

P O R T F O L I O

I n d u s t r i a l D e s i g n & D e v e l o p m e n t

AMBER WANG

2026

CONTENT.

我相信设计的价值，不只是为产品塑造形式，而是从复杂问题中找到真正值得解决的核心，并在用户、品牌、商业与技术之间建立清晰的关系。对我而言，好的设计应该始于准确的判断，最终落实为有意义、可理解、可实现，并能够真正创造价值的产品。

I believe the value of design goes beyond shaping form. It begins with identifying the problem that truly matters and creating clarity across users, brands, business, and technology. To me, good design starts with sound judgment and turns complexity into products that are meaningful, intuitive, feasible, and capable of creating real value.



01

Tesla eVTOL



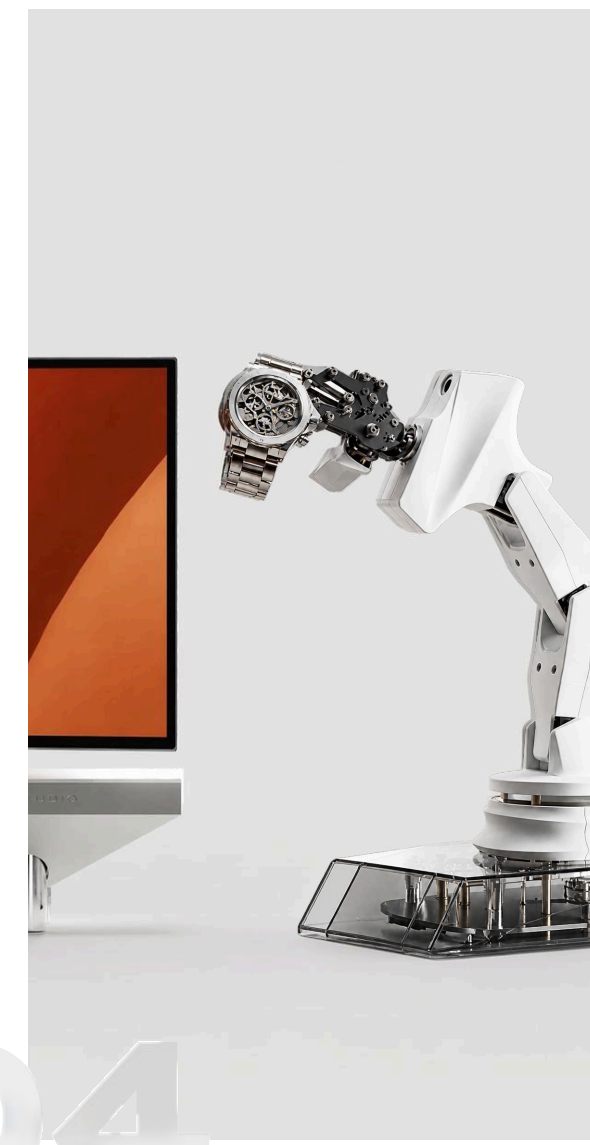
02

B&O SPEAKER



03

RACE KART KIT



04

ROBOT ARM



05

BEO PHONE

A futuristic, silver, four-rotor eVTOL aircraft is shown in flight, hovering over a winding road that crosses a bridge over a lake. The landscape is lush with green and yellow trees, and mountains are visible in the background under a soft, hazy sky. The aircraft has a sleek, aerodynamic design with a large cockpit window and four propellers. A red car is visible on the road below.

TESLA

eVTOL service

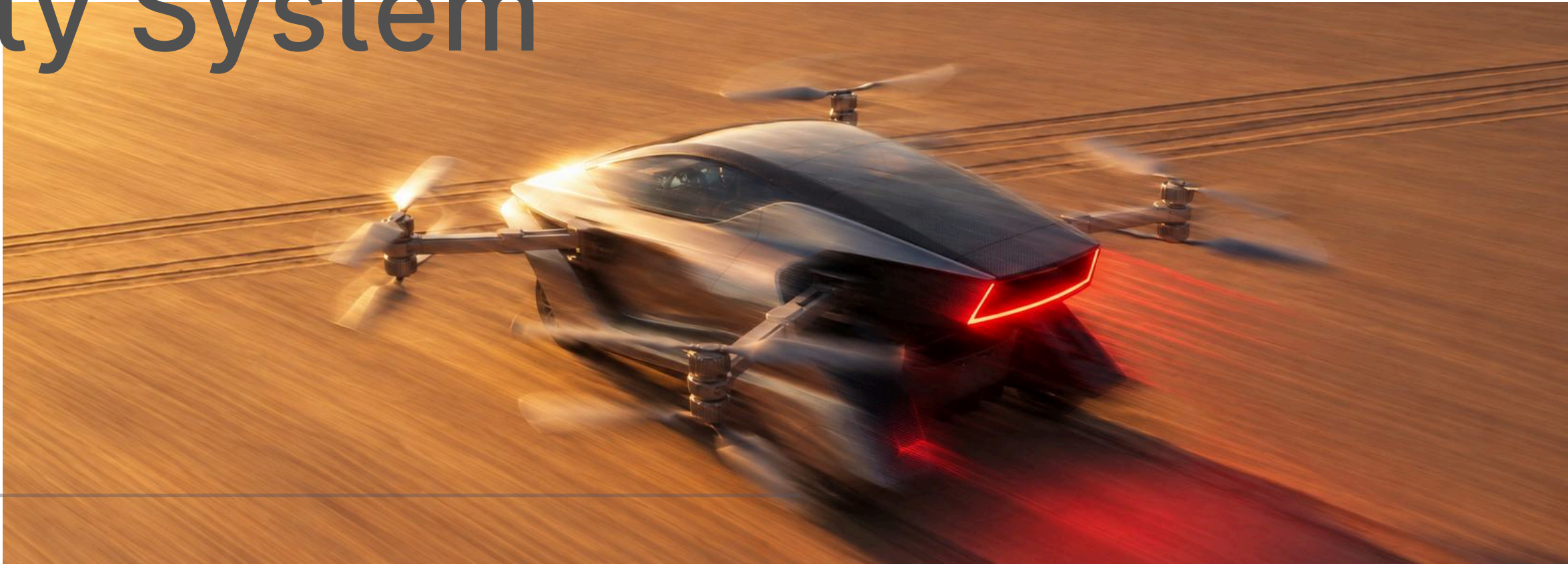
Capstone Final
Amber Wang

Not a Flying Car A Predictable Mobility System

城市交通真正昂贵的，并不只是移动距离，而是Uncertainty
拥堵、事故、换乘和波动，使同一段地面行程的时间成本高度不可预测。对普通日常出行而言，这种波动可被接受。
但在机场接驳，商务出行，高时间敏感行程中，“确定什么时候到达”，本身就是一种产品价值。

因此这个项目的出发点并不是：如何让所有人都飞起来？
而是：在哪些出行场景中，空中交通能够创造足够高的时间价值，使新的交通系统真正成立？

真正的产品不是飞行器，而是“可预测的到达”。先取代那些“时间最值钱”的行程



Future Mobility × Service System × Industrial Design



Corporate Ownership & Service Model (Membership)

Target User Group:
High"Time Experience Consumers"

Ms. Li, 35, investment analyst

Business Traveler

8Times/M

On-time arrival, avoid missed flights

Airport express, urgent meetings

Young couple, anniversary/
proposal
Special Moment
Consumer

4Times/Q

Ritual feeling, unforgettable experience

Romantic dinner, surprise proposal

Corporate executives, hosting important clients
Business Reception
Client

On-demand

Client experience, brand image

City tours, premium reception

Ordinary citizens, urgent situations
Emergency
Requester

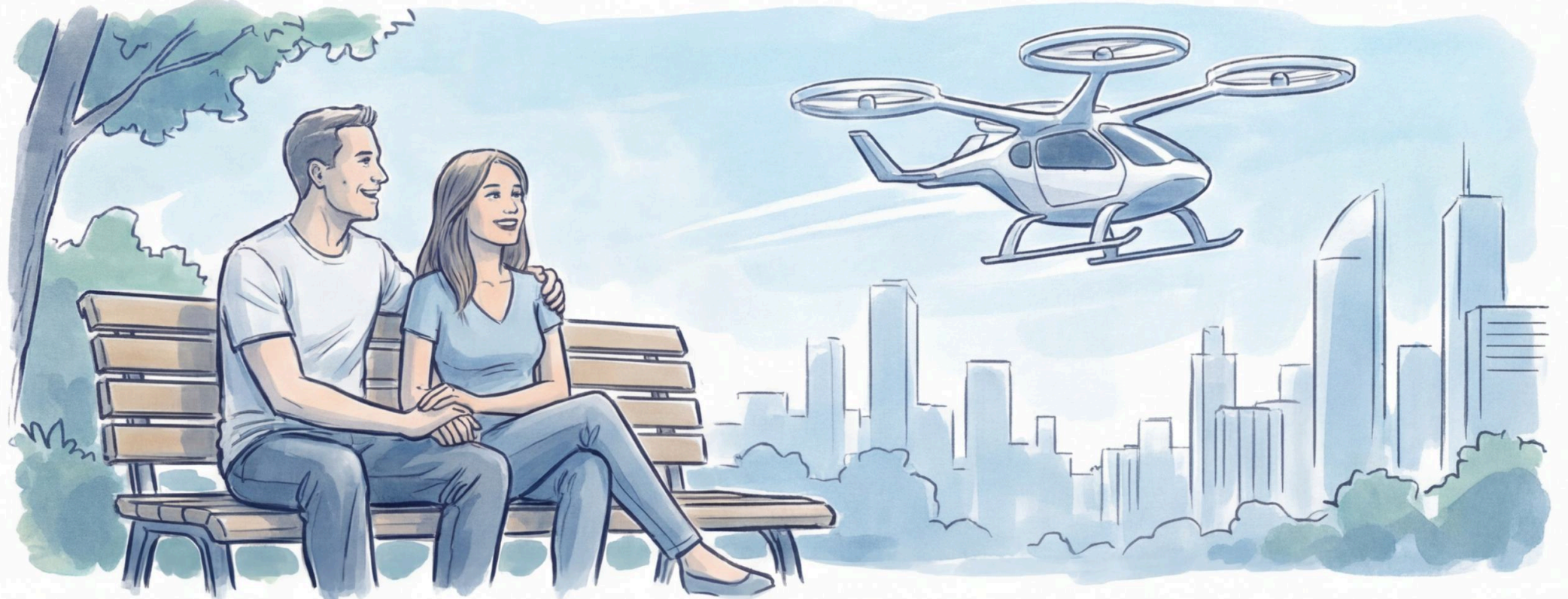
Occasional

Time-critical, irreplaceable
Catching trains/flights, medical emergencies

Hotels/Airports/High-end Shopping Malls
Company/project cooperation

High frequency

Client experience, brand image, Value-added services



*Based on the most recent data available from NHTSA and FHWA (from 2023).

Use Scene



ULTIMATE GAMING EXPERIENCE



EMERGENCY SITUATIONS



COMPANY / PROJECT COOPERATION

Why Tesla?

Tesla's Unique Advantage Matrix

电池技术优势

自动驾驶积累

基础设施

SpaceX协同作用

品牌信任和用户基础

自动驾驶出租车运营经验



独立学术概念项目，与 Tesla 官方无合作或隶属关系。



Manufacturing

Industrial Battery

AI Compute

Bot

Trucking

Solar

Home Charging

Home Battery

Electric Vehicles

Charging Network

Robotaxis

Bot

From Vehicle Design To Mobility System Design

这个项目让我意识到，未来交通设计不应该从“交通工具长什么样”开始，而应该先判断技术在哪些场景能够创造足够的用户价值与商业价值，再由系统需求反向定义产品。

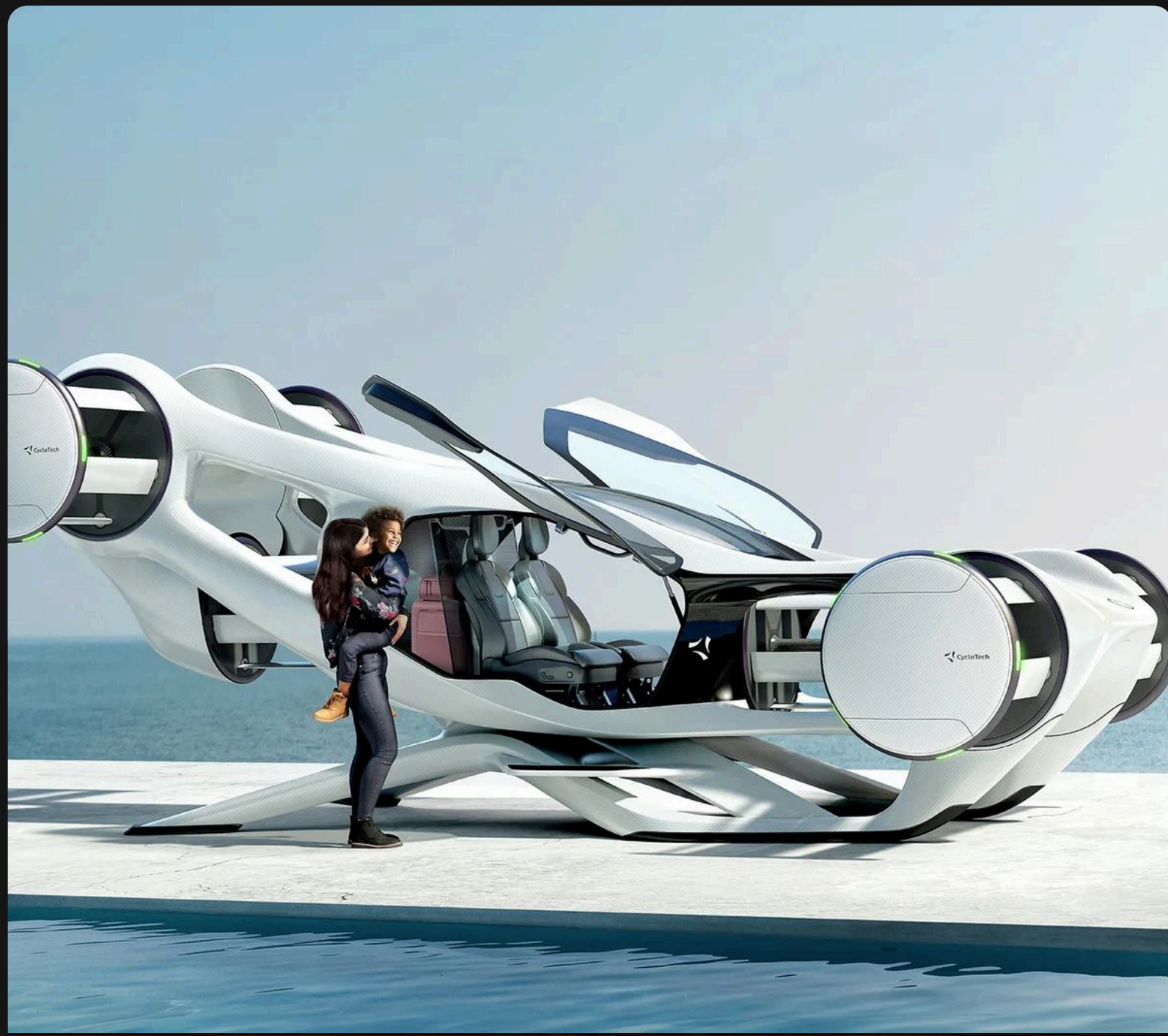
TESLA

Our Product: Tesla eVTOL

Aviation Architecture

- 两座座舱
- 电池布置
- 旋翼 / 电机系统
- 旋翼折叠系统
- 散热
- 缓冲起落结构
- 感知与导航
- 乘客行李
- 地面接驳与充电
- 航程管理 APP





