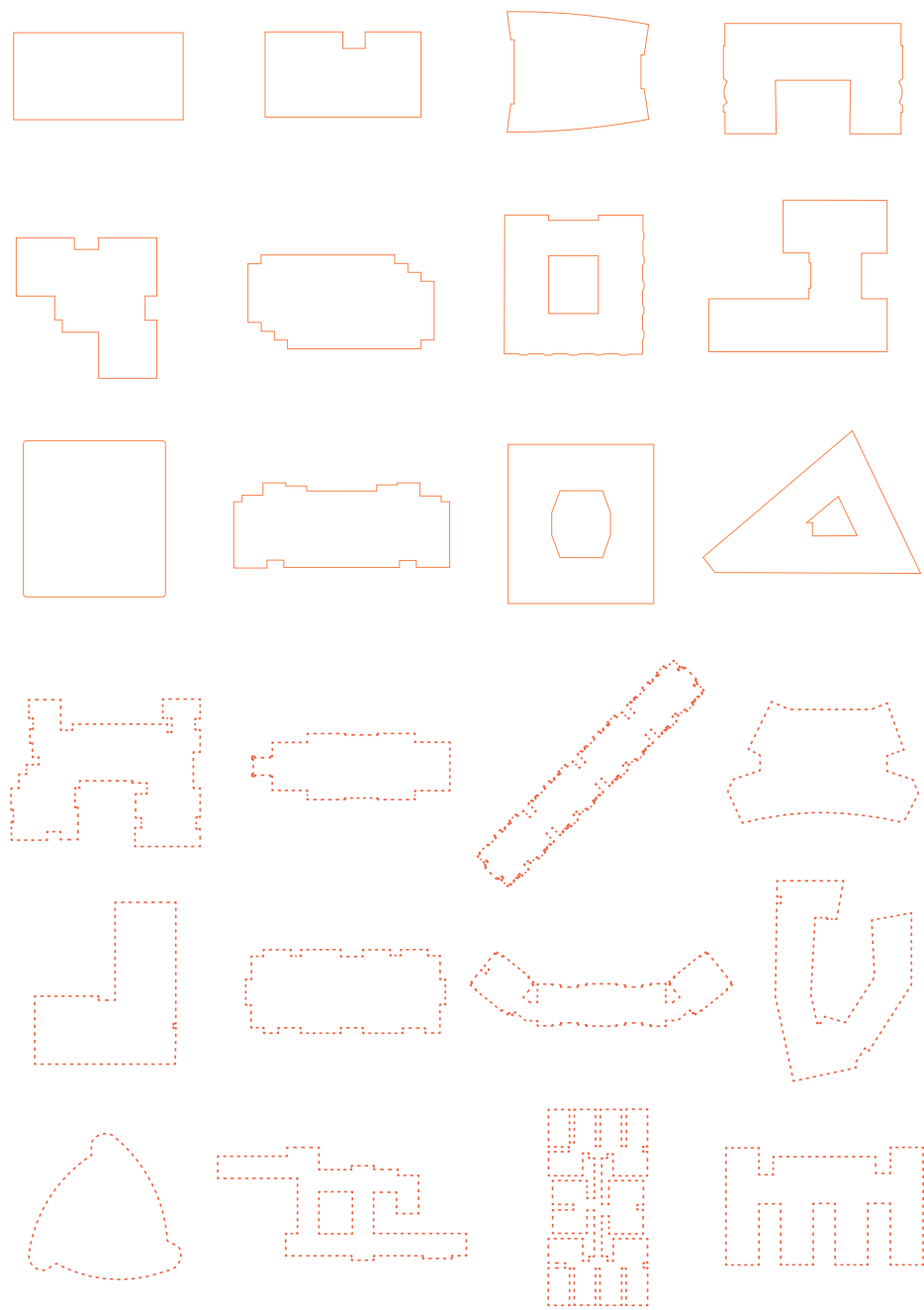
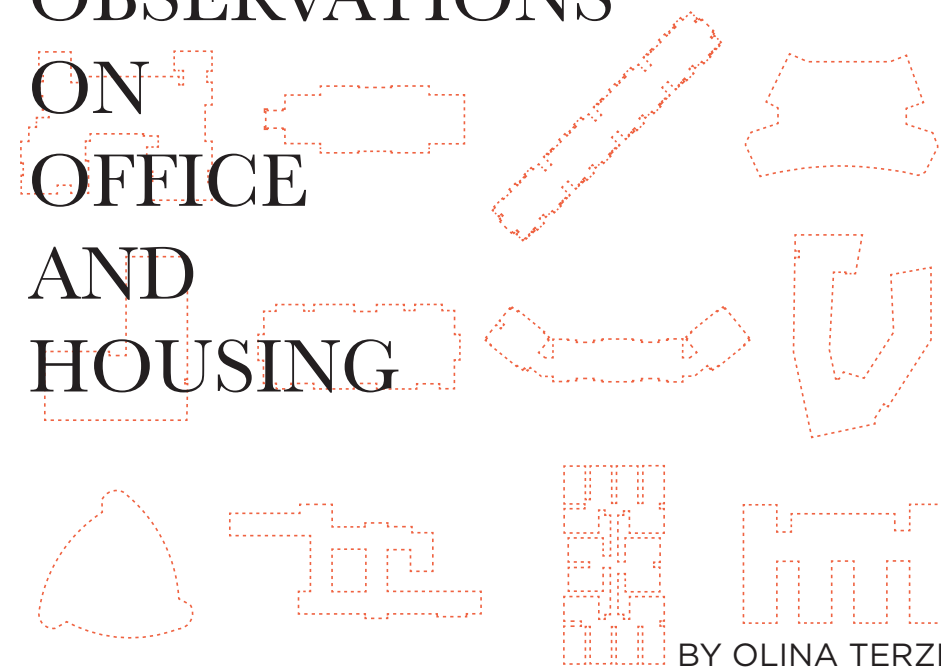




