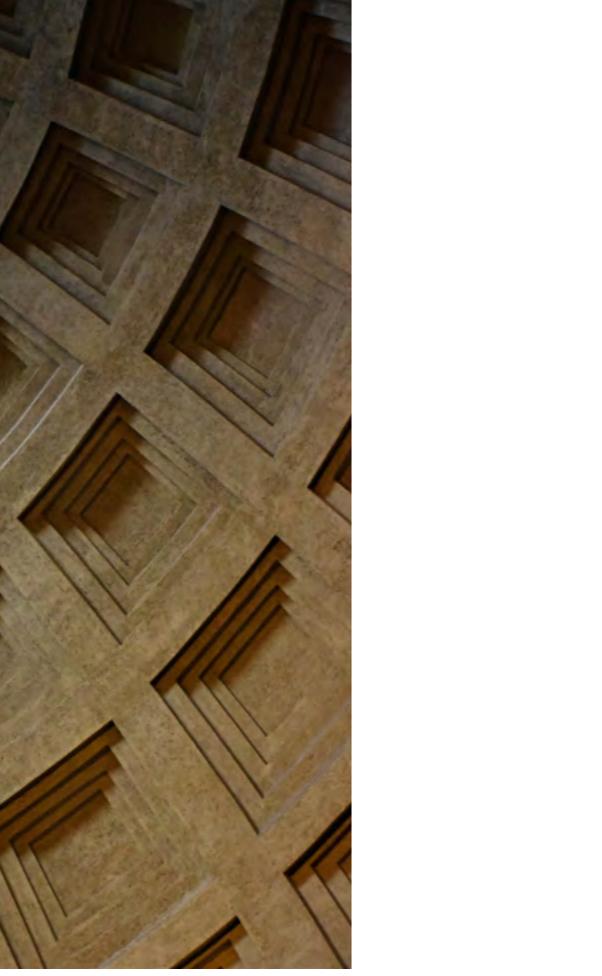
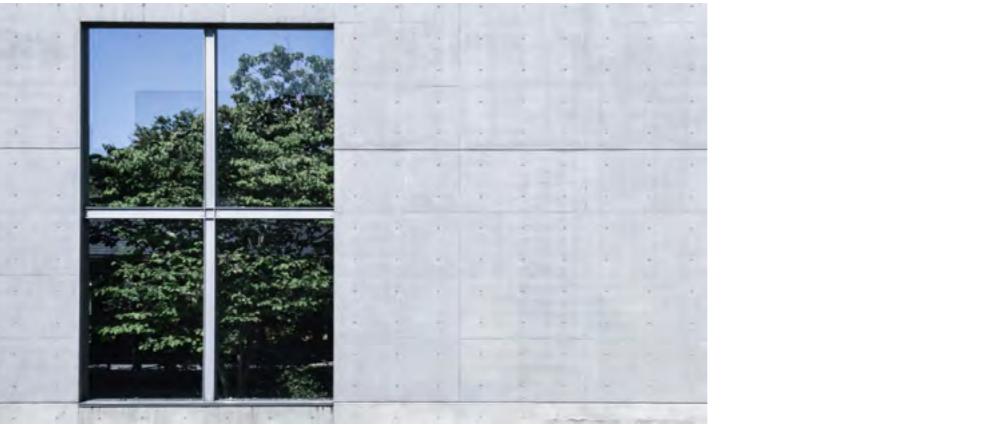