低空交通 竞争的不只是飞行器性能

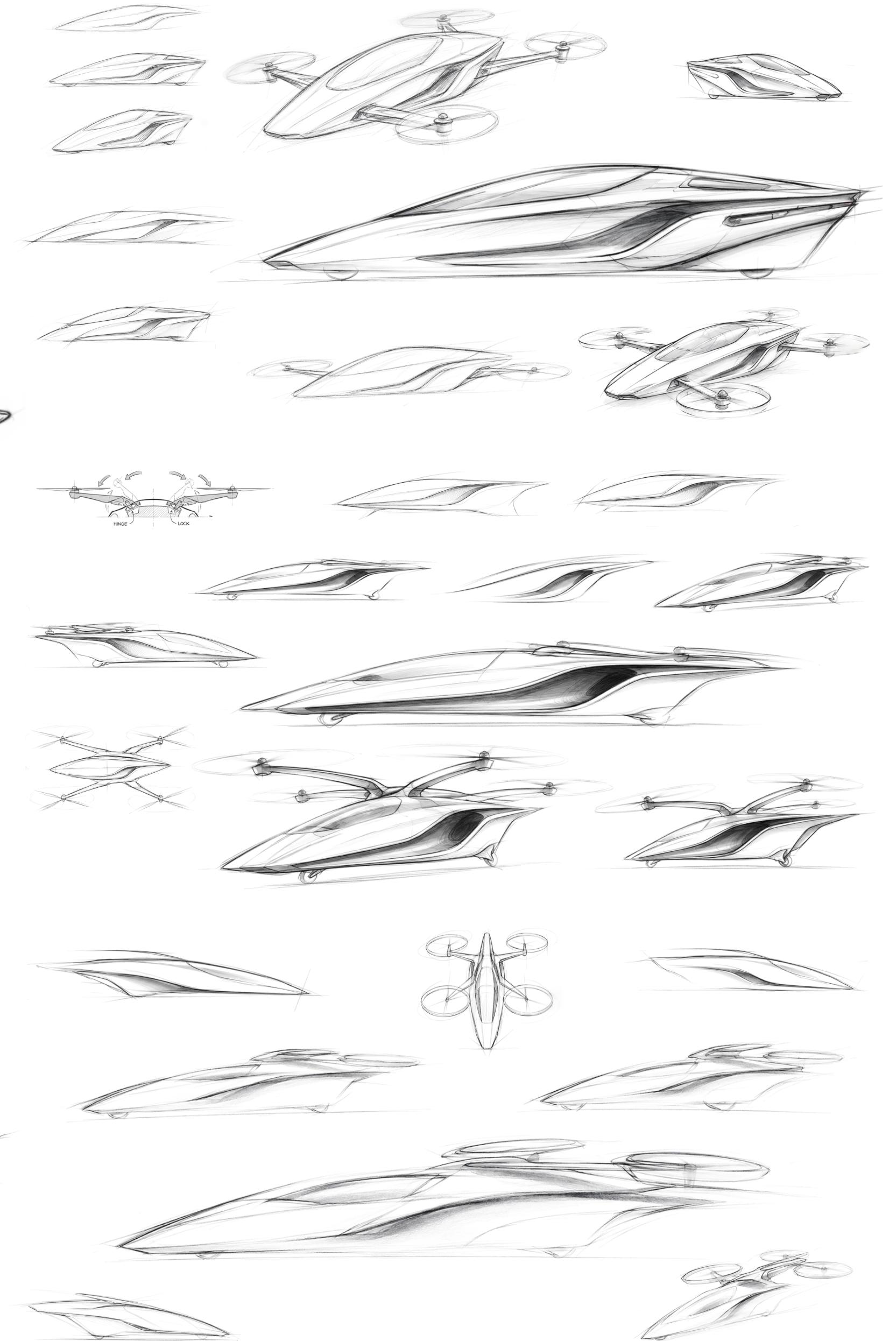
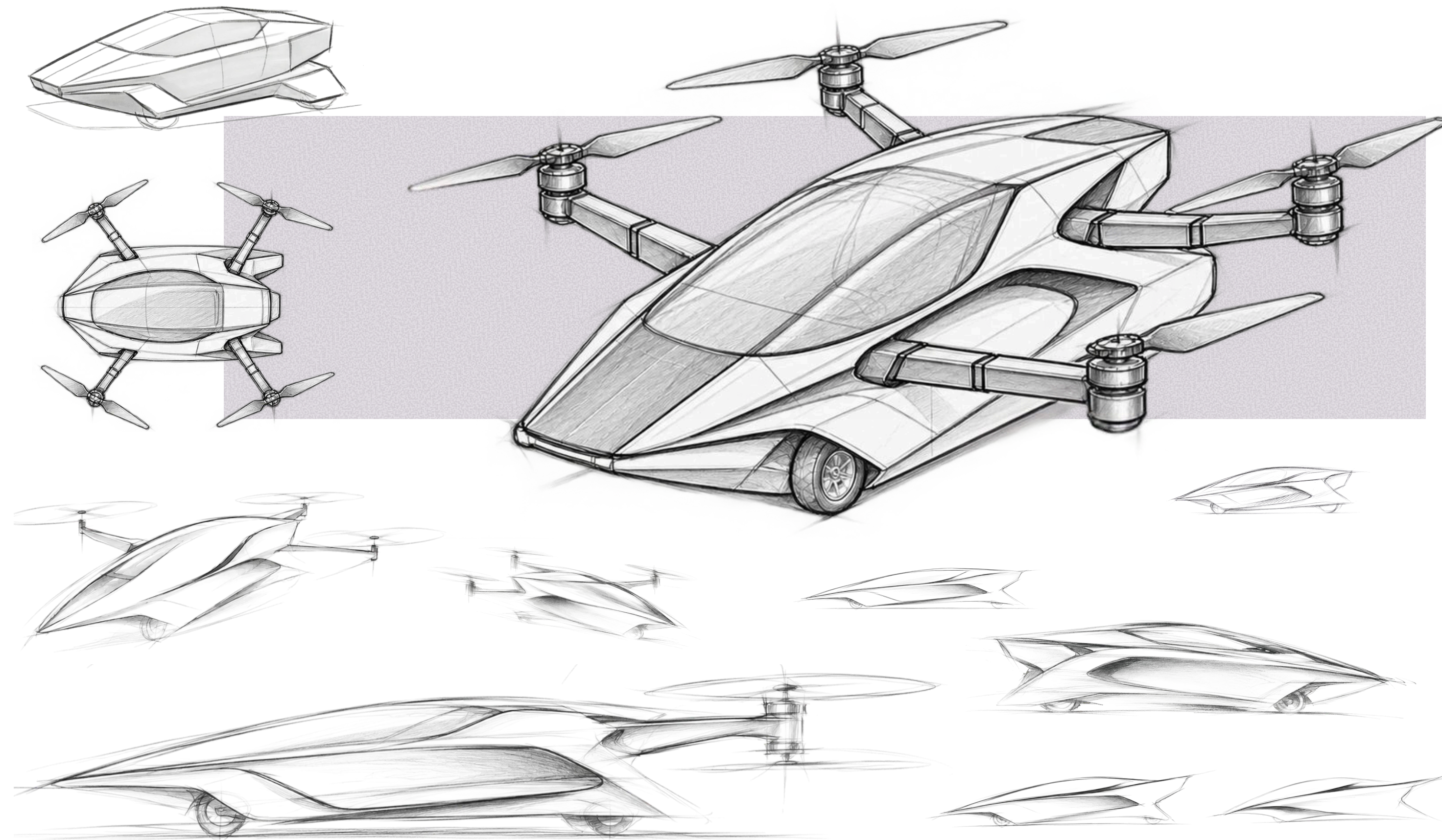
eVTOL 并不存在唯一正确答案

有的追求“运载能力”，有的追求“航程”，
有的追求“自主飞行能力”，有的追求“短途运营效率”

什么样的eVTOL是适合Tesla项目的？

 Learn more at [Tesla.com/Impact](https://tesla.com/impact)

Sketches



Tesla Design DNA × Aviation Constraints × Service Architecture

Layout



Storage Space

前储物舱（建议容量： 60—90 L）后储物舱（建议容量： 80—120 L）

Electrical Machinery

四个蓝色旋翼中心，推进臂根部蓝色模块，机身中部高压母线，尾部推进器

Brain/Computer

Autonomy AI Layer; Flight Control Layer; Safety Redundancy Layer

Charging Unit

Tesla 宣传 Supercharger 可在 15 分钟补充大量续航，最高充电功率标注到 325 KW。EVTOL 可以以此为基础

Cooling System

在 EVTOL 中冷却系统非常重要，因为它同时要服务：
电池; 电机; Inverter; 计算机; 客舱空调; 快充下的热管理

GPS

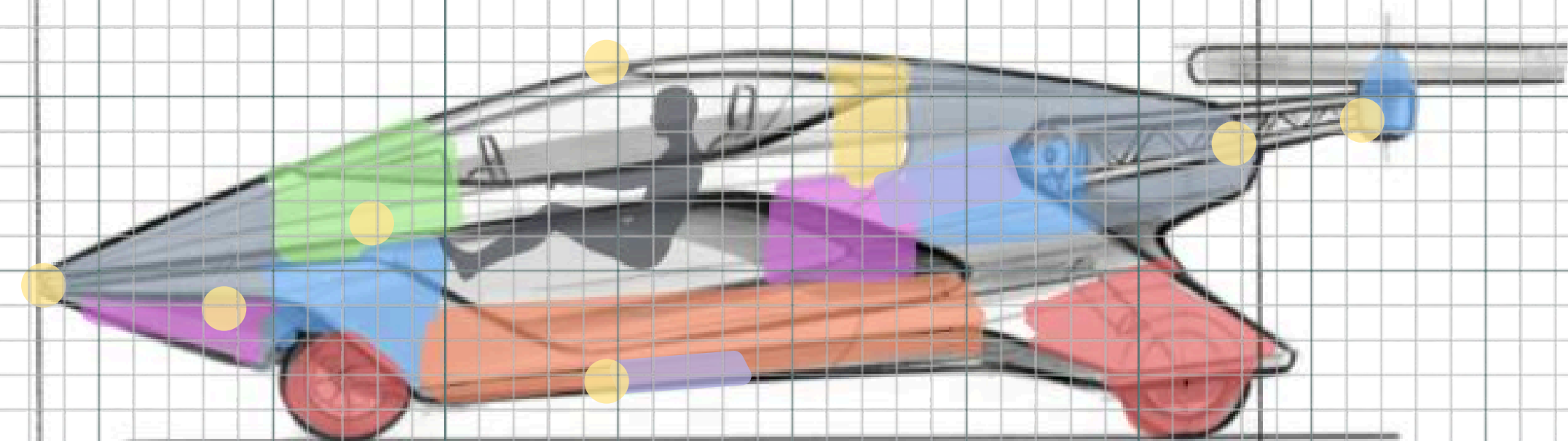
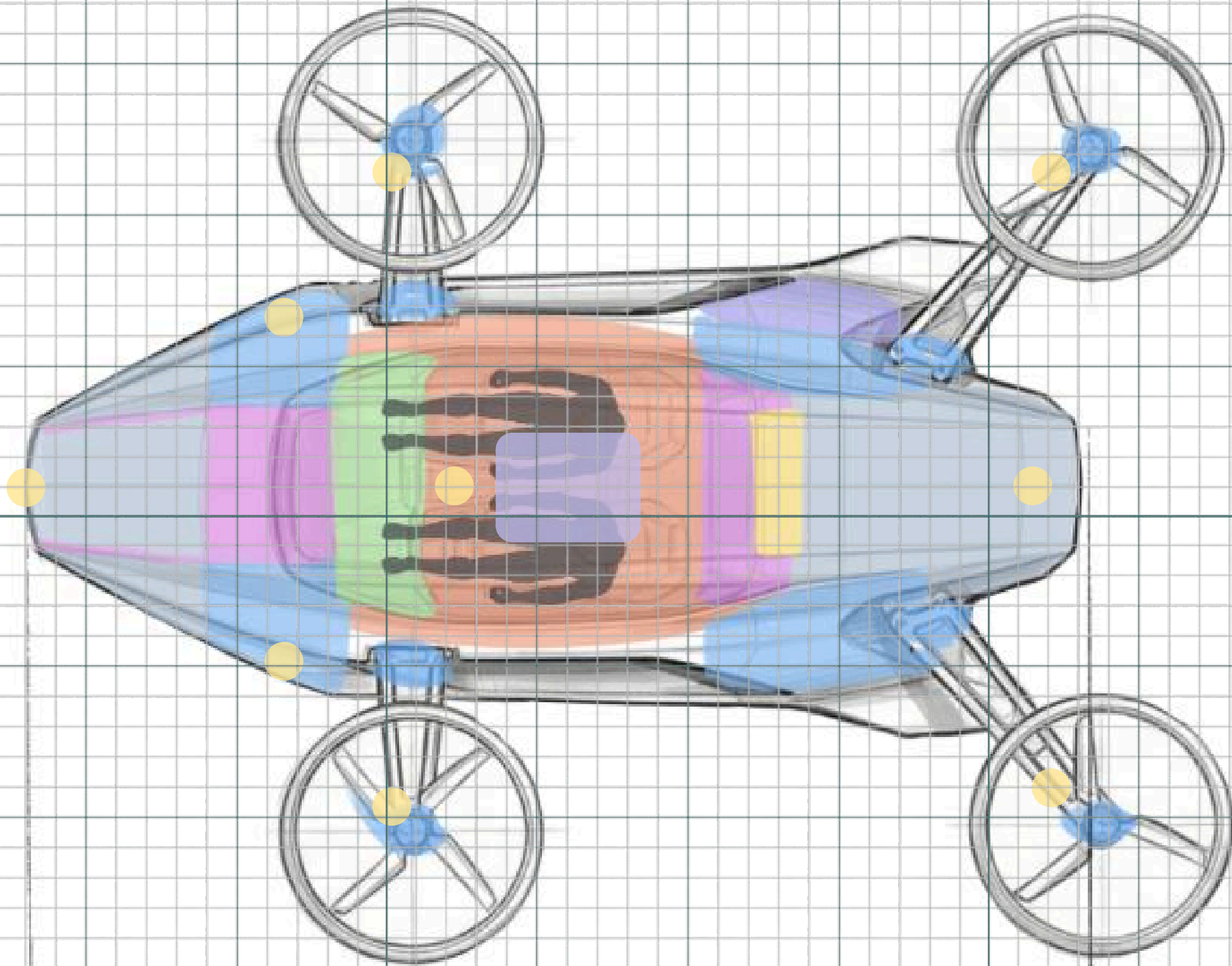
因为这是载人 EVTOL，所以不完全照搬 Tesla Vision 的“纯视觉”方向。
对 EVTOL 来说，必须使用多传感器冗余。

Battery

巡航距离： 140 Km, 巡航速度： 180—220 Km/H
纯巡航时间： 38—47 分钟, 总需求： 130—160 KWh

Damping

起落架冲击吸收; 旋翼振动隔离; 座舱噪音控制; 电池/结构冲击保护; 乘客舒适性控制



Difference View



Perspective View



Rear View



Front View



Side View



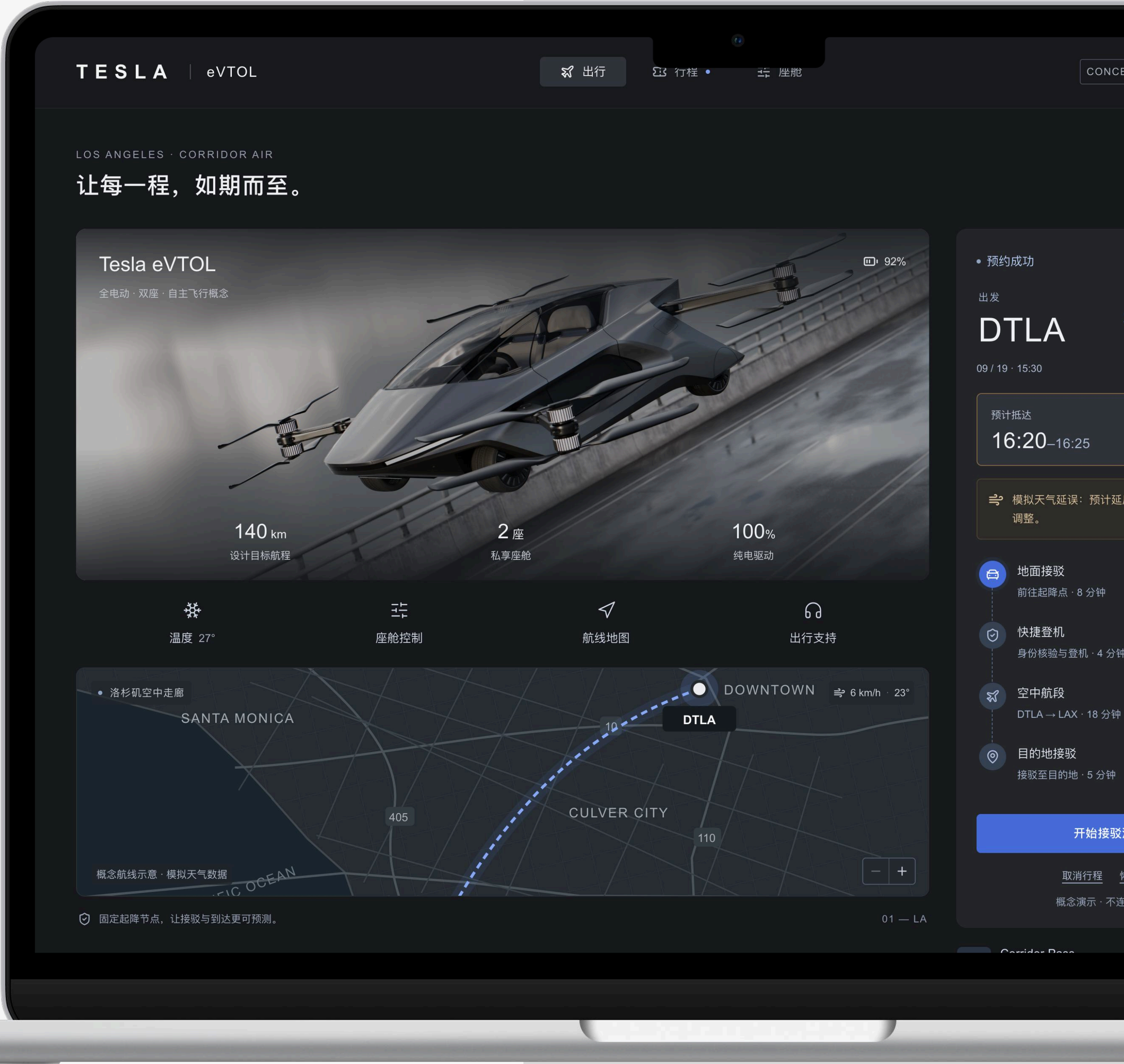
Top View



TESLA APP



Learn more at <https://amber-tesla-evtol.amberwang1316.chatgpt.site>



TESLA



TESLA

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TESLA

We are creating a new sustainable urban lifestyle and redefining the relationship between people and space.

