

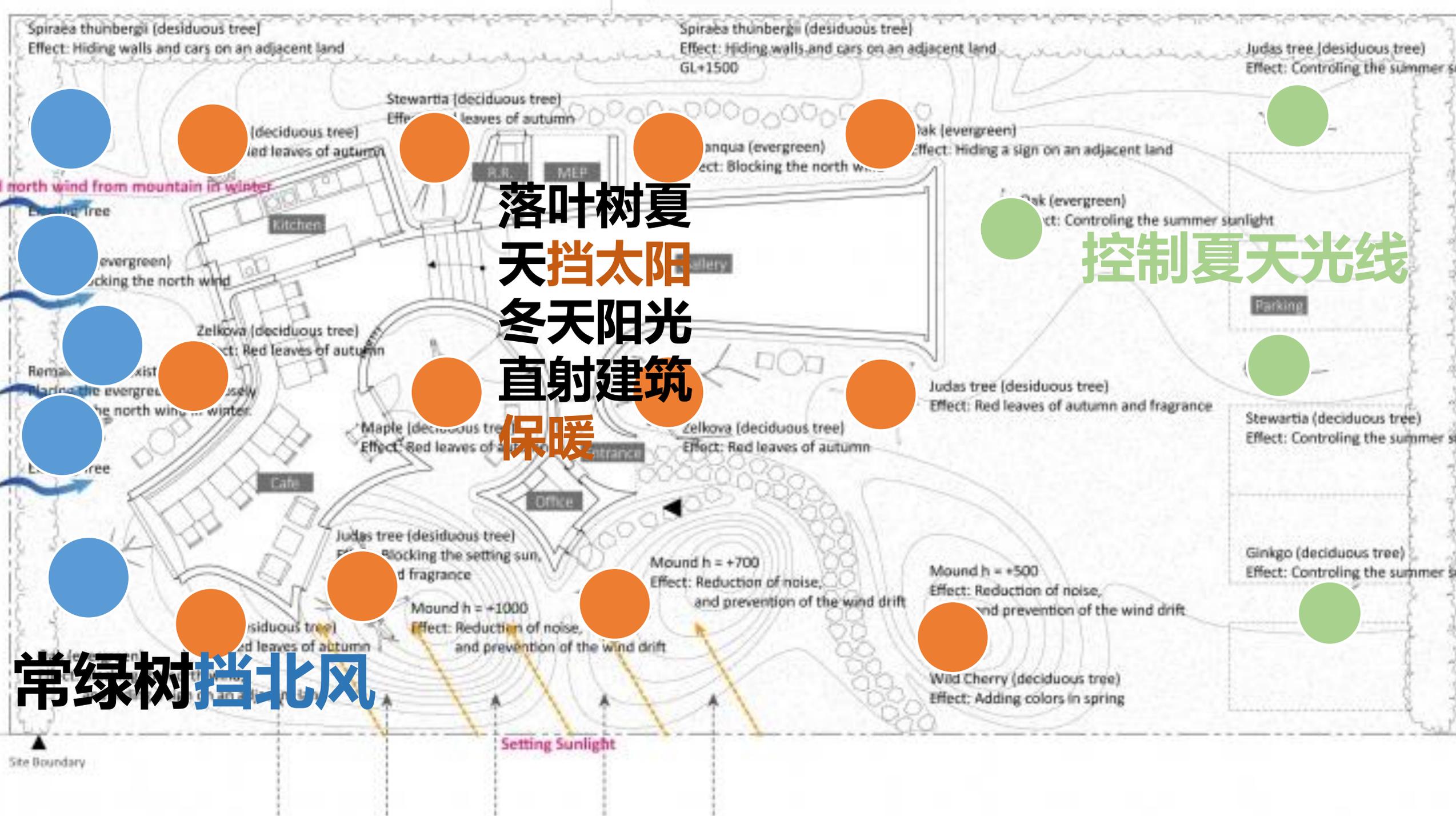
Roku Museum

録 museum & cafe

之

分析

制作人 郑耀凯 李锦华



落叶树夏天挡太阳
 冬天阳光直射建筑
 保暖

控制夏天光线

常绿树挡北风

Spiraea thunbergii (deciduous tree)
 Effect: Hiding walls and cars on an adjacent land

Spiraea thunbergii (deciduous tree)
 Effect: Hiding walls and cars on an adjacent land
 GL+1500

Judas tree (deciduous tree)
 Effect: Controlling the summer sunlight

Stewartia (deciduous tree)
 Effect: Red leaves of autumn

Quercus (evergreen)
 Effect: Blocking the north wind
 Effect: Hiding a sign on an adjacent land

Blocking the north wind from mountain in winter

Evergreen tree
 Effect: Blocking the north wind

Zelkova (deciduous tree)
 Effect: Red leaves of autumn

Remaining existing trees
 Blocking the north wind in winter

Evergreen tree

Maple (deciduous tree)
 Effect: Red leaves of autumn

Zelkova (deciduous tree)
 Effect: Red leaves of autumn

Judas tree (deciduous tree)
 Effect: Red leaves of autumn and fragrance

Stewartia (deciduous tree)
 Effect: Controlling the summer sunlight

Judas tree (deciduous tree)
 Effect: Blocking the setting sun, and fragrance

Mound h = +700
 Effect: Reduction of noise, and prevention of the wind drift

Mound h = +500
 Effect: Reduction of noise, and prevention of the wind drift

Deciduous tree
 Effect: Red leaves of autumn

Mound h = +1000
 Effect: Reduction of noise, and prevention of the wind drift

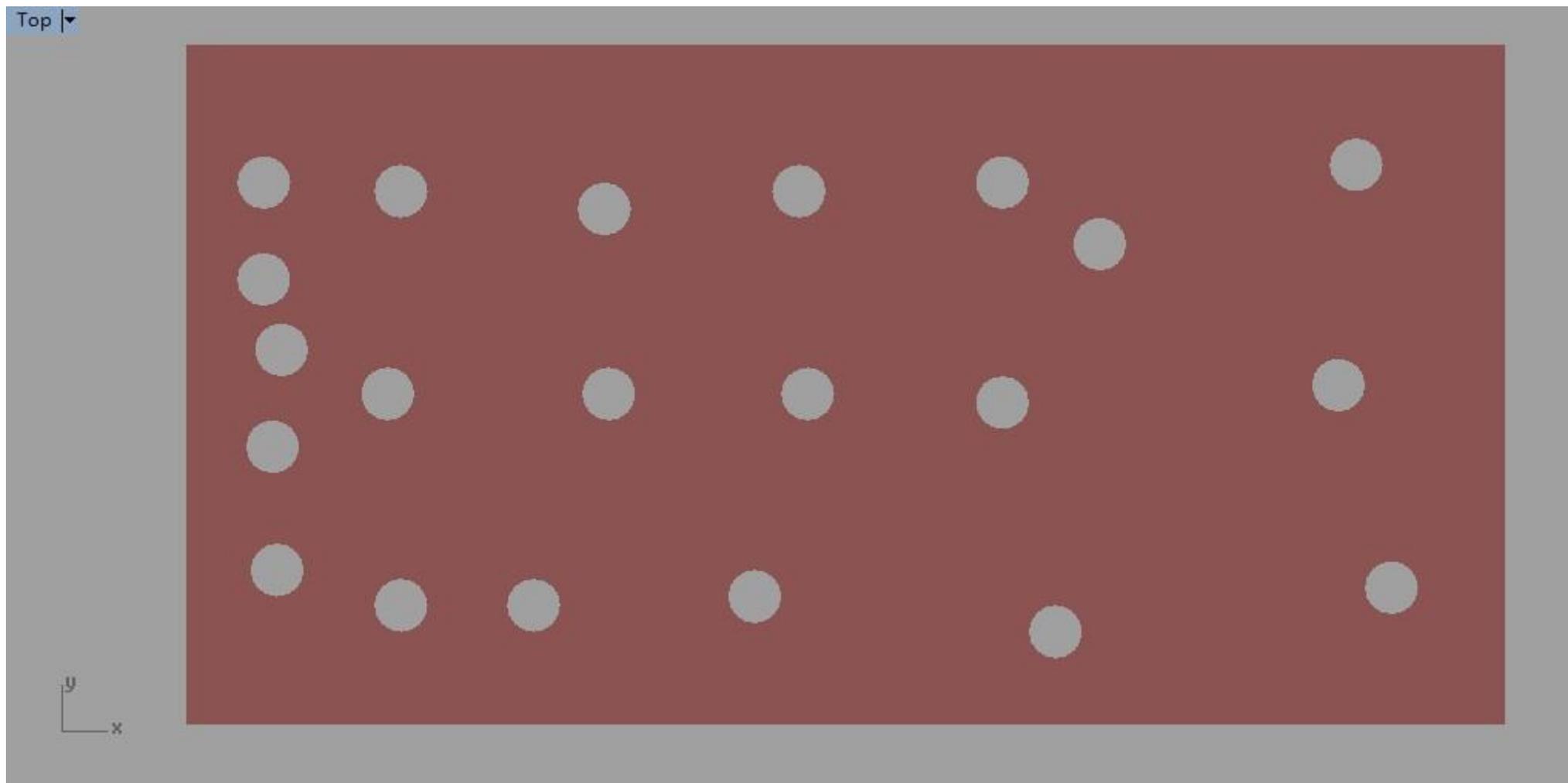
Wild Cherry (deciduous tree)
 Effect: Adding colors in spring