Photography

more work:
<https://www.instagram.com/yifannnsfilm/>



Japan 2018



Rome, Italy 2023



Venice, Italy 2023



Venice, Italy 2023



Venice, Italy 2023

Construction work

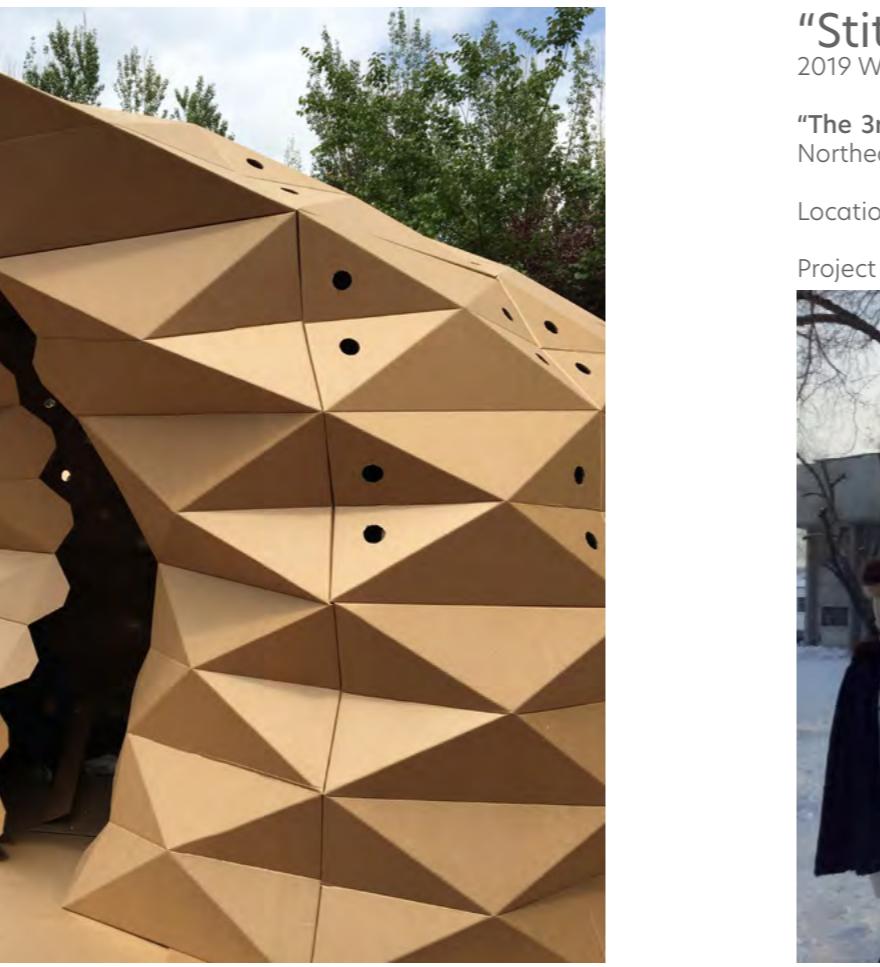
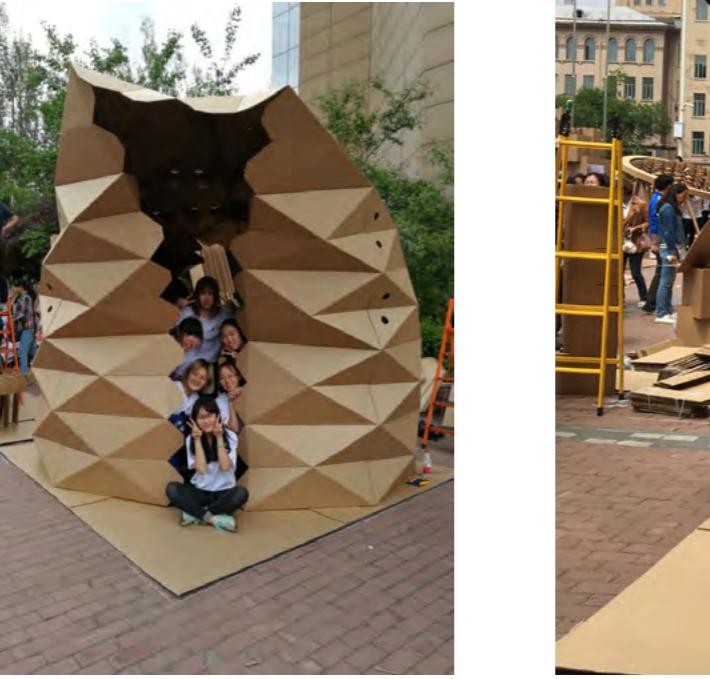
In the cloud

2017 Summer

"Second Prize of University Group, The 8th Harbin Institute of Technology Construction Festival"

Location: Harbin Institute of Technology, Harbin, Heilongjiang Province, China

Project type: Group work



"Stitch"

2019 Winter

"The 3rd PRIZE of Snow Sculpture Competition of Campus Ice and Snow Culture Festival of Northeast Forestry University"

Location: Northeast Forestry University, Harbin, Heilongjiang Province, China

Project type: Group work