TESLA





TESLA



TESLA



Reimagining B&O for a New Generation



ArtCenter × B&O
Sponsor Studio



2023.02 — 2023.04
3 Months



Mentor :
Nathan Allen

Sound

×

Craft

×

Design

×

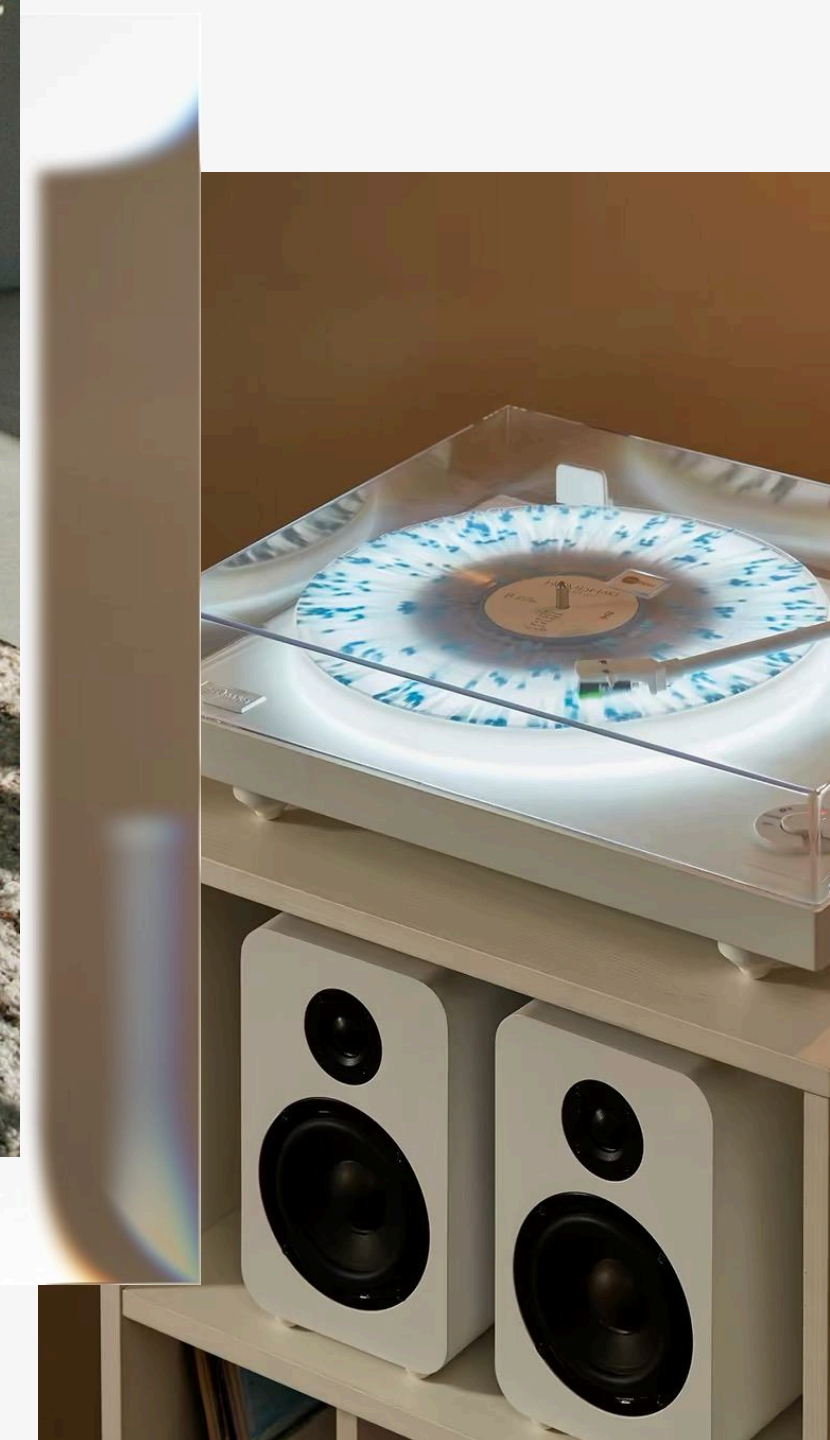
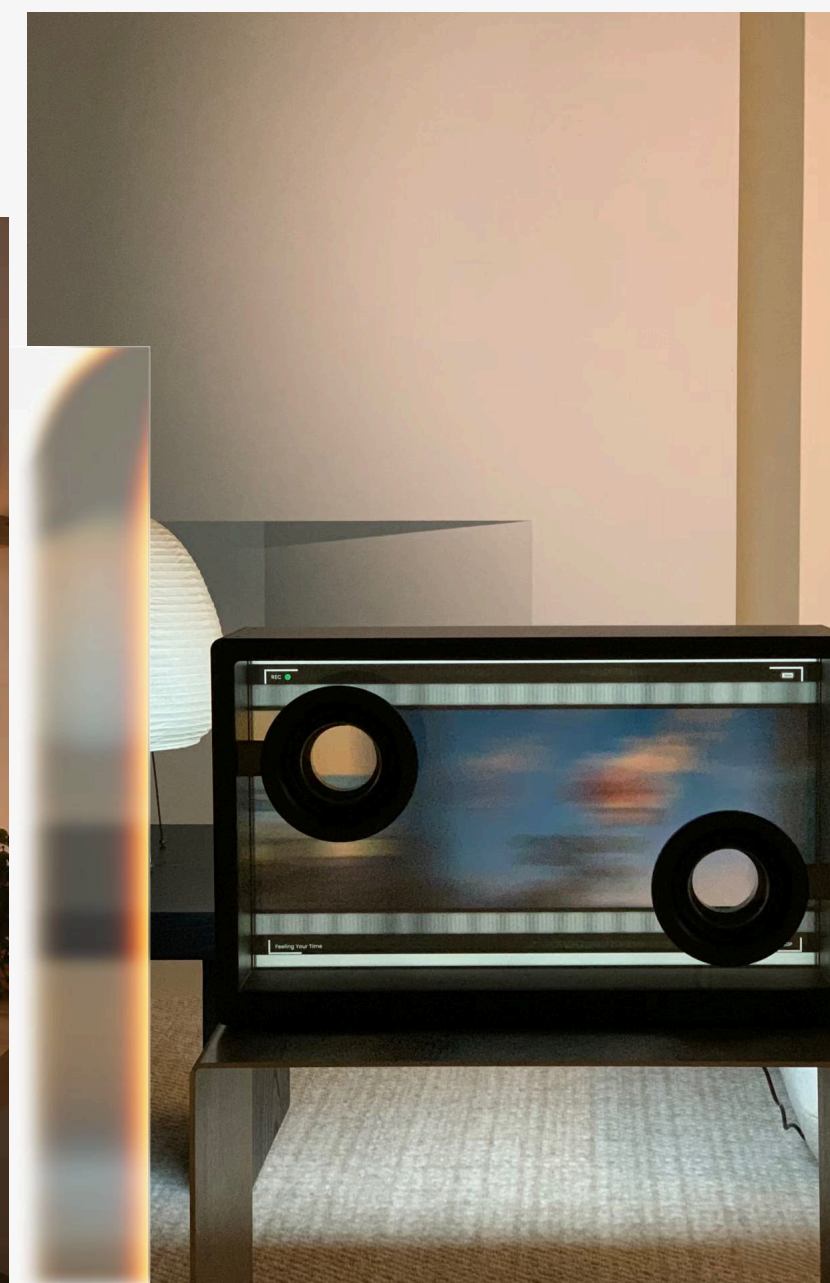
Living



B&O 自 1925 年成立以来，一直将声音、设计与工艺作为品牌核心，并通过真实材料，强调比例、工艺和耐久性的产品设计，将音响从单纯的电子设备转化为空间与生活的一部分。其品牌价值并不只是“高端音质”，而是：B&O 的产品强调长期拥有、空间融合与审美价值，并持续通过材料、工艺和设计建立独特的品牌识别。

BANG & OLUFSEN

B&O 不需要重新定义自己，而需要重新定义与下一代用户的关系



Design Brief

B&O 已经拥有年轻人所认可的价值，但这些价值还没有完全转化为年轻人的生活方式。
不是让 B&O 看起来更年轻，而是在保留品牌 DNA 的前提下，重新定义产品与年轻生活方式之间的关系。

问题不在于 B&O 的审美，而在于产品背后的生活方式

From Market Gap to User Insight

高端音频市场正在从单纯的声音性能竞争，向品牌文化、空间体验与生活方式价值延展。
机会并非改变 B&O 的 DNA，而是让这套 DNA 适应一种新的生活方式。

User Research

年轻用户并不排斥 B&O，而是生活方式发生了变化。

Key Insight

传统用户围绕产品建立空间；年轻用户希望产品适应自己的生活。

竞品分析不只关注产品造型，而是进一步比较不同品牌如何通过产品建立与用户生活方式的关系。
B&O 已经建立了强大的“空间语言”，下一步的机会，是建立更具当代感的“生活方式语言”。



重新定义产品体验



设计语言



产品原型开发



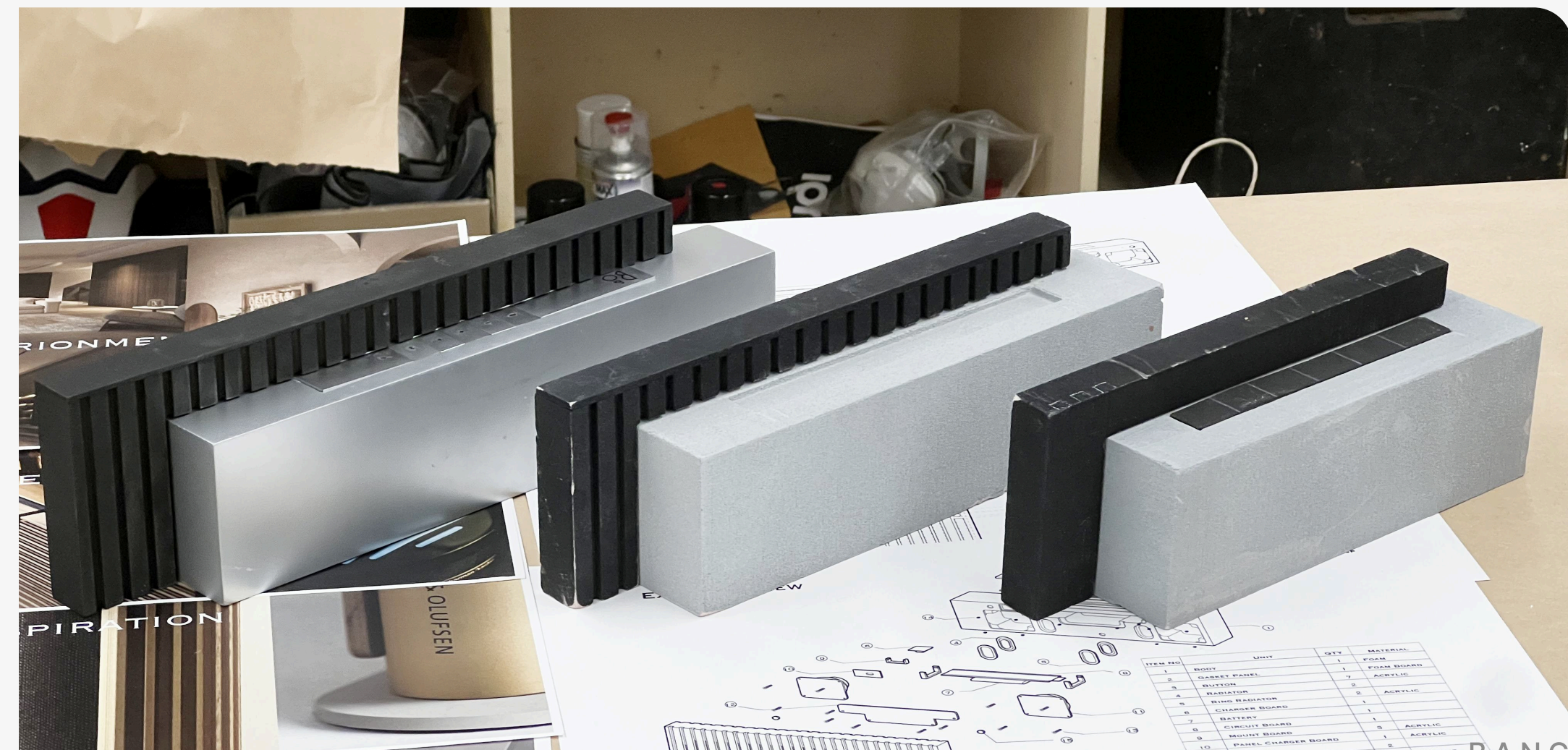
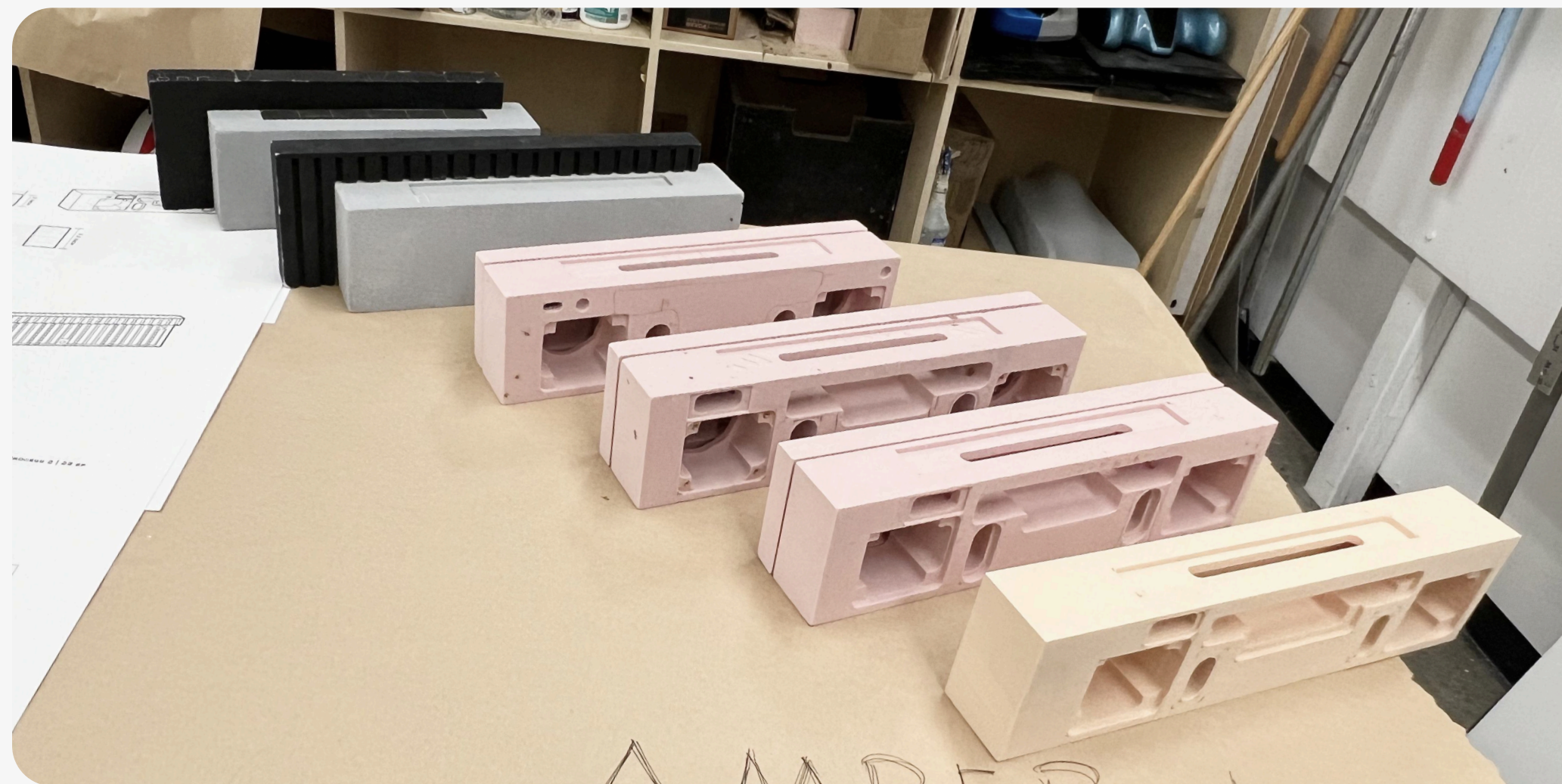
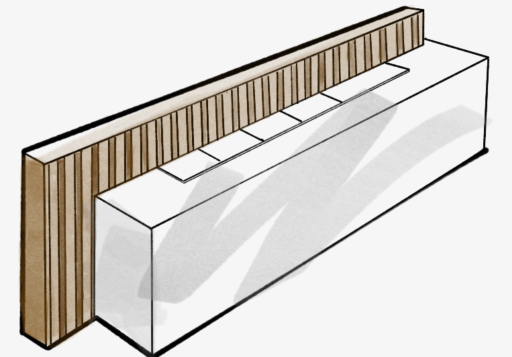
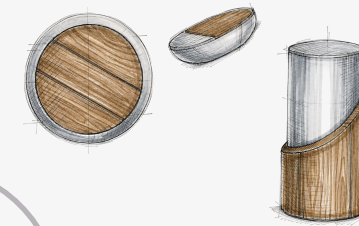
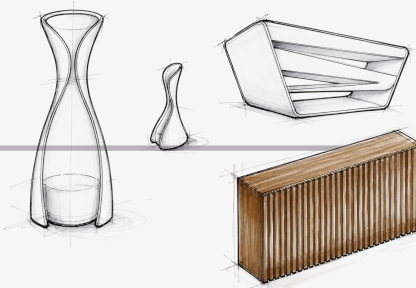
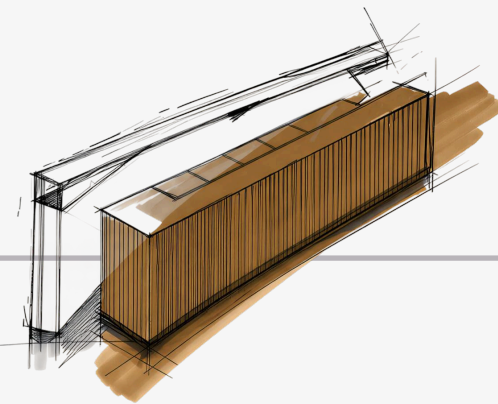
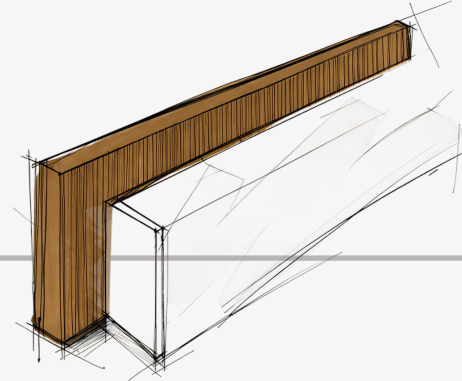
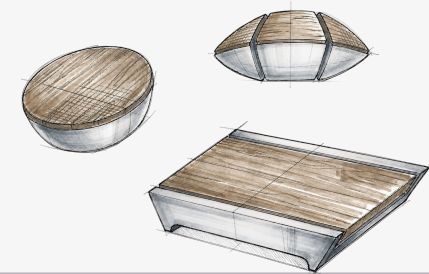
建立年轻用户能够感知的产品价值