Ginkgo (deciduous tree)
 Effect: Controlling the summer sunlight

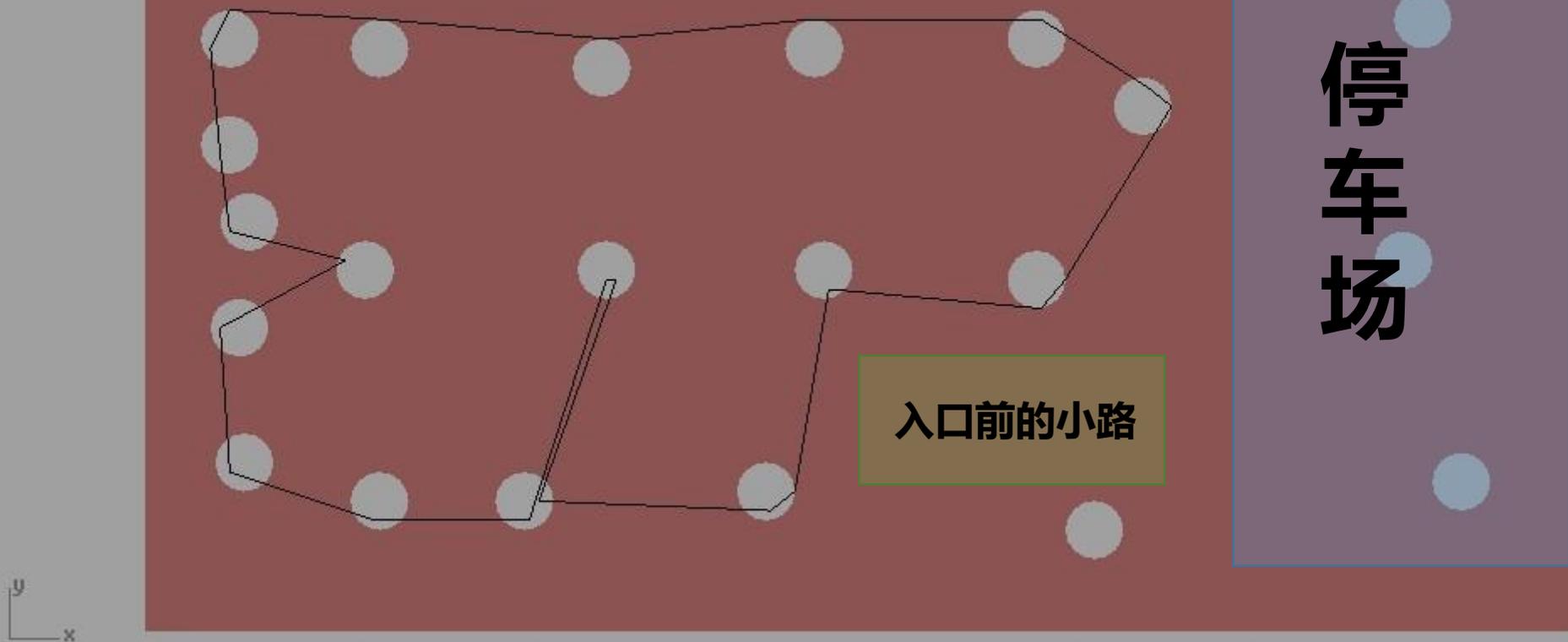
Setting Sunlight

Site Boundary

树都种好了，开始设计建筑平面



首先大概确定建筑范围

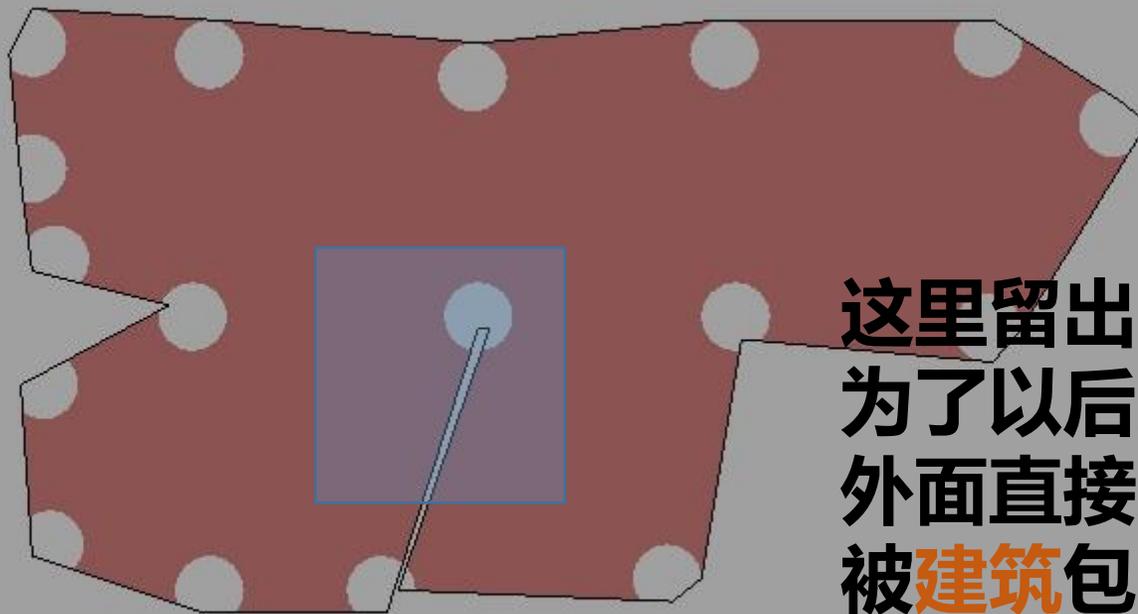


入口前的小路

停车场



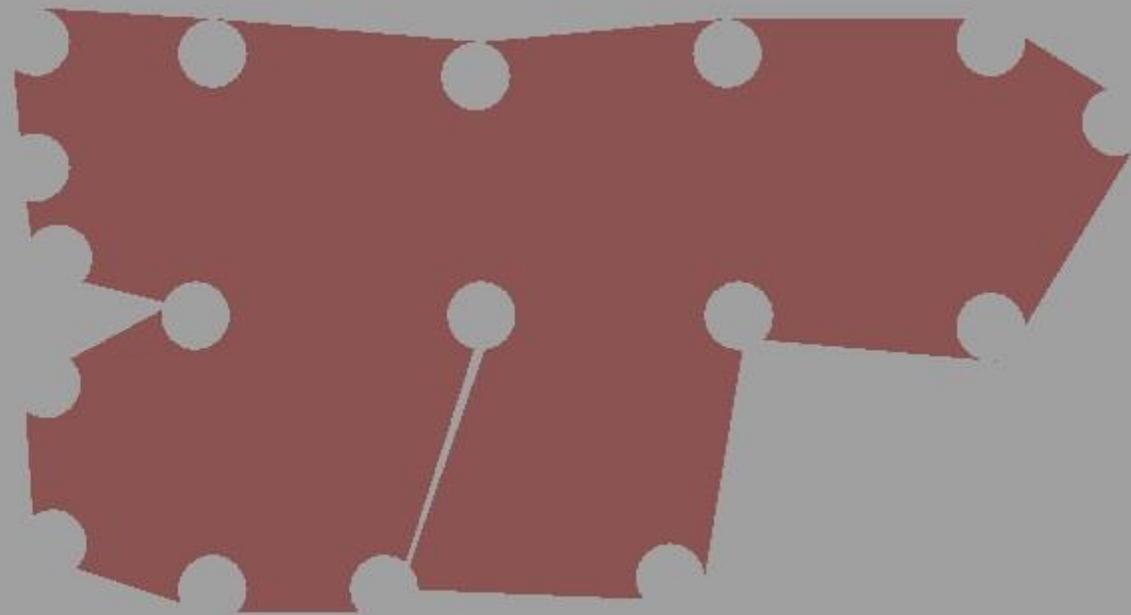