FIXATIONS OF BUILT FORM

FIXATIONS OF BUILT FORM

OBSERVATIONS
ON
OFFICE
AND
HOUSING



BY OLINA TERZI

Foreword

Till this day, the standards of construction are put into boxes: typologies of buildings remain frozen in their differences preventing their adaptable use over time.

We know today that a building can have many lives; however, only 15 to 20% of the existing empty stock can be successfully redeveloped due to spatial limitations related to daylight, access and structure.

Inability to respond to changing demand over time has lead to the highest ever rates of urban vacancy for office, reaching a staggering 30% in the Netherlands, meanwhile a housing shortage. Contemporary architecture is yet to face this oxymoron created by the lack of adaptability in its structures.

Such facts hint towards the potentials of interchangeability of building use.

It is however not so simple to adapt. The structure of a building, its geographical location, level of local rents must be suitable for all the work and expense involved in a change of use to be worthwhile.

Further to that structural limitations, a lack of or placement of conveniences as elevators and accessibility shafts, concentration of service cores, floor plans' dimensions, are all likely deal breakers for redevelopment.

This research booklet by studying the floorplans of 24 existing buildings aims to reveal the most footprint-consuming building sector hindering adaptable use over time.

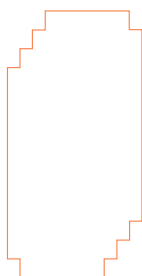
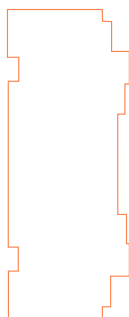
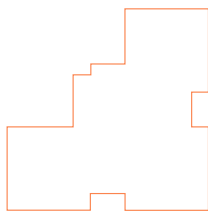
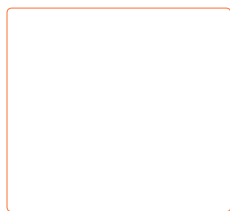
To discover the most effective architectonic tool to increase the adaptability of buildings over time.

Facing such a design challenge in a time when urban lifestyles have started to converge calls for the departure of the typological polarity of Office and Housing.