重新定义产品与生活方式的关系

Sketchs

从空间陈设到个性表达
从空间中心到空间氛围
真实质感材质 B&O DNA
透明结构
模块化



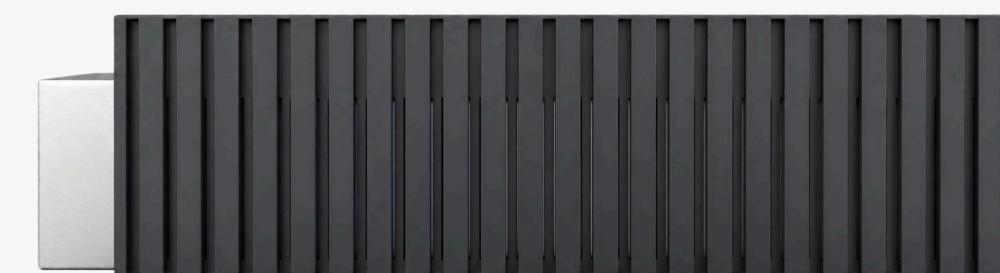
BANG & OLUFSEN



FRONT - OPENED MAGNETIC GRILLE



TOP - CLOSED MAGNETIC GRILLE



BACK - CLOSED MAGNETIC GRILLE

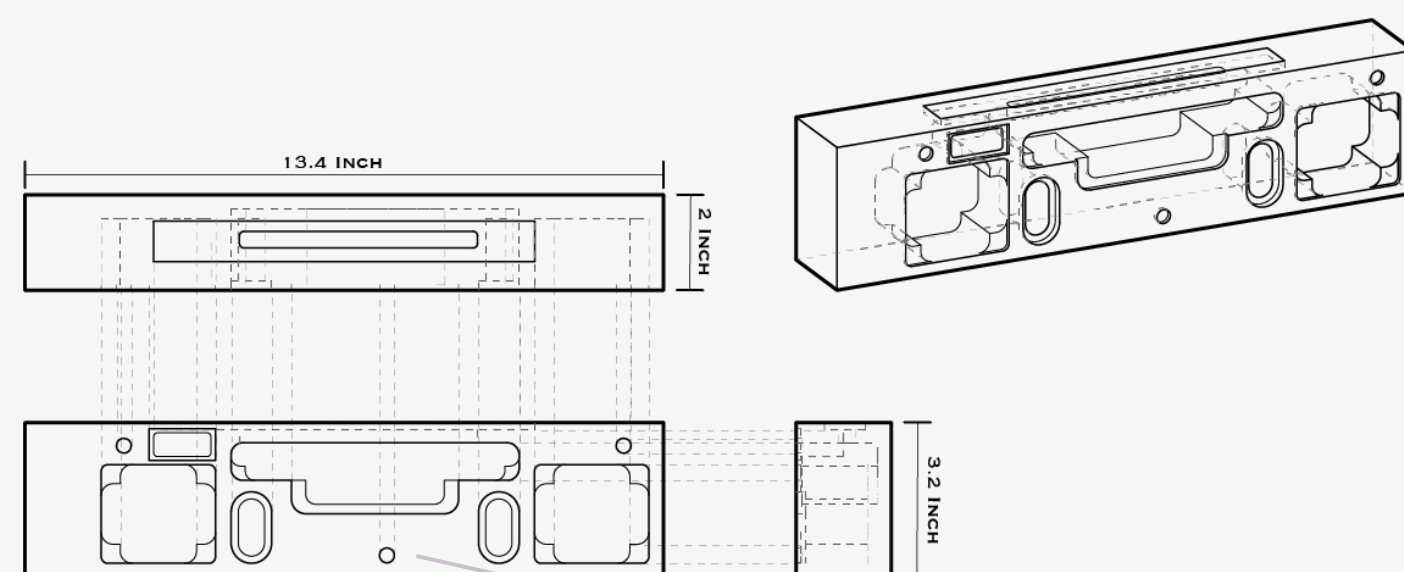


FRONT - CLOSED MAGNETIC GRILLE

Tech Pack

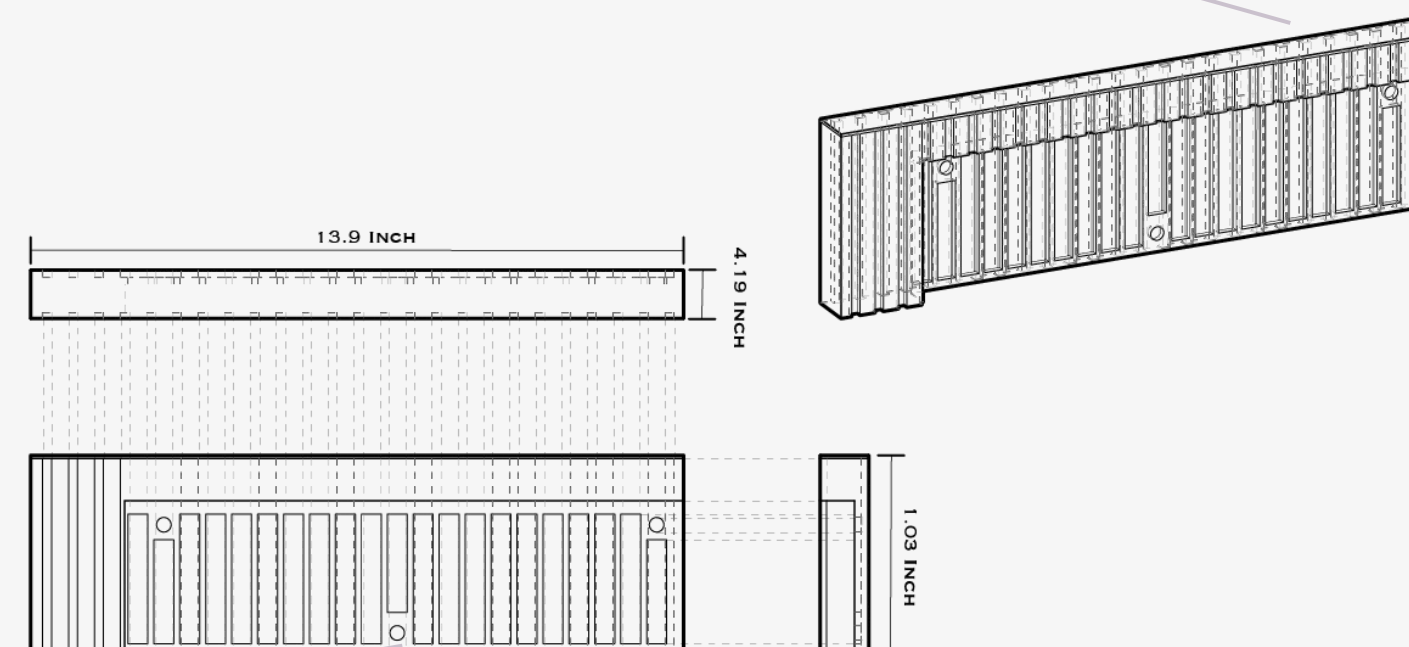
模块化

双面组装，适应不同场景与氛围

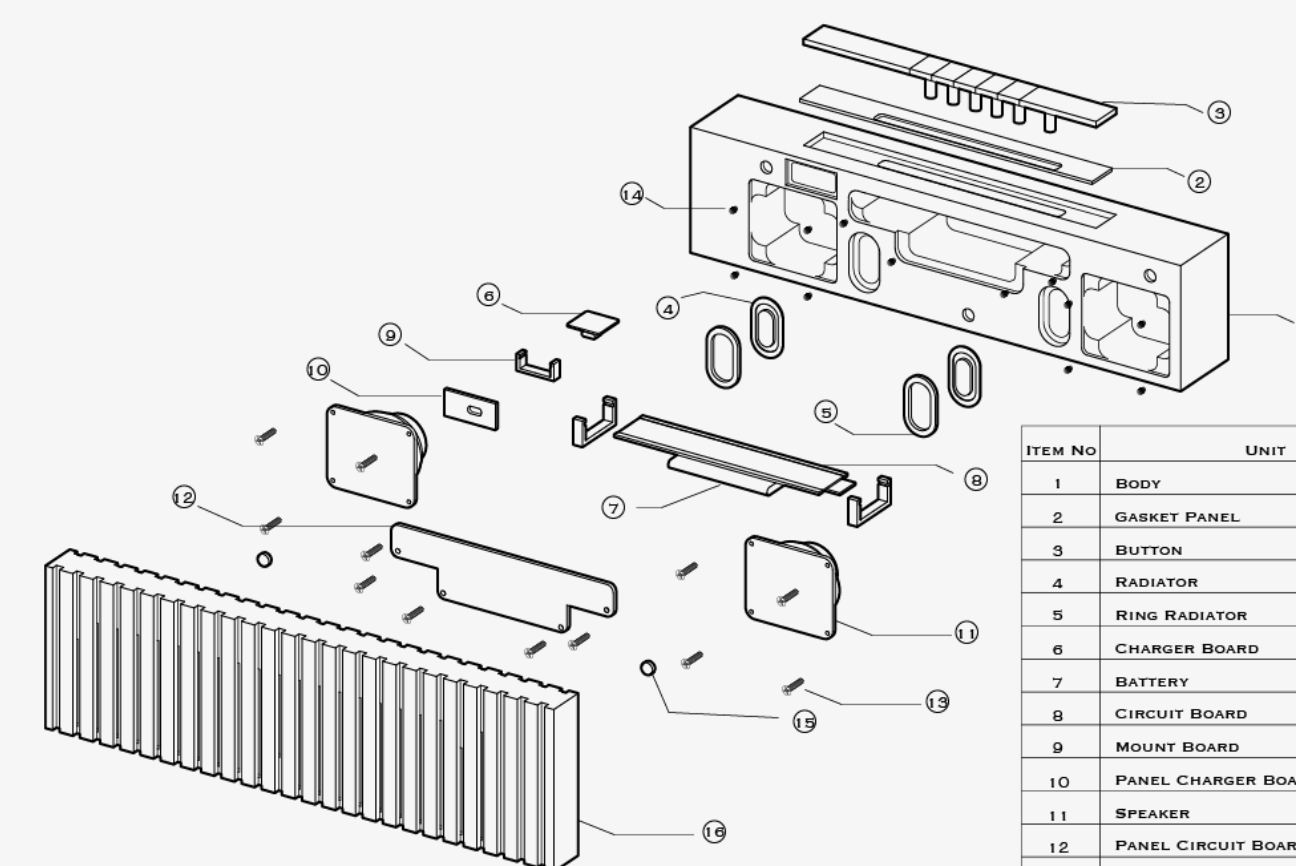


双面错位CNC

模块化扩声器遮盖的同时保证声音的质量



定位磁吸



ITEM No	UNIT	QTY	MATERIAL
1	BODY	1	FOAM
2	GASKET PANEL	1	FOAM BOARD
3	BUTTON	7	ACRYLIC
4	RADIATOR	2	
5	RING RADIATOR	2	ACRYLIC
6	CHARGER BOARD	1	
7	BATTERY	1	
8	CIRCUIT BOARD	1	
9	MOUNT BOARD	3	ACRYLIC
10	PANEL CHARGER BOARD	1	ACRYLIC
11	SPEAKER	2	
12	PANEL CIRCUIT BOARD	1	ACRYLIC
13	4-40 SCREW	12	STEEL
14	INSERT 4-40	12	STEEL
15	MAGNET	6	MAGNET
16	PART	1	WORK

BANG & OLUFSEN





MoMA

The Beethoven Project

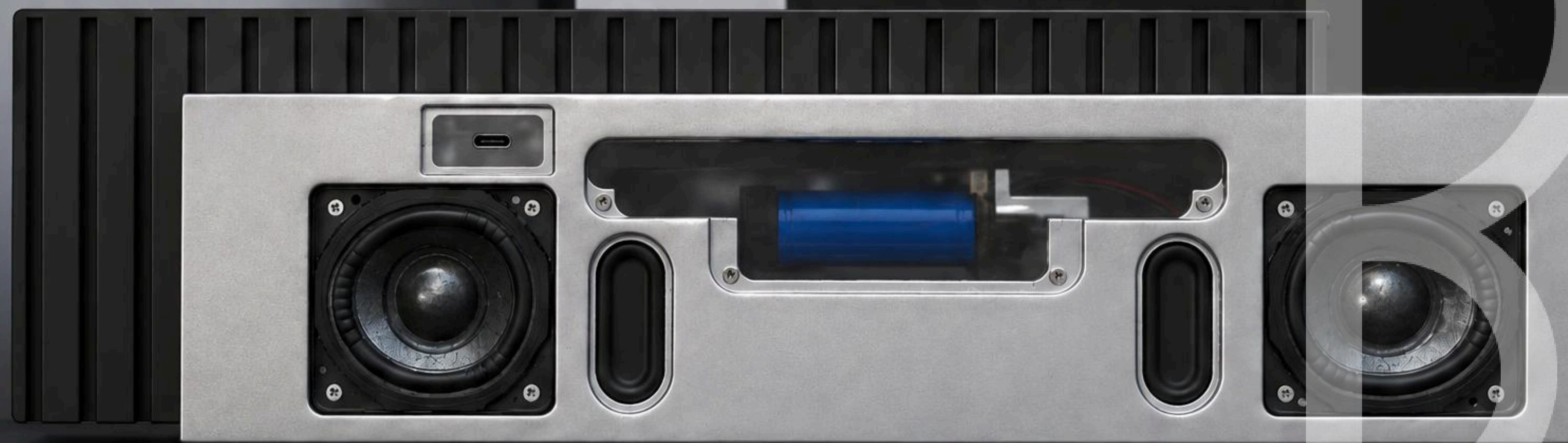
CYPRES 21

JAMIE HAWKESWORTH THE BRITISH ISLES

BANG & OLUFSEN



B
&
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MORGAN

RACE KART KIT

从手工造车传统，到可参与的品牌体验



Craft

×

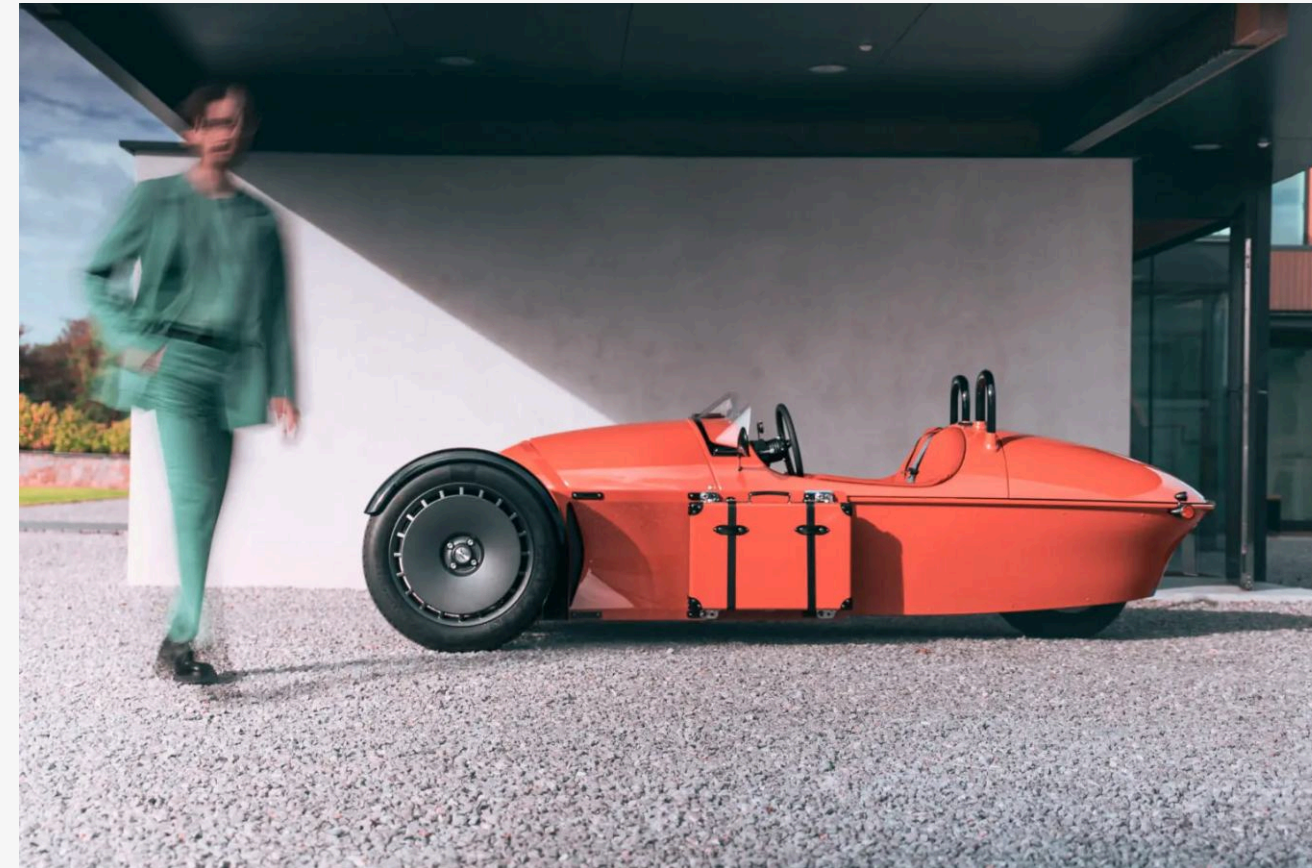
Build

×

Drive

×

Heritage



About MORGAN

Morgan 的核心不是复古，而是“传承”本身

Morgan 创立于 1909 年，是极少数仍将传统 coachbuilding 工艺保留在现代汽车制造中的品牌。Morgan 始终将传统 Coachbuilding 工艺与现代工程结合，并以木材、金属、皮革等真实材料、手工制造和纯粹驾驶体验构建独特的品牌文化——不是复制过去，而是让传统工艺与现代工程持续共存。