Top ▾



这里留出小空间是
为了以后方便人从
外面直接进入修建
被**建筑**包围的**树木**



Top ▾



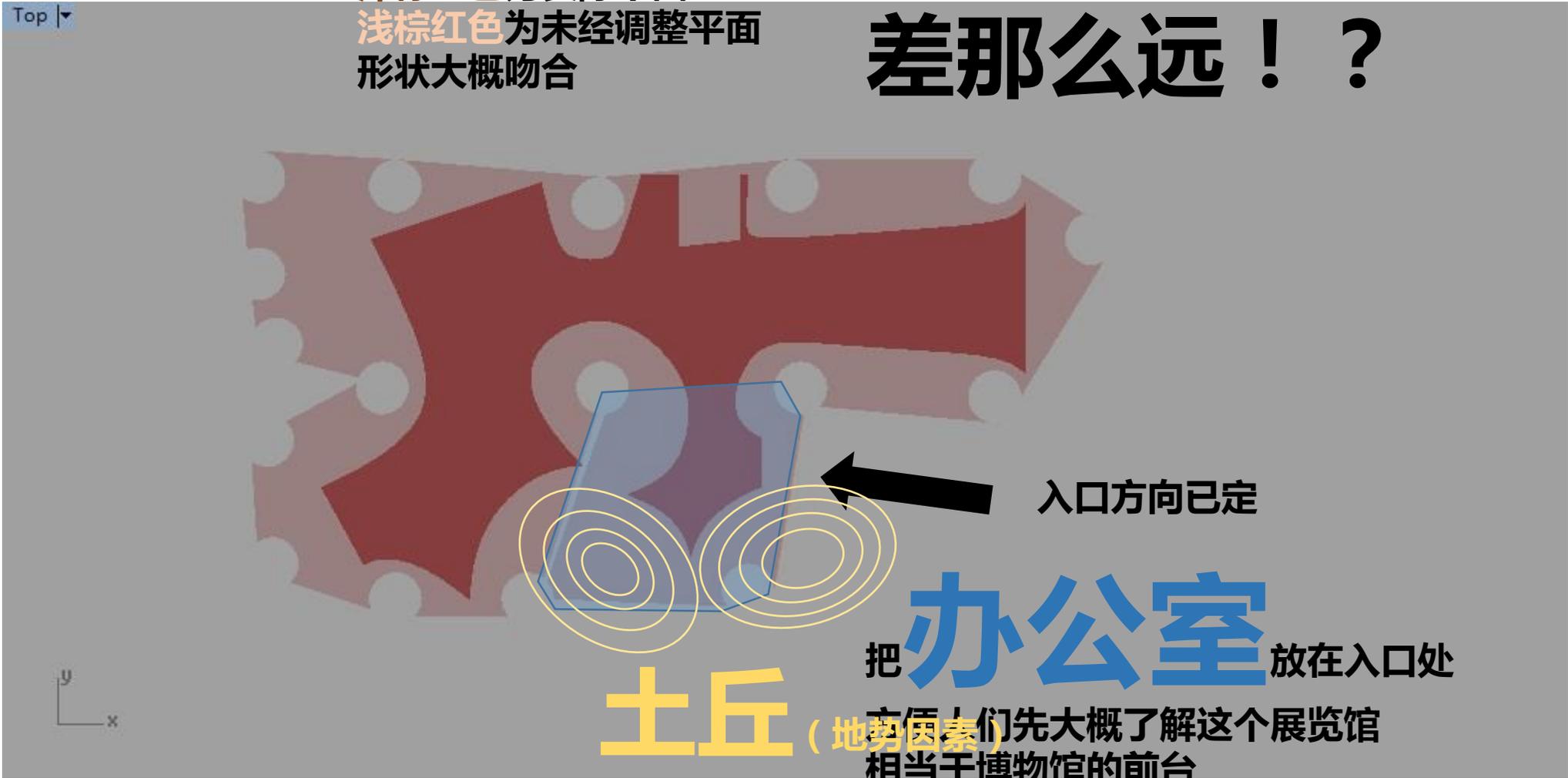
第一步

为什么形状差那么远！？

深棕红色为实际平面
浅棕红色为未经调整平面
形状大概吻合

需要什么

1. 展厅
2. 咖啡厅
3. 厨房
4. 办公室
5. 厕所



第二步

因为

1. 我们需要**墙面平整的展厅**

2. 降低了**建造结构上的难度和复杂性**

为什么形状

还是差那么远! ?