Morgan Experience Centre 提供工厂参观、驾驶体验、品牌档案馆等项目，每年超过 30,000 名访客进入工厂近距离观看车辆从 ash frame 到最终整车的手工制造过程。

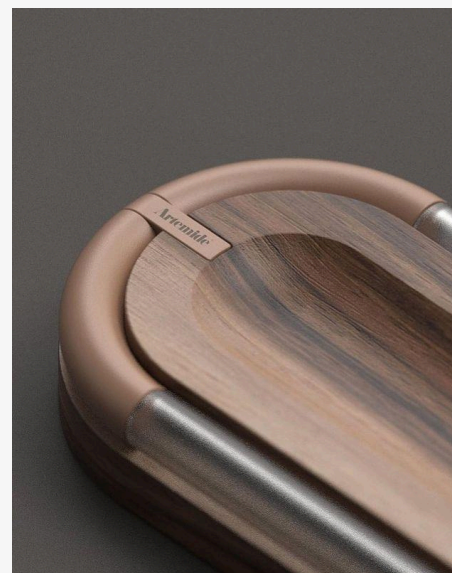
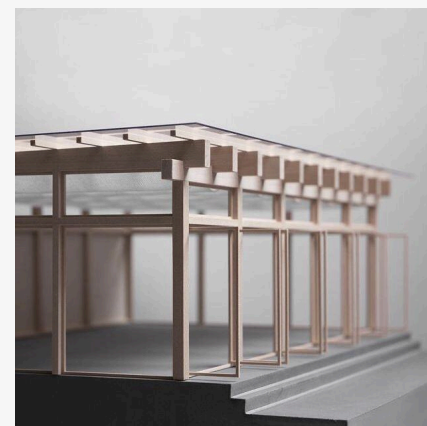
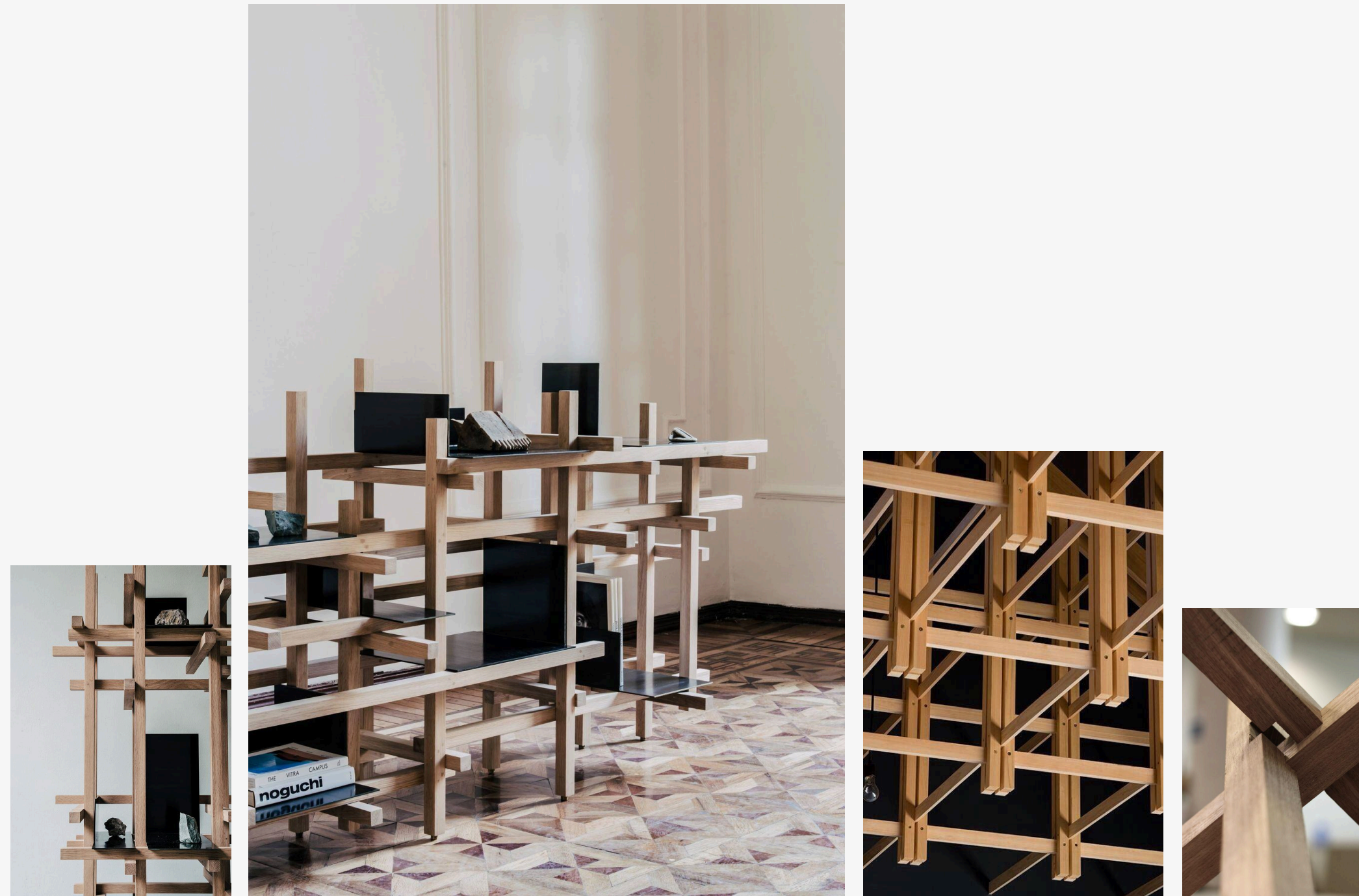
MORGAN

Pre-cut Wooden Parts
预加工木件

Joinery
榫接 / 木结构连接

Visible Fasteners
可理解的机械连接

Modular Assembly
模块化装配



把 Morgan 的手工造车文化，从被观看与欣赏的传统，
转化为下一代可以亲手参与、理解并驾驶的品牌体验。

Concept



我们记住的从来不只是品牌，而是与品牌共同发生过的生活

童年时期的品牌体验，可增加长期熟悉感、情感连接与品牌怀旧，为未来品牌偏好建立更深层的心理基础。对 Morgan 来说，“代际传承”本身就是品牌的一部分。既然工艺可以代代传承，品牌关系是否也可以？父母传递给下一代的，不只是产品，还有故事、技能与价值观。共同制造，让品牌从“被看见”，变成一段家庭共同记忆。

OPPORTUNITY:

如果下一代不只是观看 Morgan、玩 Morgan，而能够真正亲手制造一辆属于自己的 Morgan 呢？

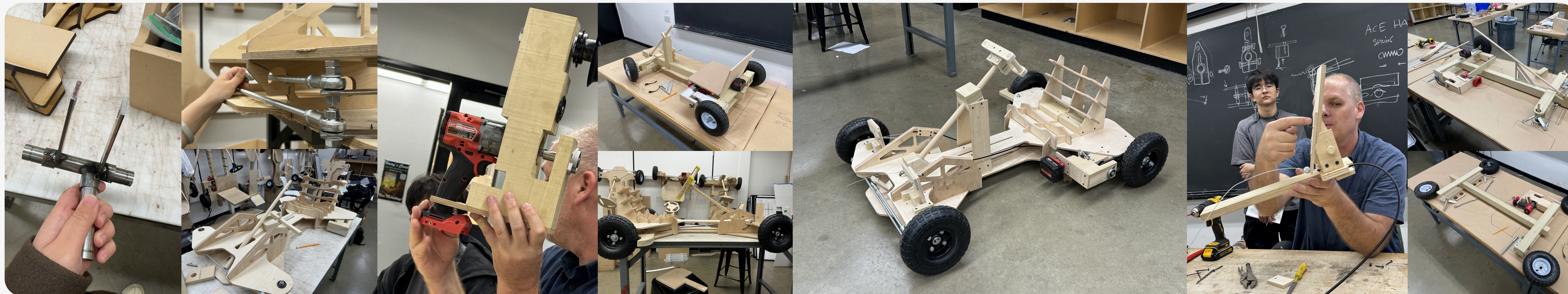
WHY A KART?