至于这里

进入门口后首先需要

展厅

需要什么

- 1. 展厅
- 2. 咖啡厅
- 3. 厨房
- 4. ~~办公室~~
- 5. 厕所



不如我们来做这种效果

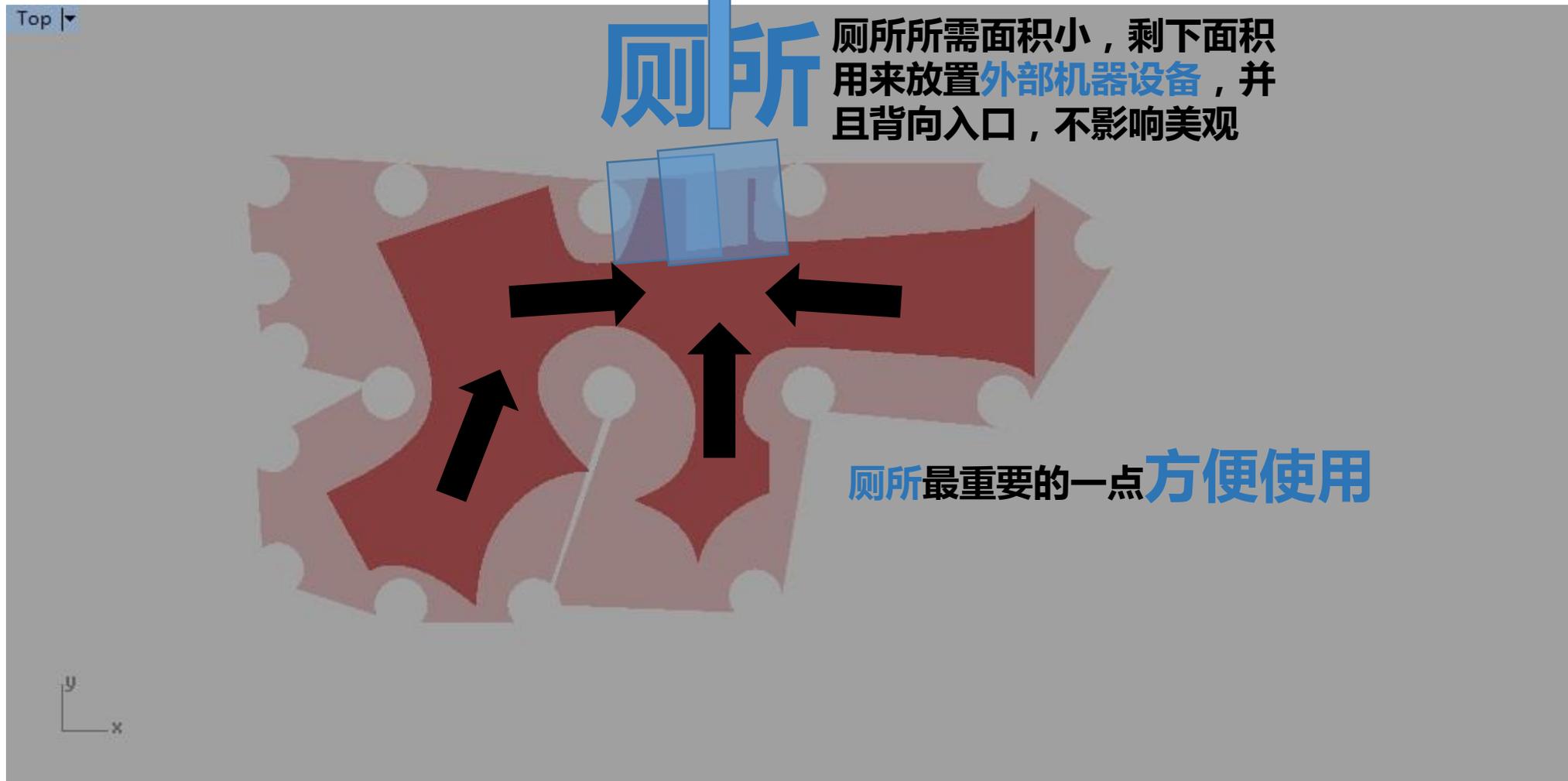


建筑师中村拓志

业主 我表示赞同



第三步



需要什么

~~1. 展厅~~

2. 咖啡厅

3. 厨房

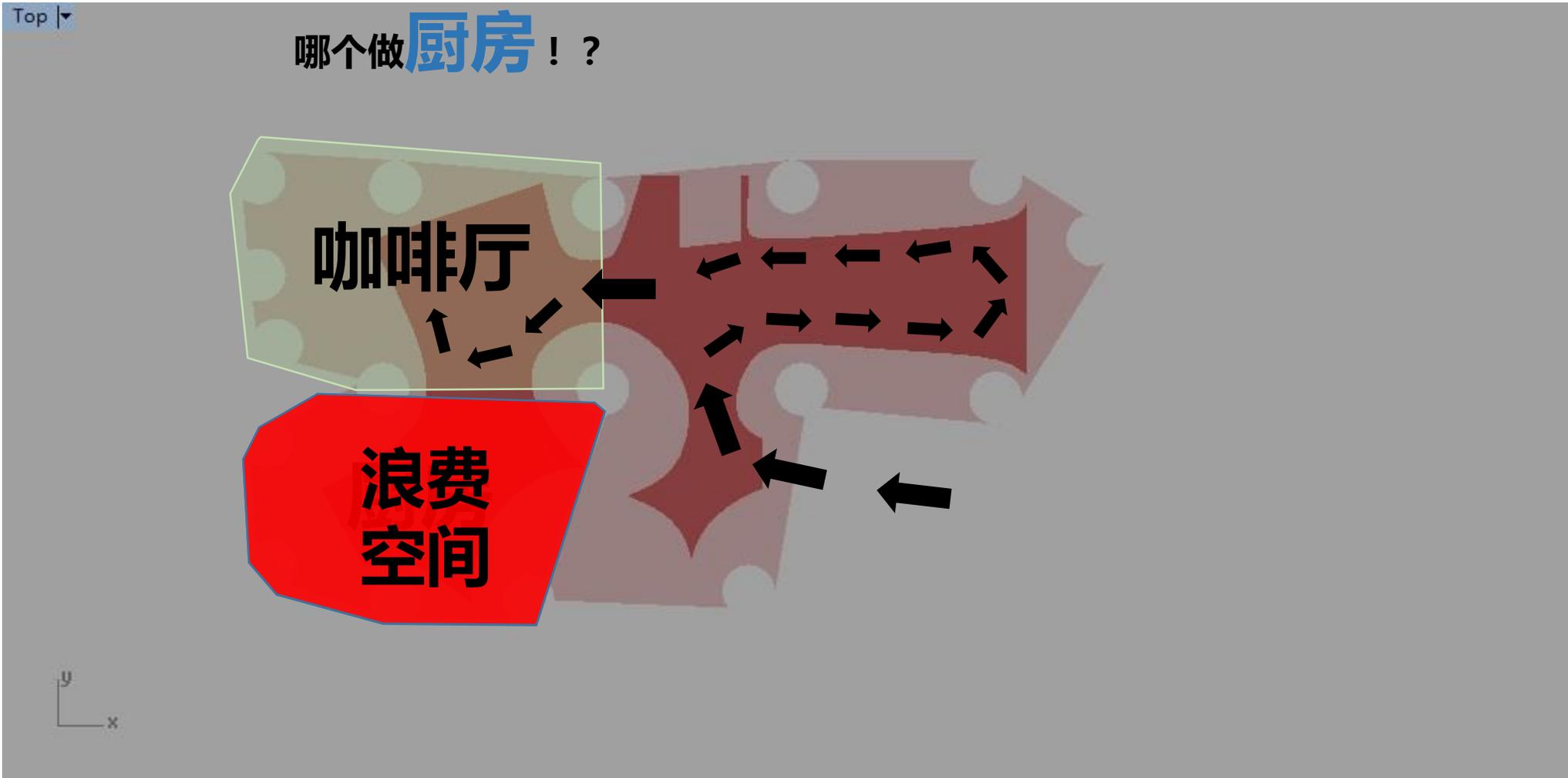
~~4. 办公室~~

5. 厕所

第四步

假设对于游客来说
到底哪个做咖啡厅

哪个做厨房! ?