卡丁车，是能够保留真实汽车逻辑的最低复杂度载体。

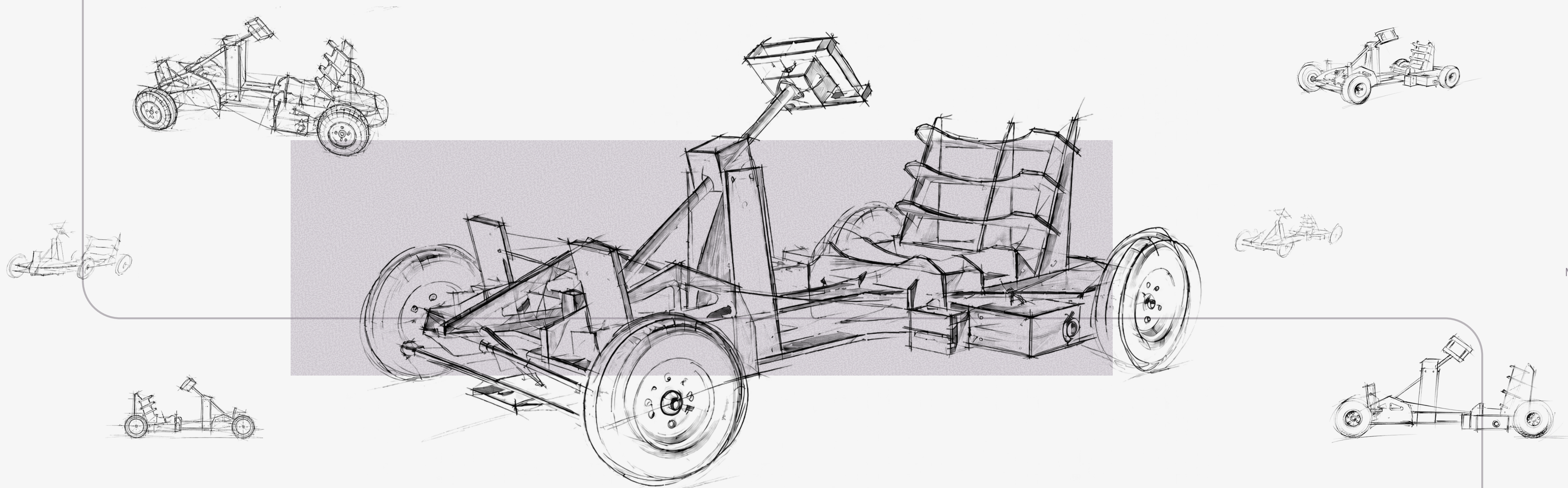


Morgan has already begun to proactively connect with the next generation

MORGAN



Design Exploration



MORGAN DNA

BUILDABILITY
可建造性

STRUCTURAL LOGIC
结构逻辑

DRIVING EXPERIENCE
驾驶体验

LOW PART COUNT
零件数量低

MANUFACTURABILITY
可制造性

MORGAN



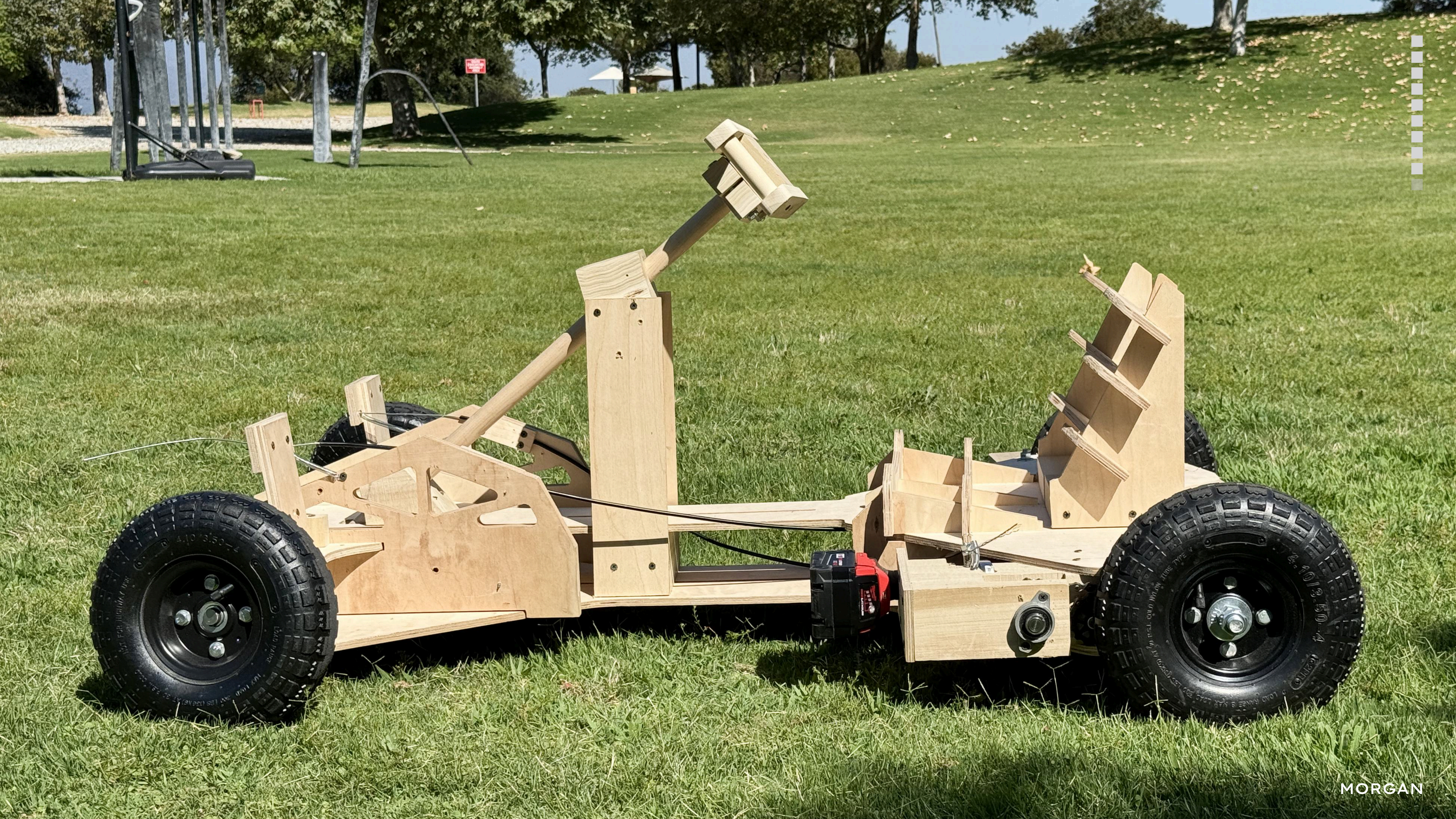
Driving Test

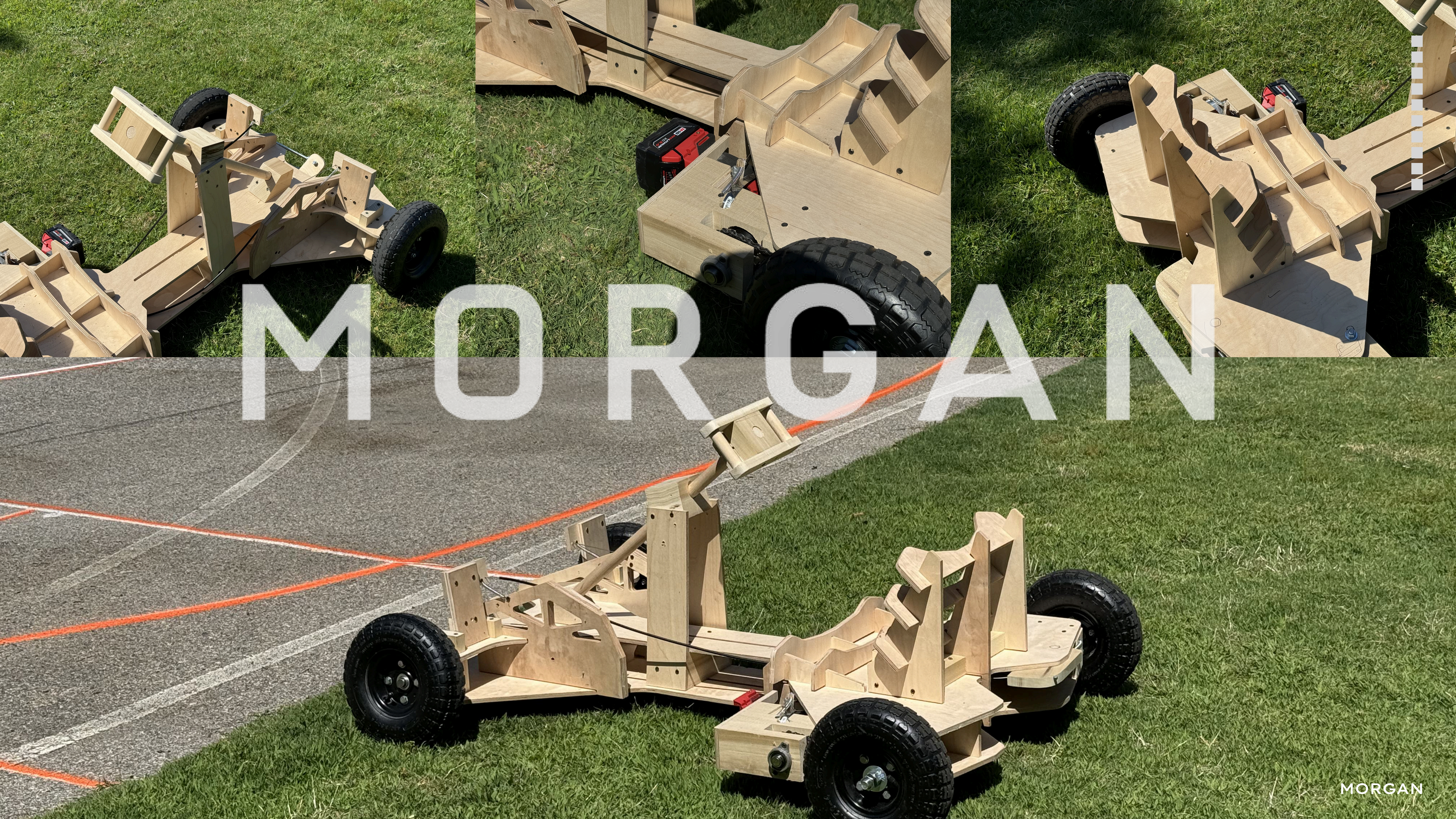








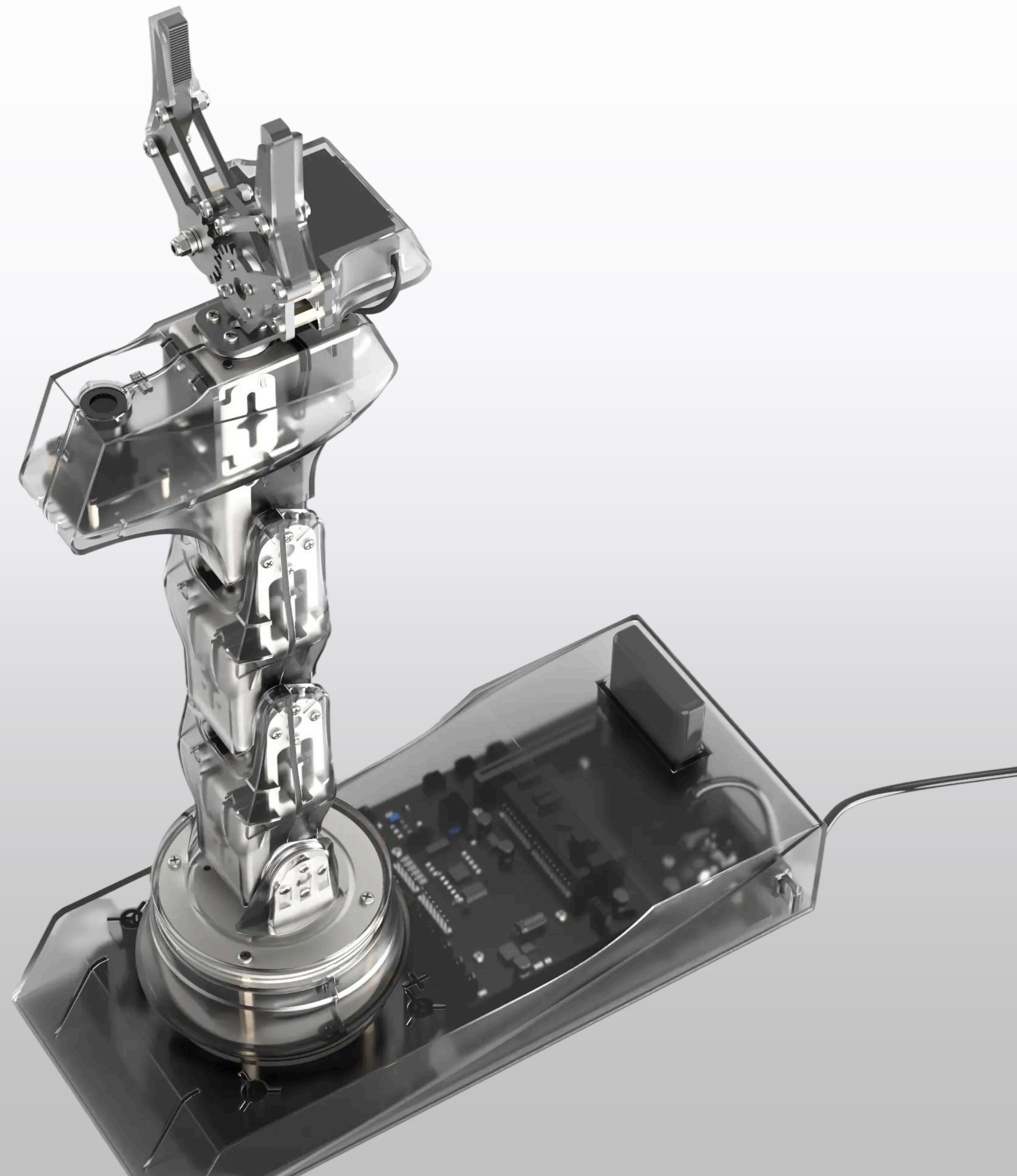




MORGAN

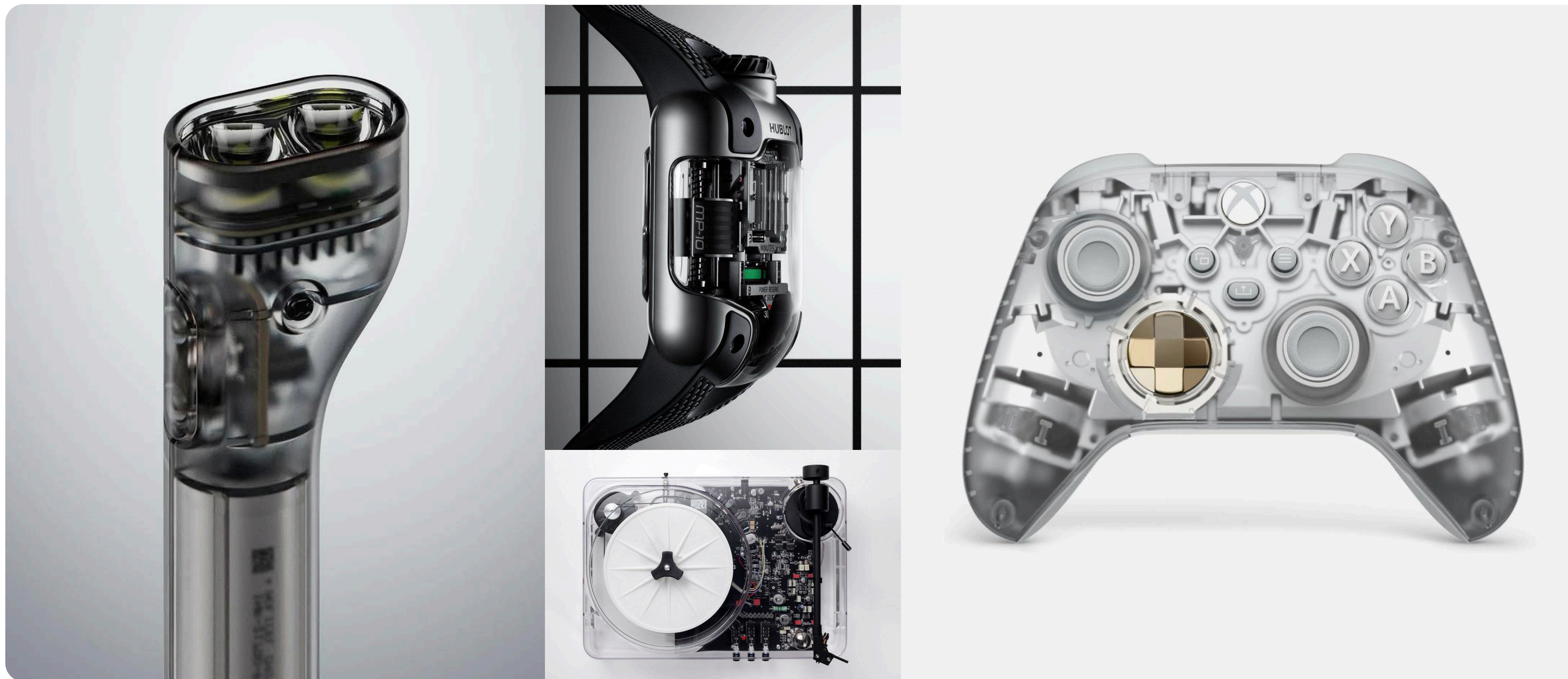
ROBOT ARM - MANUFACTURE

从“能做出”，到“值得被做出”



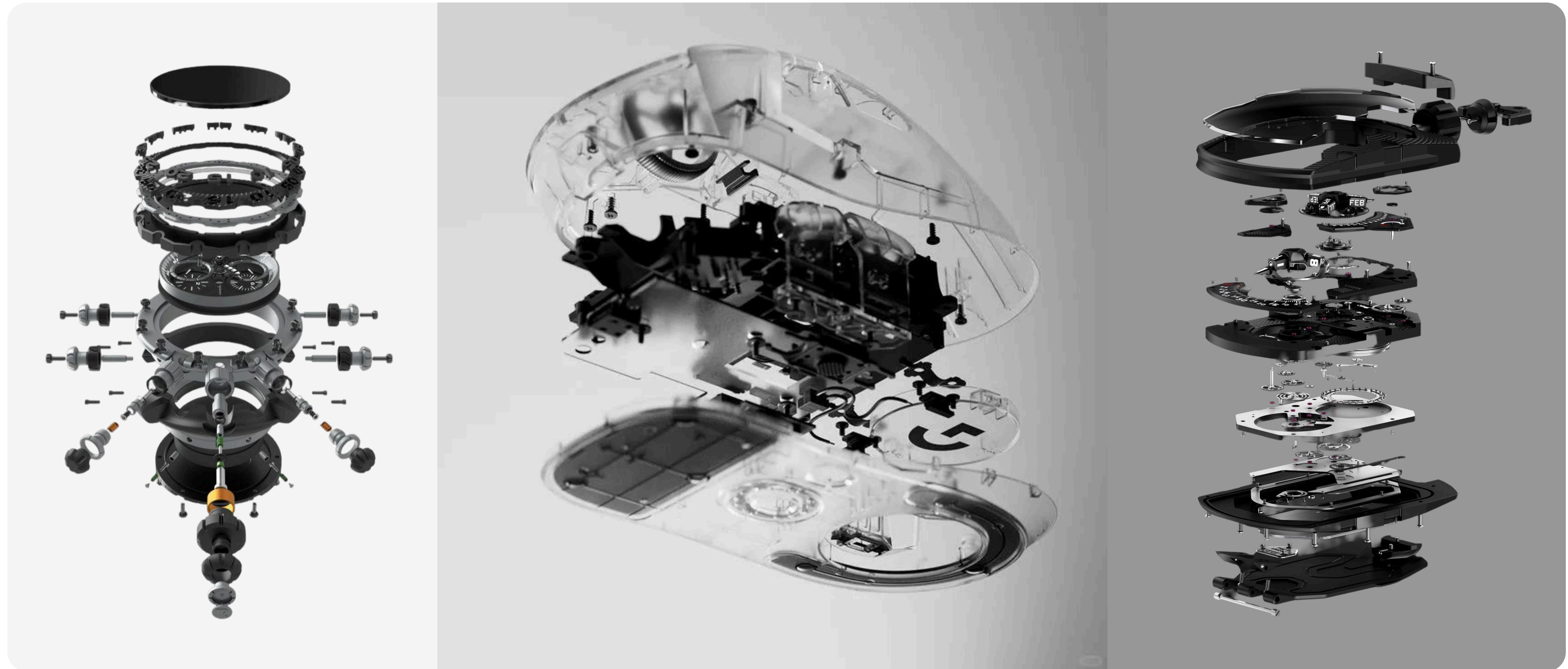
Reference for See Through Product

以透明设计，让复杂结构变得可读



Reference for Explode Image

通过拆解关系，理解产品架构

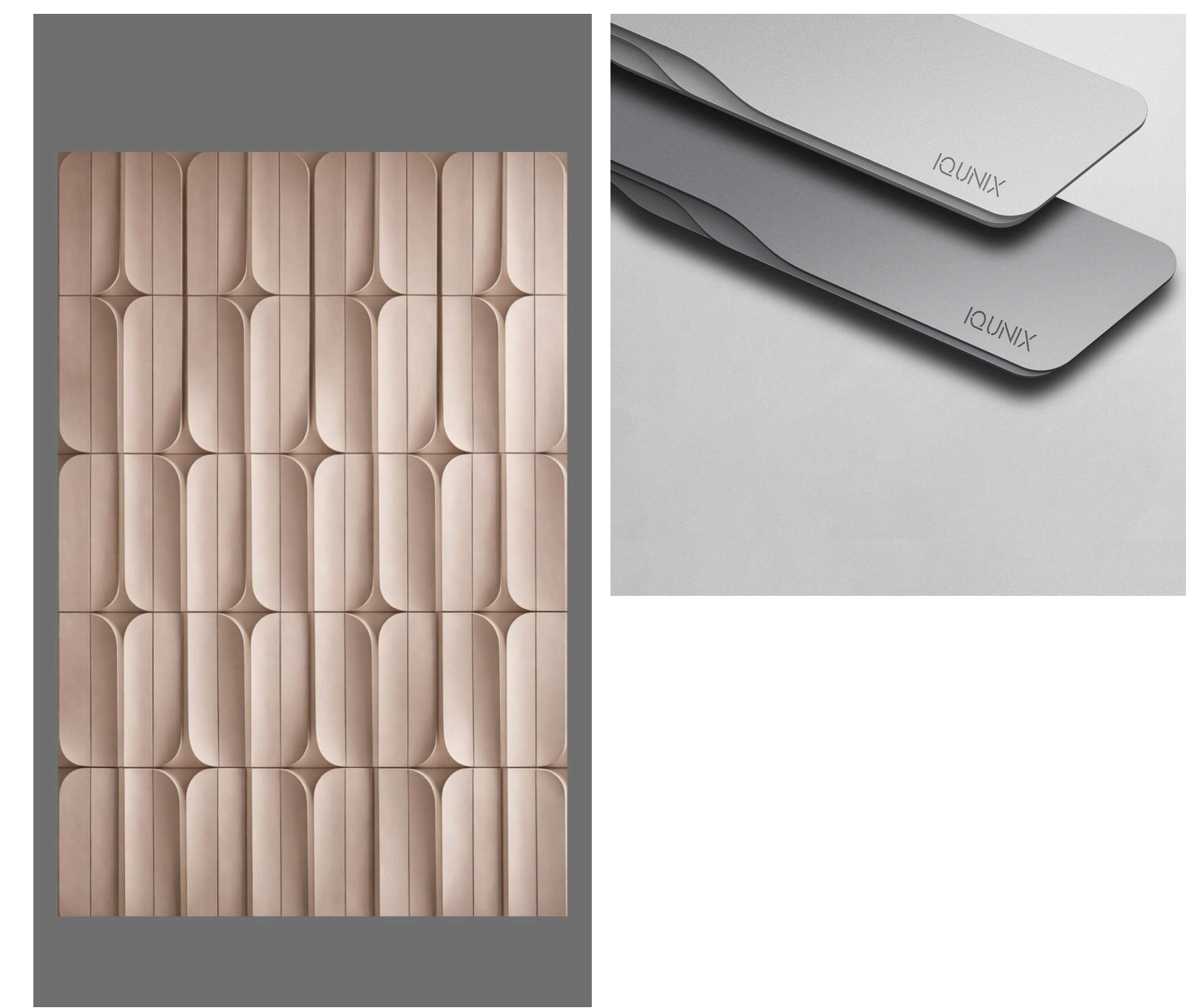




COMPETITOR



DETAIL



Sketches

The form had to emerge from the motion system, rather than conceal it.