需要什么

~~1. 展厅~~

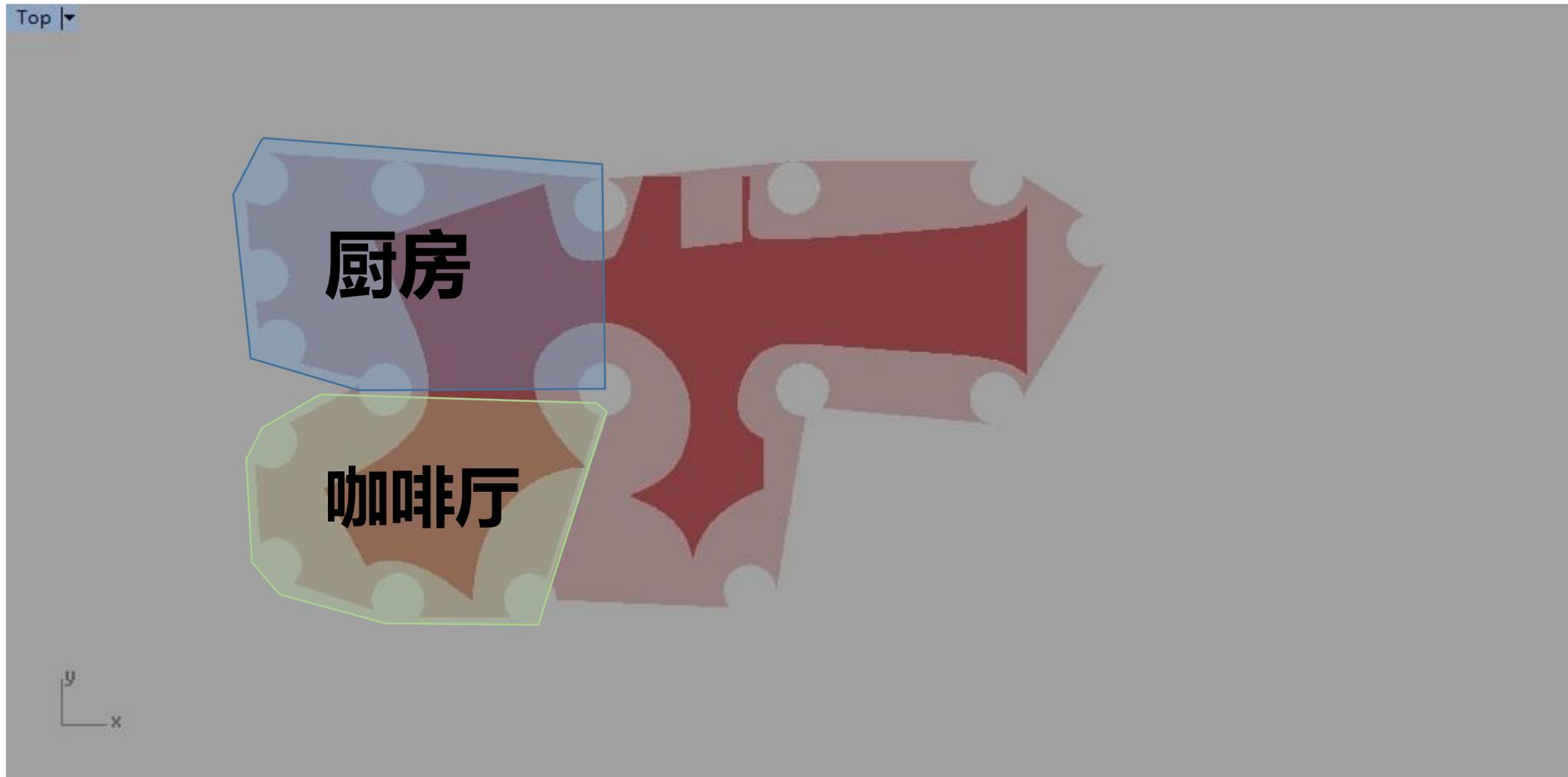
2. 咖啡厅

3. 厨房

~~4. 办公室~~

~~5. 厕所~~

第四步



需要什么

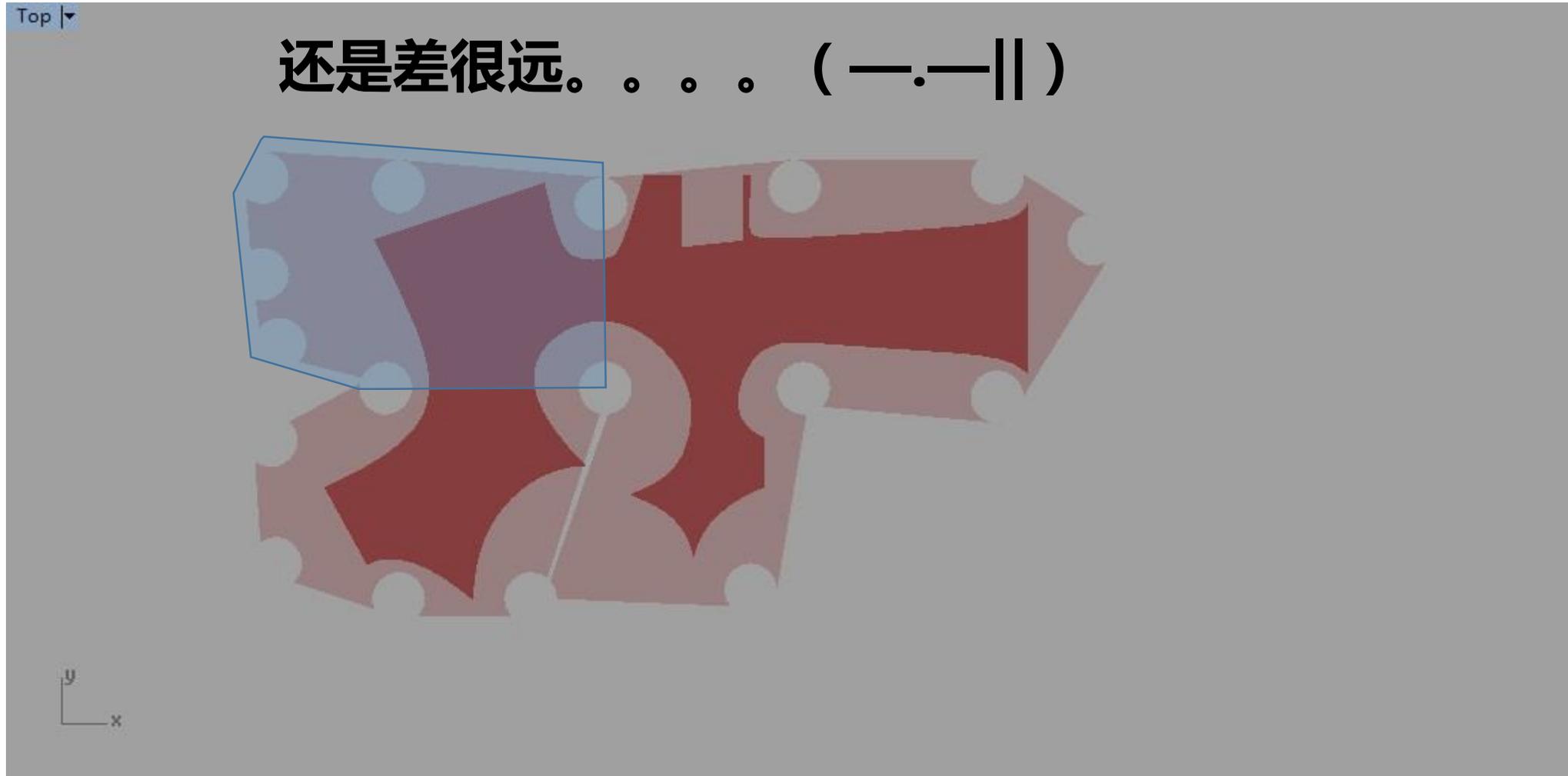


2. 咖啡厅

3. 厨房



第四步



需要什么



2. 咖啡厅

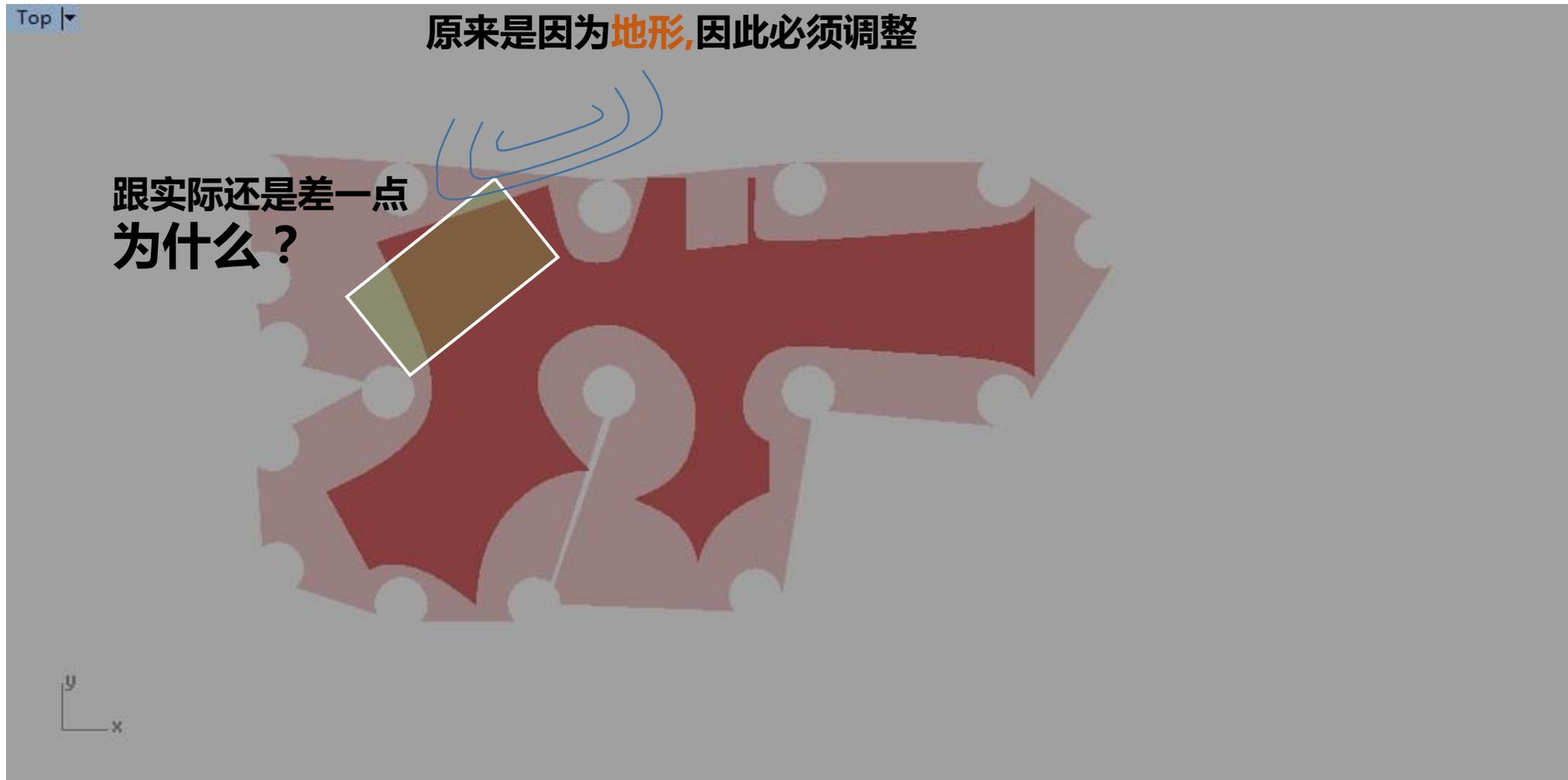
3. 厨房



第四步 厨房 (半开放式)



第四步 厨房 (半开放式)