Reach

Motion Range

Joint Volume

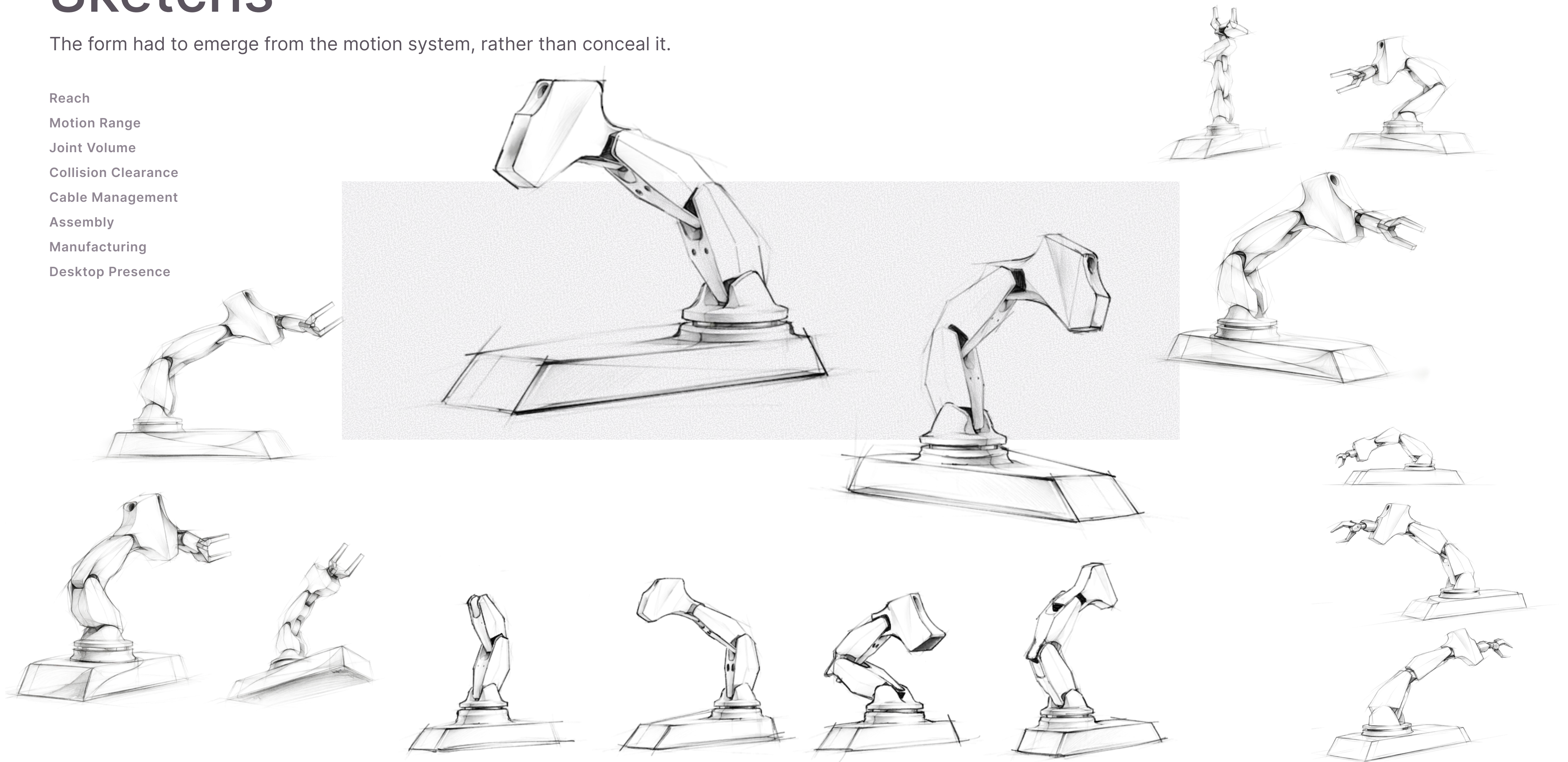
Collision Clearance

Cable Management

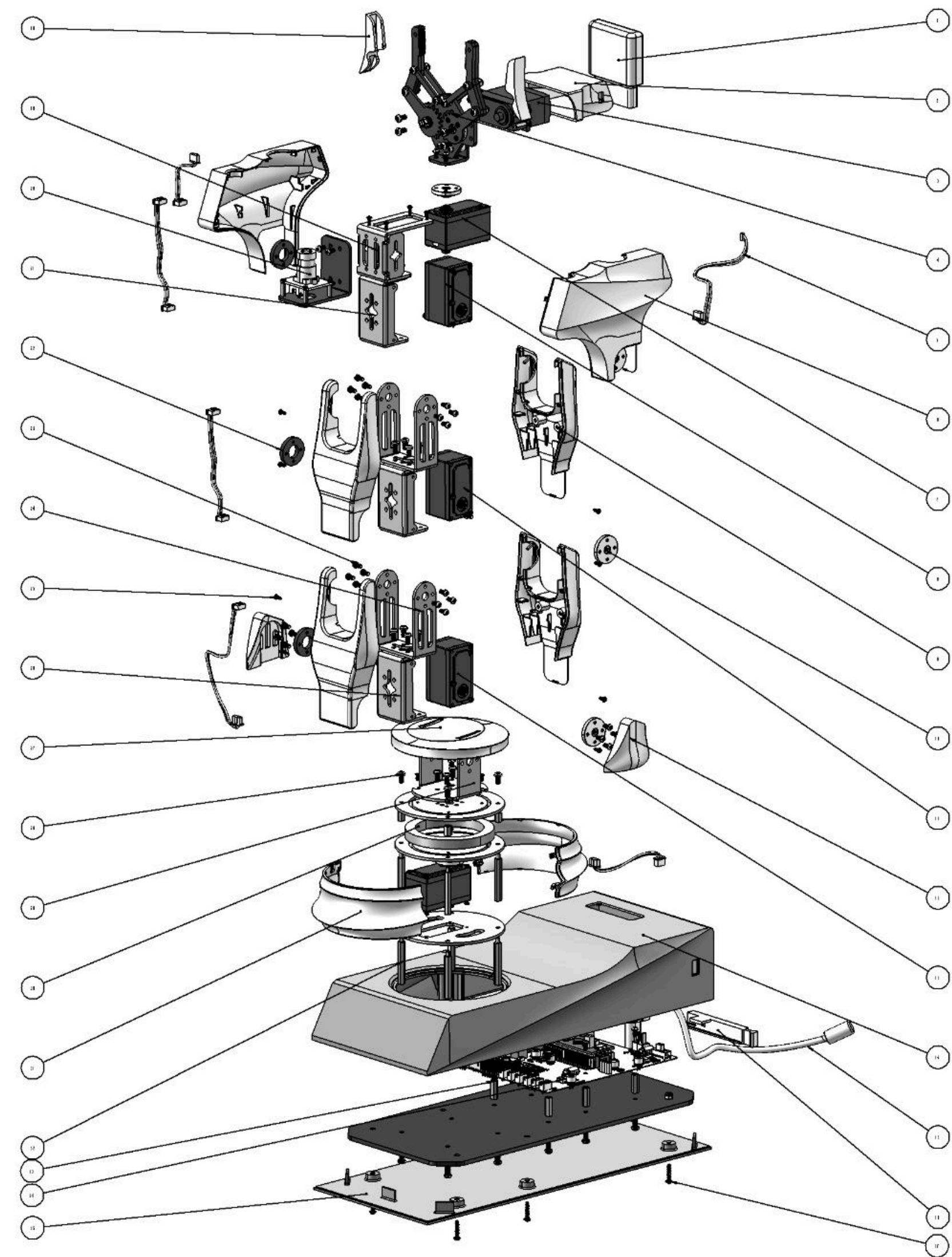
Assembly

Manufacturing

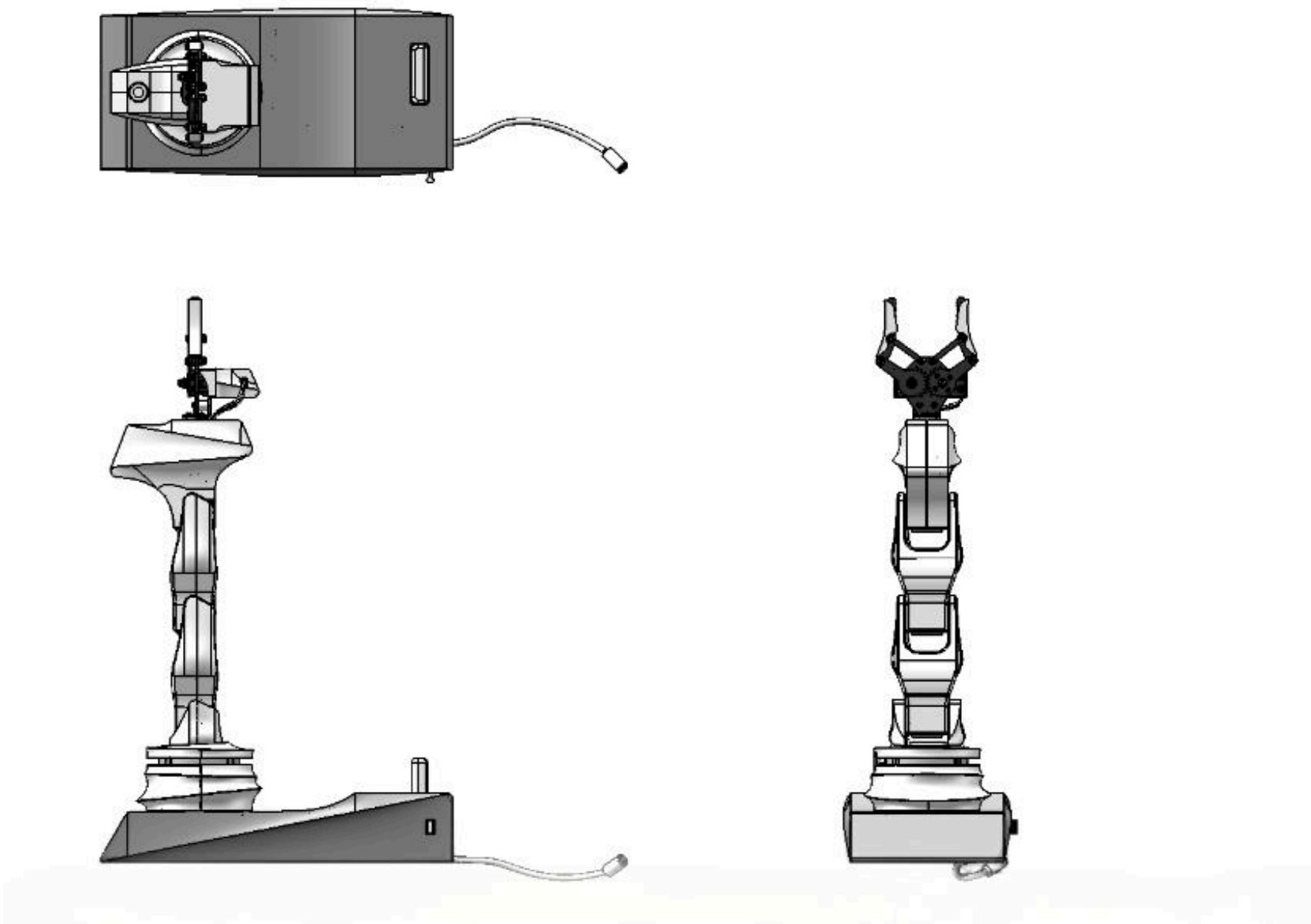
Desktop Presence



Bill of Material



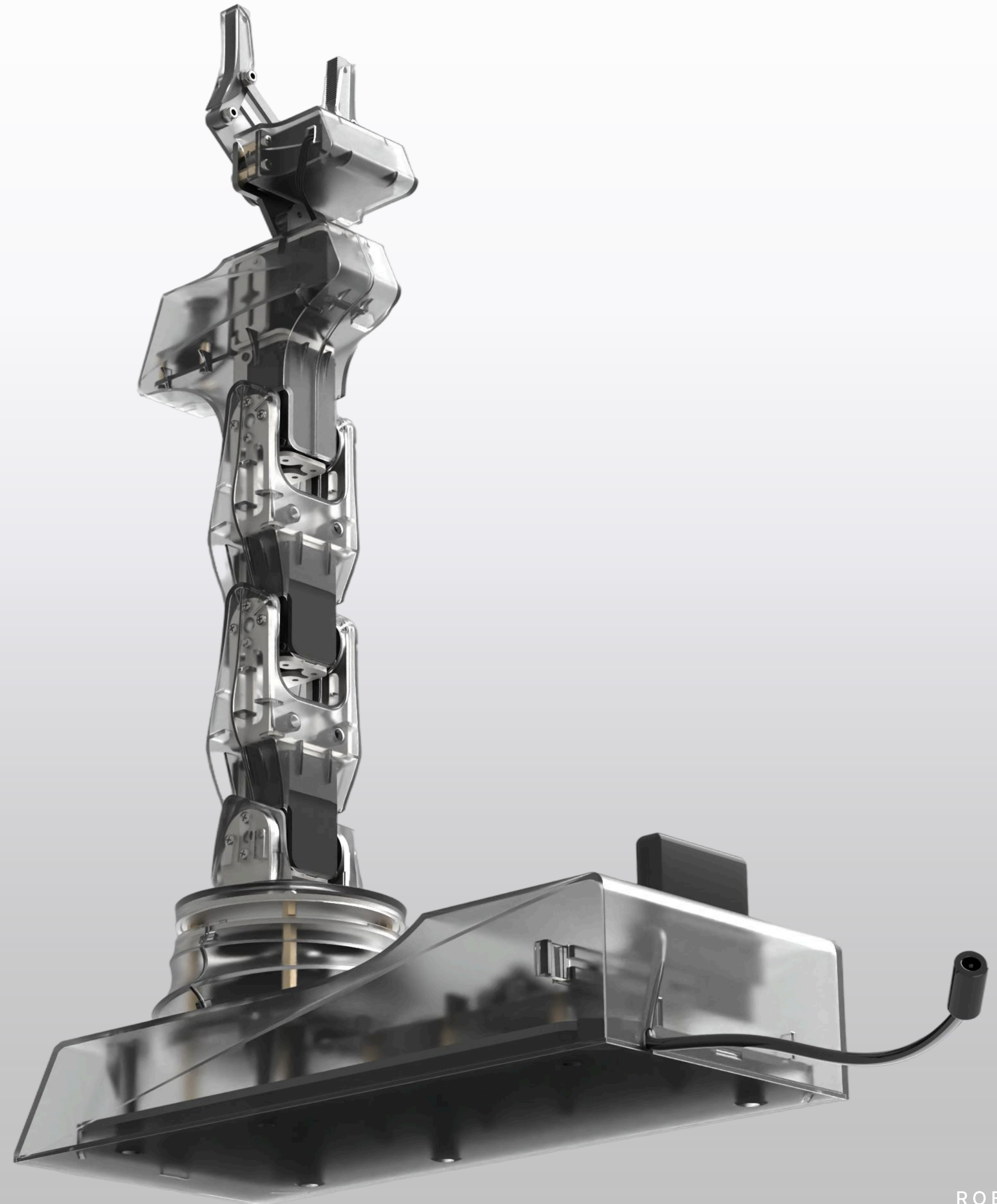
ITEM NO.	COMPONENT	DESCRIPTION	QTY.
1	CONNECTOR OF HANDLE	PLASTIC AND METAL	1
2	SHELL OF ELECTRICAL MACHINERY NO.6	3D PRINT PLA	1
3	ELECTRICAL MACHINERY NO.6	PLASTIC AND METAL	1
4	MECHANICAL HAND	METAL	1
5	ELLECTRIC WIRE OF ELECTRICAL MACHINERY	PLASTIC AND METAL	6
6	SHELL OF ELECTRICAL MACHINERY NO.4 & 5	3D PRINT PLA	2
7	ELECTRICAL MACHINERY NO.5	PLASTIC AND METAL	1
8	ELECTRICAL MACHINERY NO.4	PLASTIC AND METAL	1
9	SHELL OF ELECTRICAL MACHINERY NO.3 OR NO.2	3D PRINT PLA	4
10	GEAR	METAL	5
11	ELECTRICAL MACHINERY NO.3	PLASTIC AND METAL	1
12	SHELL OF GEAR	3D PRINT PLA	2
13	ELECTRICAL MACHINERY NO.2	PLASTIC AND METAL	1
14	TOP SHELL OF BASE	3D PRINT PLA	1
15	POWER WIRE	PLASTIC AND METAL	1
16	SWITCH	3D PRINT PLA	1
17	LONG SCREW	METAL	6
18	SHELL OF MECHANICAL HAND	3D PRINT PLA	2
19	MATEL HOLDER OF ELECTRICAL MACHINERY NO.5	METAL	1
20	CAMERA	METAL AND PLASTIC AND GLASS	1
21	MATEL HOLDER OF ELECTRICAL MACHINERY NO.4	METAL	1
22	BEARING	METAL	3
23	ROUND SCROW SMALL	METAL	40
24	MATEL HOLDER OF ELECTRICAL MACHINERY SUPPORT	MEATL	2
25	FLAT SCROW	METAL	44
26	MATEL HOLDER OF ELECTRICAL MACHINERY NO.3 OR 2	METAL	2
27	SHELL OF SPIN HOLDER	3D PRINT PLA	1
28	ROUND SCROW BIG	METAL	48
29	MATEL SPIN HOLDER	METAL	1
30	SPIN BEARING	METAL	1
31	SHELL OF ELECTRICAL MACHINERY NO.1	3D PRINT PLA	2
32	SCREW PIVOT LONG	METAL	8
33	SCREW PIVOT MID	METAL	6
34	CHIP	PLASTIC AND METAL	1
35	SHELL OF BOTTOM BASE	3D PRINT PLA	1