需要什么

~~1. 展厅~~

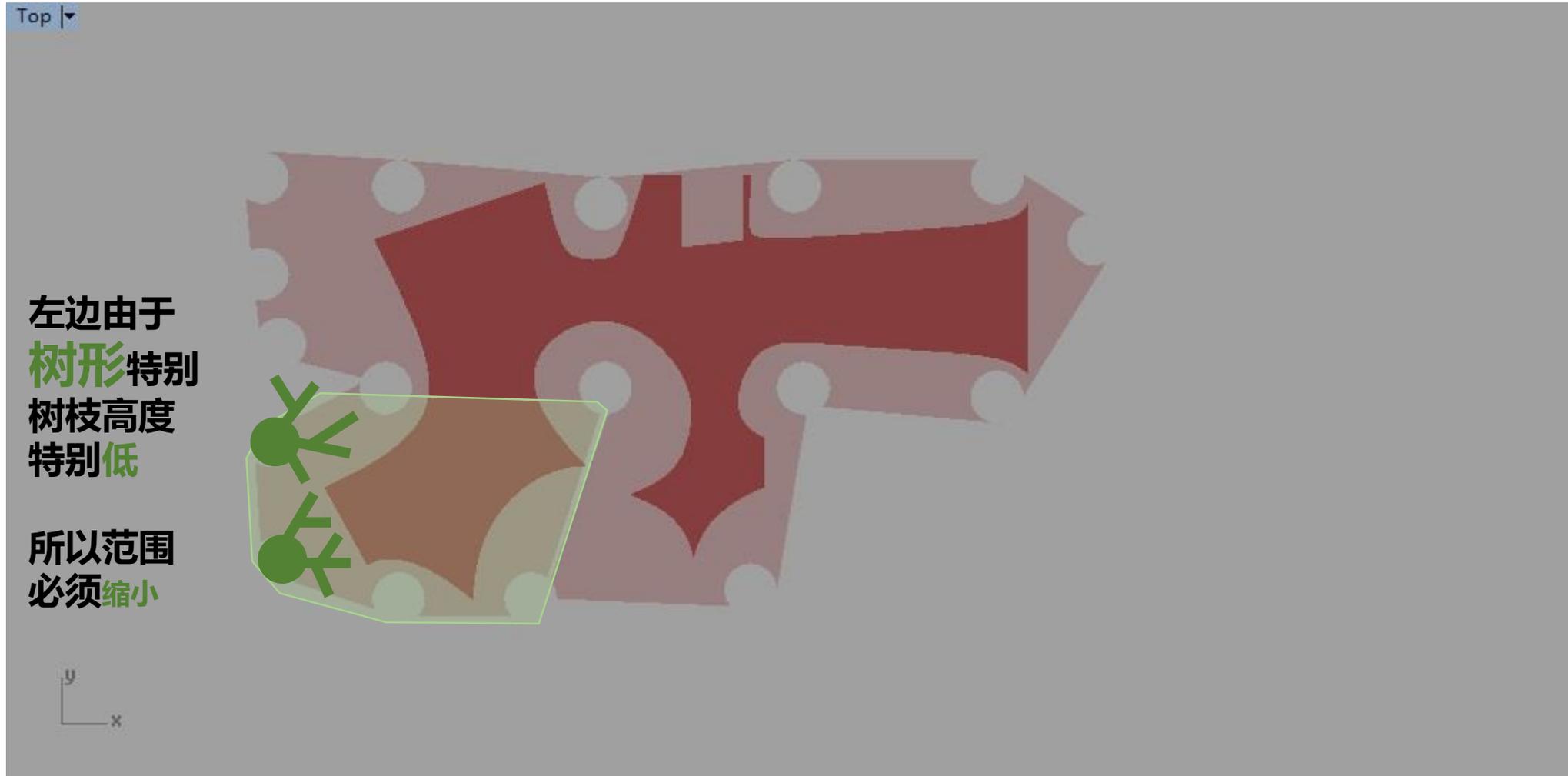
2. 咖啡厅

3. 厨房

~~4. 办公室~~

~~5. 厕所~~

第五步 咖啡厅



左边由于
树形特别
树枝高度
特别低

所以范围
必须缩小

需要什么



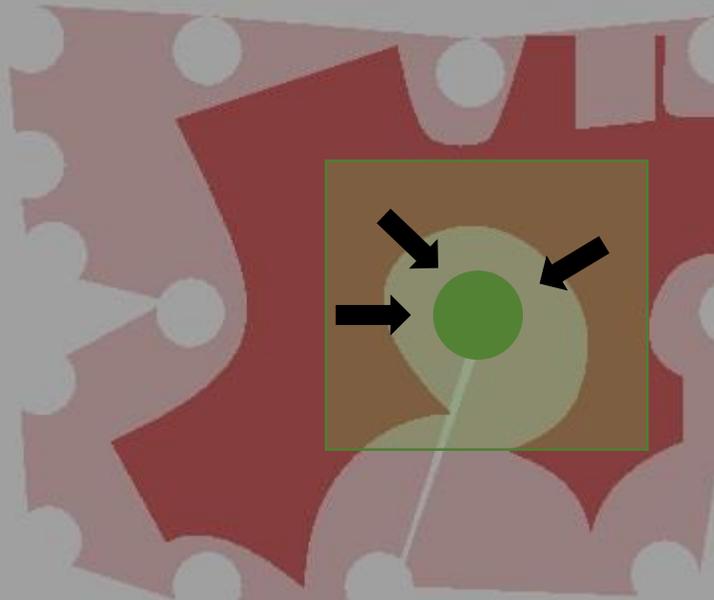
2. 咖啡厅



第六步

Top ▾

为什么范围缩小了那么多？



我想让这里的游客能从里面看到外面的树，距离太近了只能看到树干



建筑师中村拓志



需要什么

1. ~~展厅~~

2. ~~咖啡厅~~

3. ~~厨房~~

4. ~~办公室~~

5. ~~厕所~~

建筑工人



这么奇葩的曲线叫我怎么弄？

不用担心，每段曲线都是由不同的**圆弧**构成的，方便施工时定位

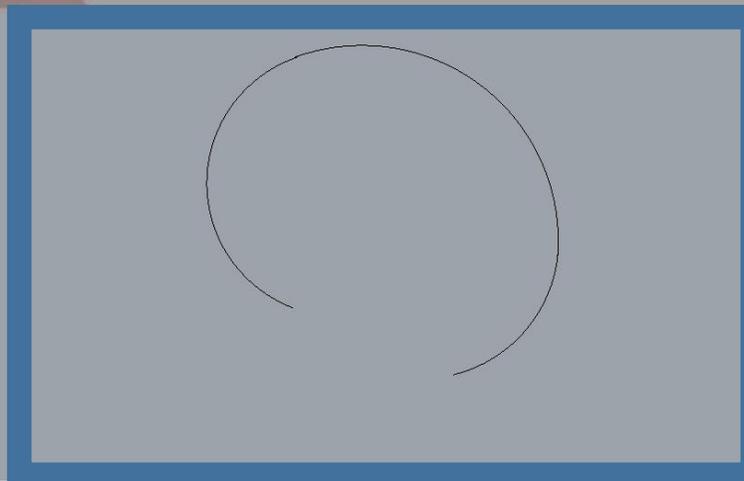


建筑师中村拓志

例如



过程

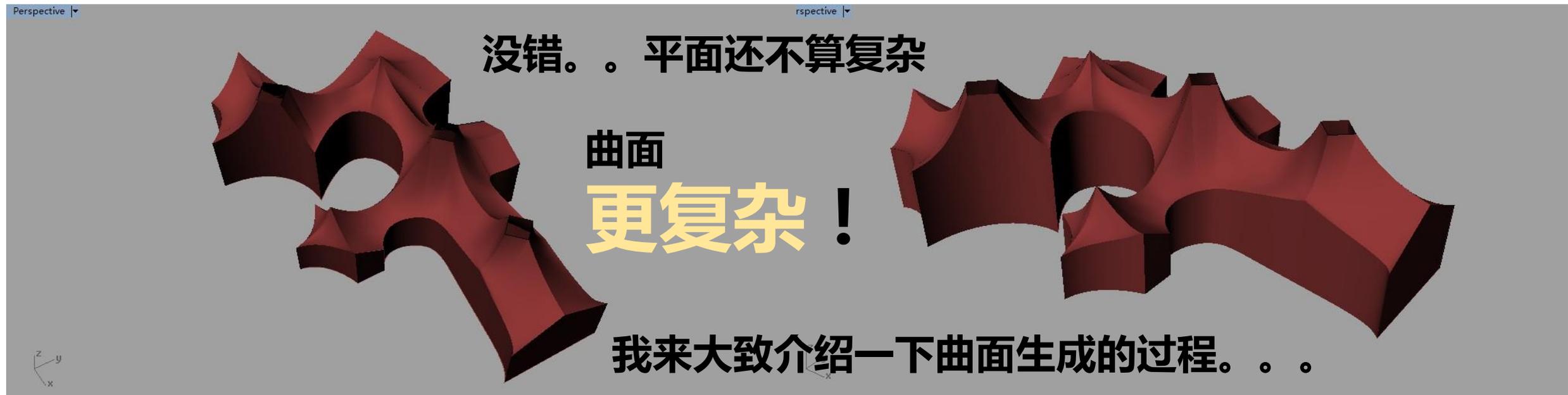


Top ▾

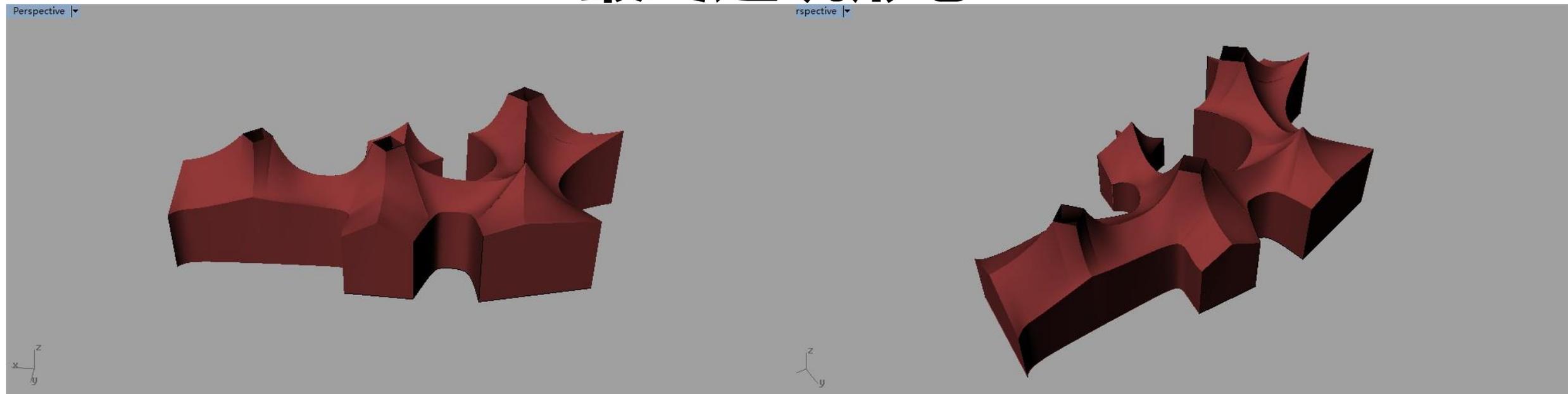


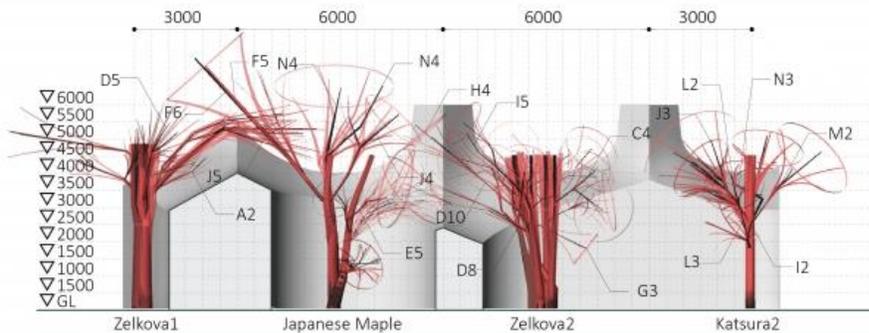
Top ▾





最终建筑形态





Zelkova1

Point	X-coordinate	Y-coordinate	Height
NEMOTO	101.498	105.661	0.416
A1	102.204	105.559	3.258
A2	103.210	105.735	4.128
A3	104.748	106.153	4.859
A4	107.478	107.237	5.246
A5	106.552	108.004	4.389
B1	101.809	105.373	4.403
B2	101.703	105.207	4.597
B3	98.739	103.286	5.157
D1	102.198	105.899	3.592
D2	102.312	106.005	3.935
D3	102.296	106.088	4.164
D4	101.963	107.370	5.129
D5	101.986	108.356	5.482
D6	102.667	109.951	5.690

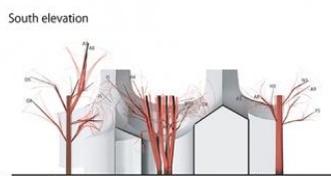
Katsura 2

Point	X-coordinate	Y-coordinate	Height
NEMOTO	503.330	509.886	0.218
A	503.477	509.977	1.254
B	503.297	510.196	1.214
I1	503.270	510.118	1.789
I2	502.529	510.555	2.566
J1	503.457	509.899	2.475
J2	503.625	509.385	3.076
J3	505.190	507.931	4.931
L1	503.250	510.050	2.625
L2	501.473	510.405	3.883
M1	503.420	510.197	2.508
M2	503.394	510.958	3.480
M3	502.827	512.713	4.577
N2	504.110	510.131	3.199
N3	505.506	508.455	3.685
P1	503.587	509.976	2.813

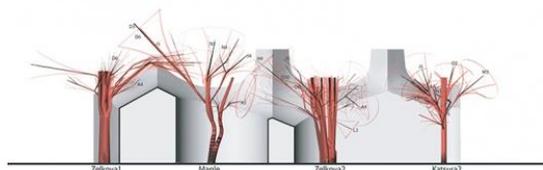
East elevation



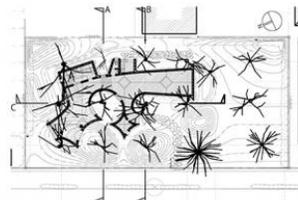
South elevation



SectionA



SectionB



SectionC



实际过程复杂得多

1. 得出每条分支末端的

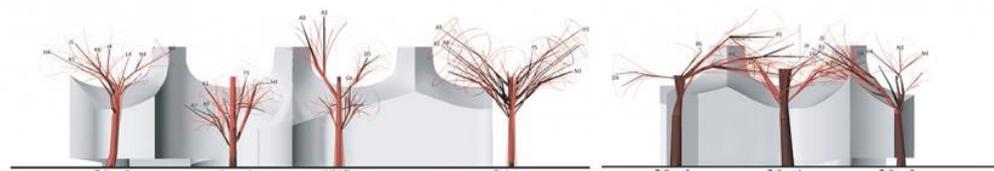
2. 计算摇晃范围

3. 结合实际结构生成合适的曲面

假设这是一

经过计算调整

的三维模型



West elevation

North elevation



East elevation

South elevation

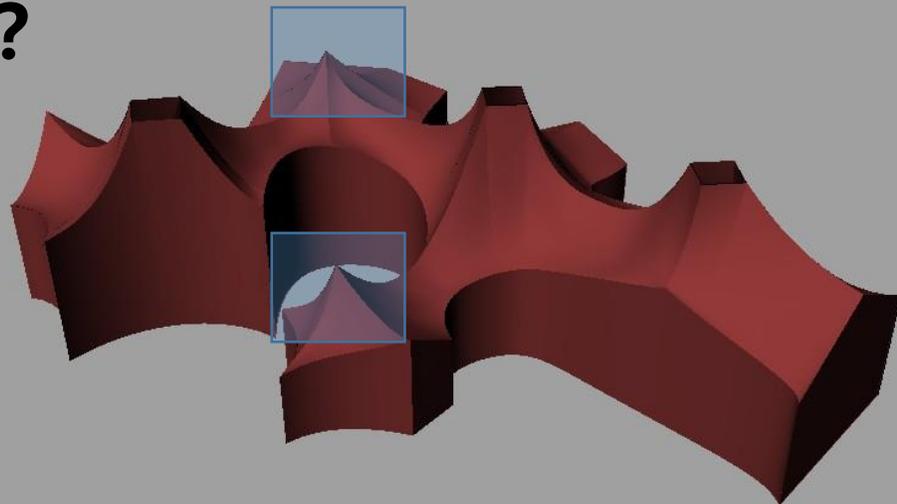


成四面

Perspective

那这里为什么不开？

因为这里是
办公室和厨房
不需要天窗

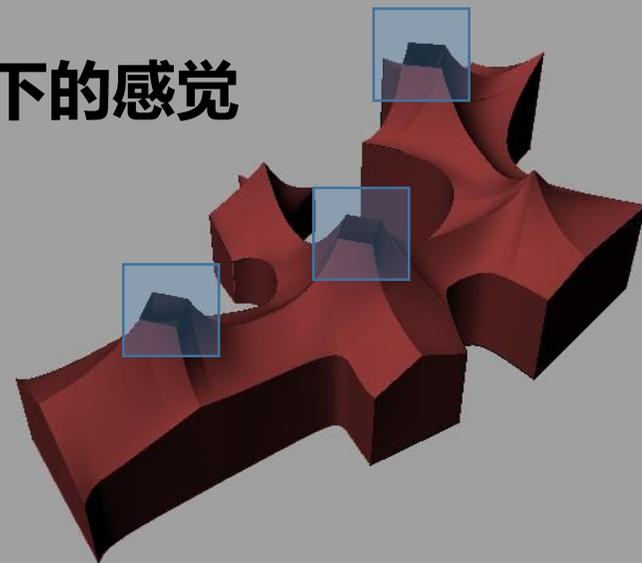
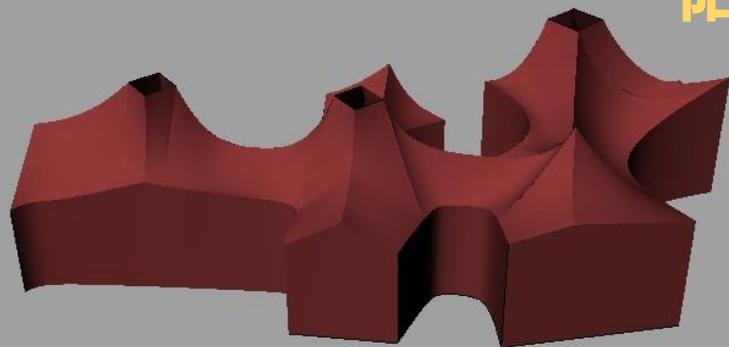


开天窗

模拟森林中

阳光从树与树之间洒下的感觉

Perspective



材料

木结构实现
曲面

録 museum & cafe

开窗

室内布置