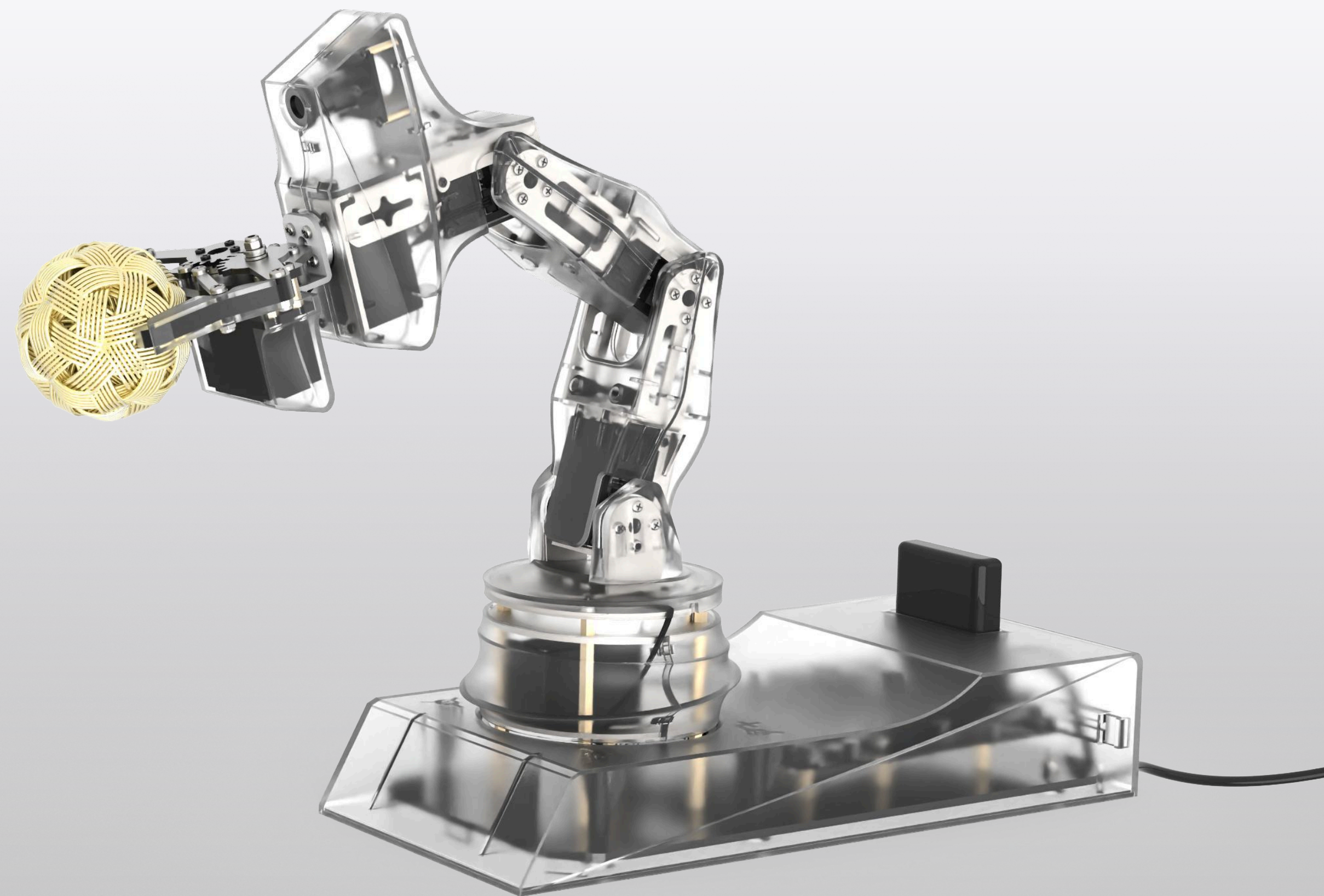
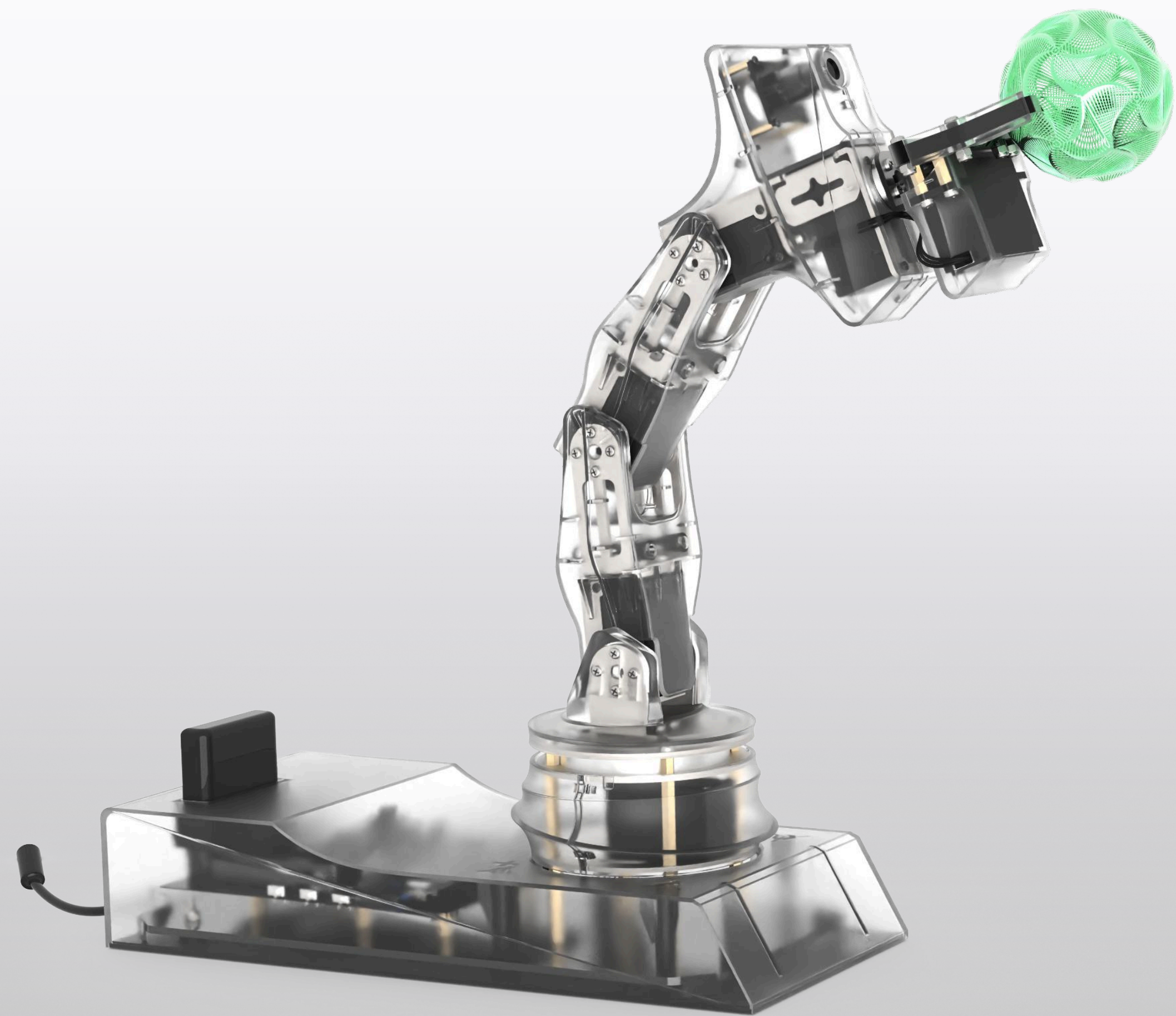
Explode Image



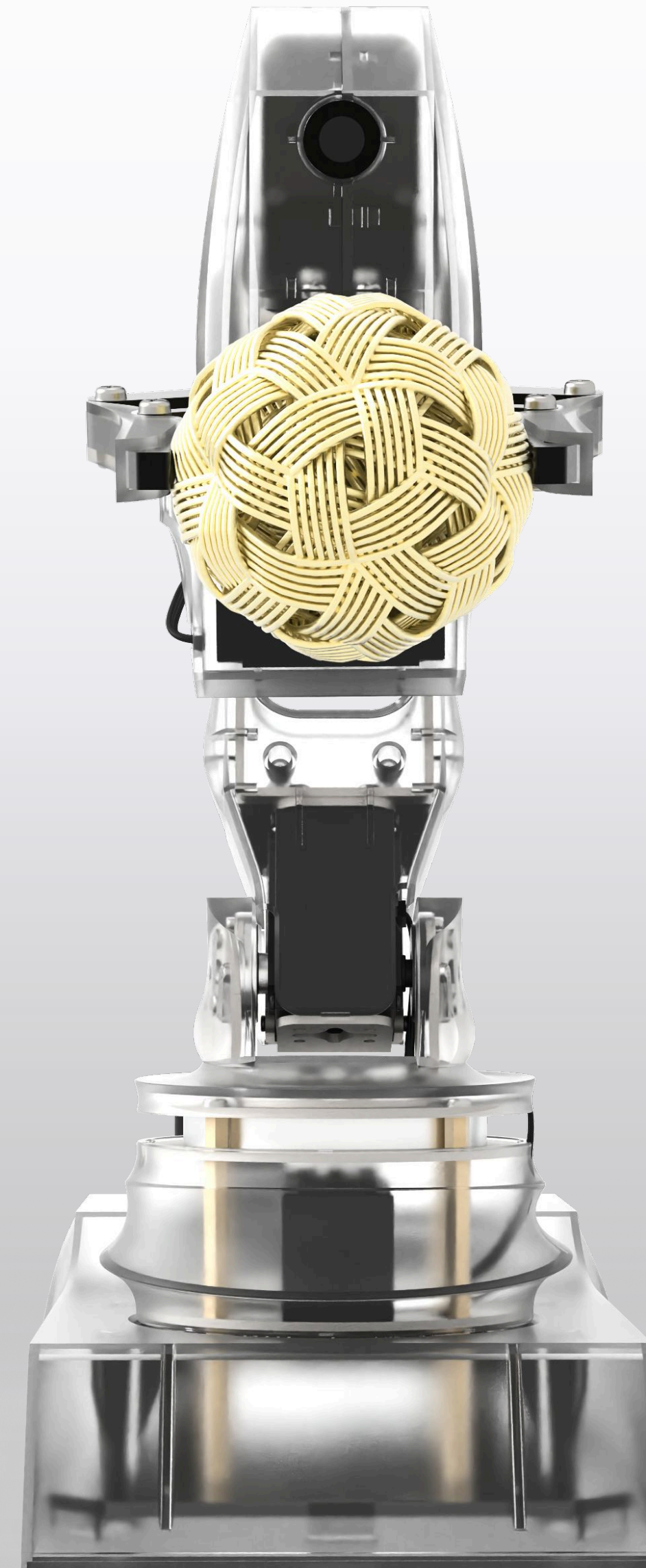
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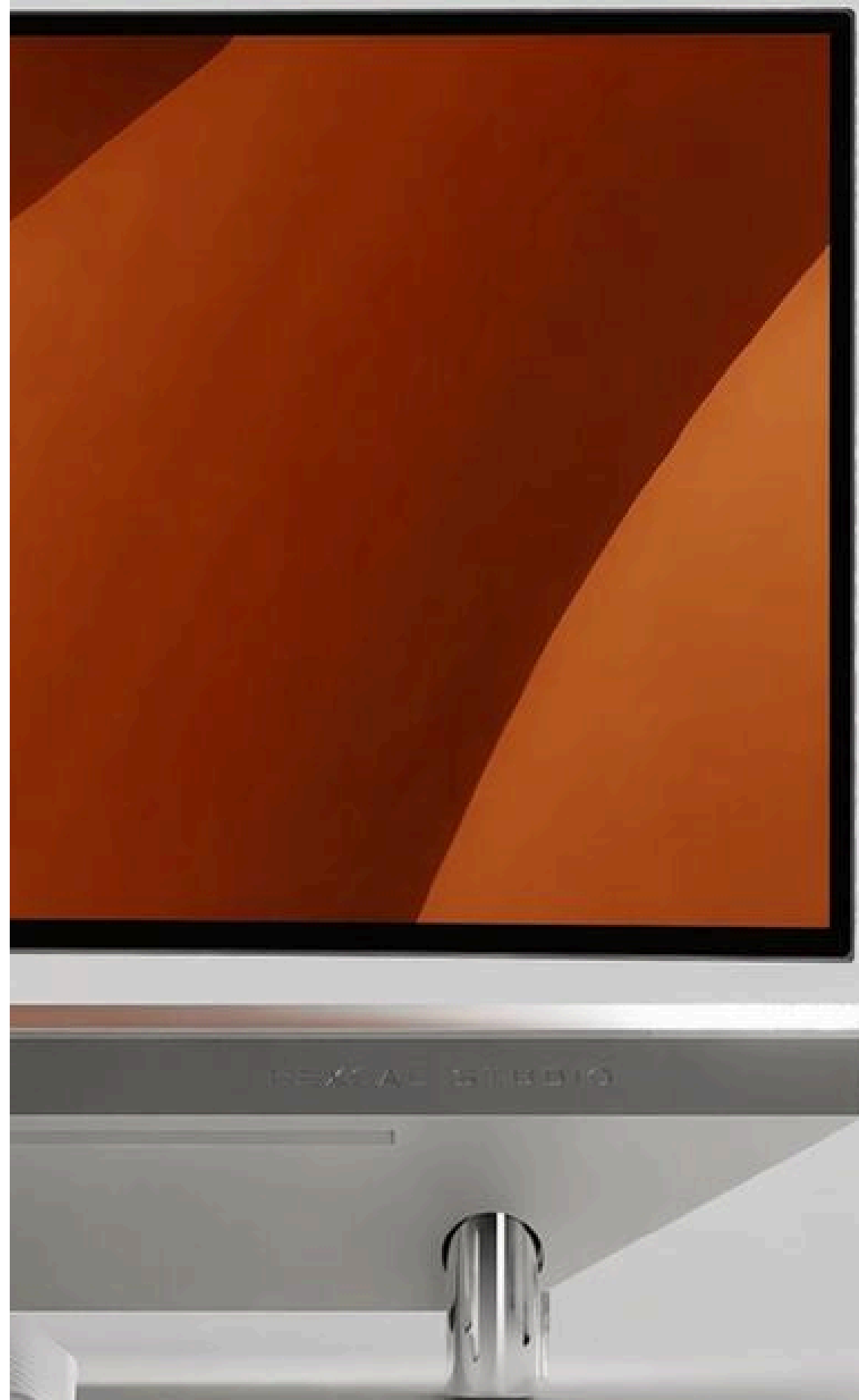
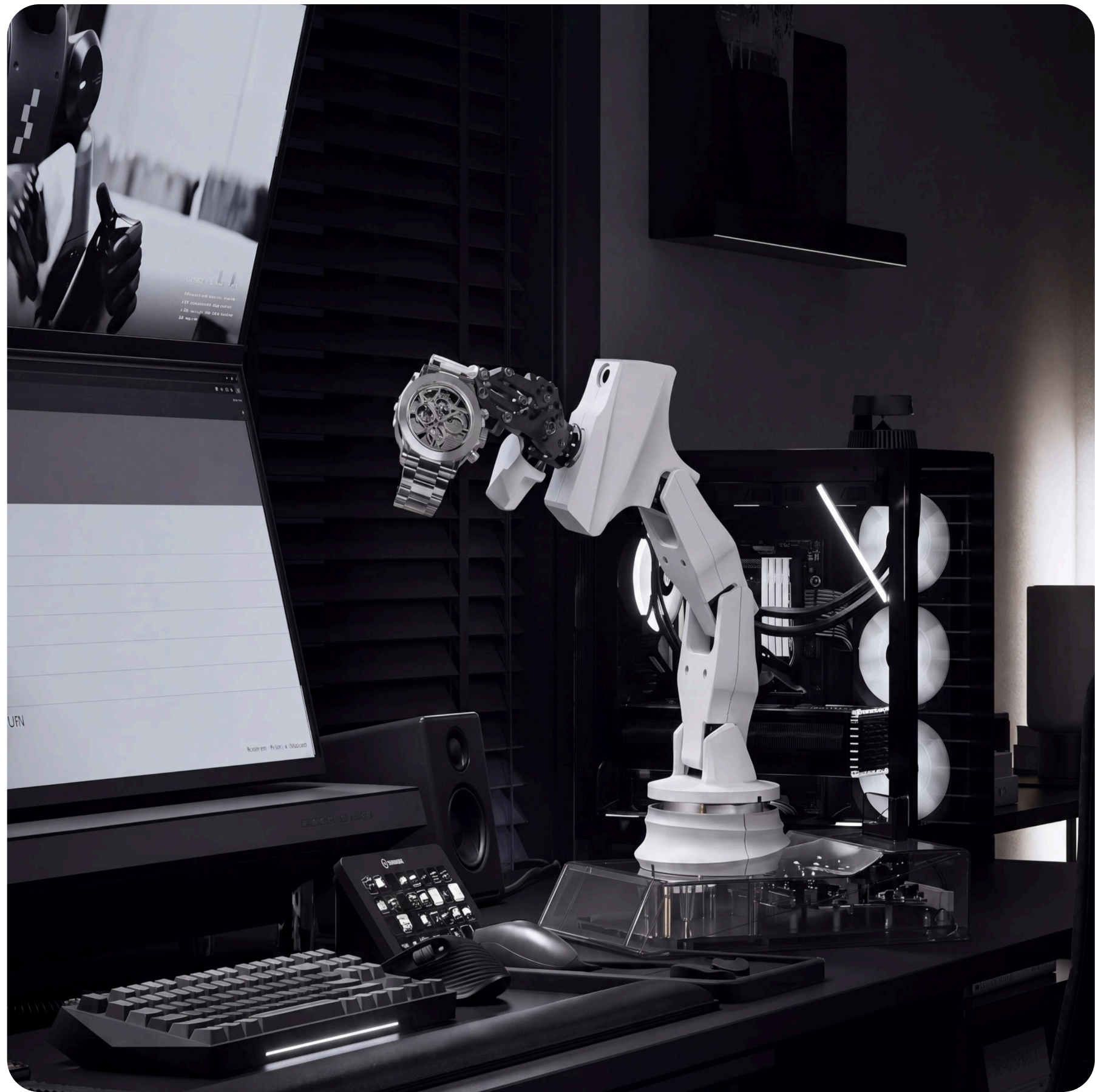


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BeoSound Phone

Reimagining Mobile Sound
Through B&O



Reimagining Mobile Sound
Through B&O