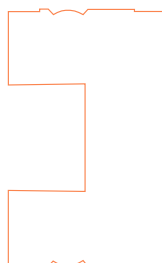
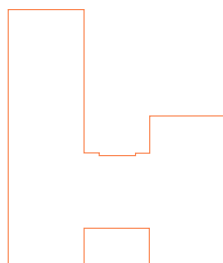
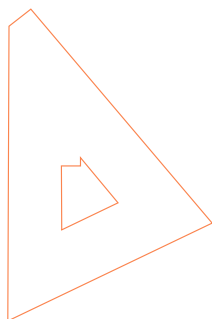
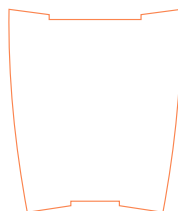
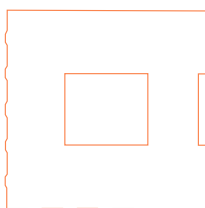
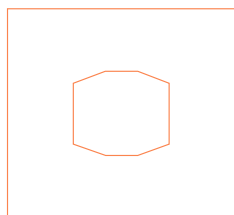
The sharing economy of co-living and co-housing has already transformed real estate in much the same way as it has hotels and taxis, while modern job mobility creates mixed demand of private and shared, fixed and variable spaces.

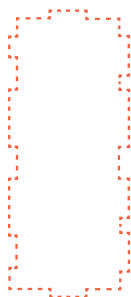
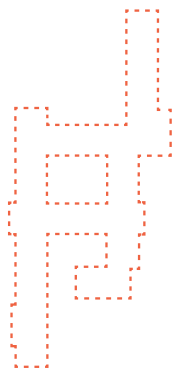
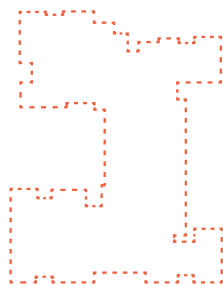
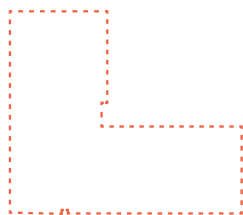
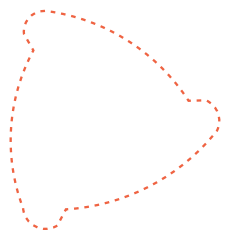
The definitions and boundaries of working and living are broadened and blurred. A meeting room with internet connection has transformed into a sufficient office, while an airport nap room frequently hosts a business traveller on tight schedule. How can Architecture respond to such changes in urban lifestyle?

The convergence of
interior lifestyles
contradicts the
divergence of
building typologies.

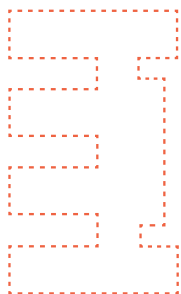
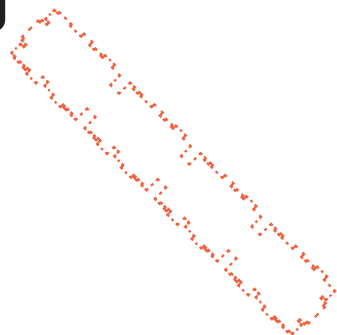
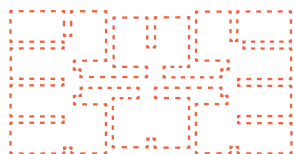


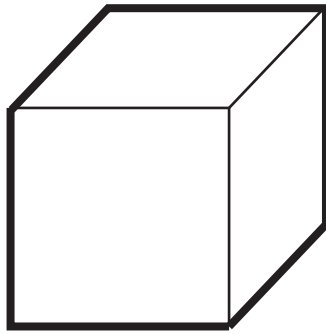
offices





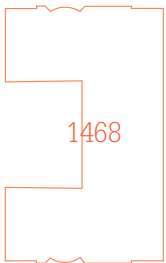
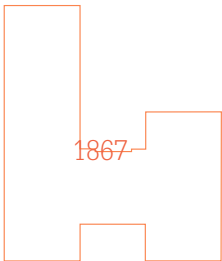
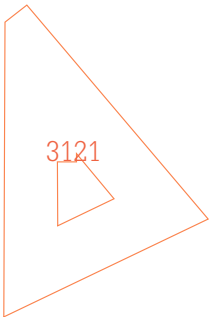
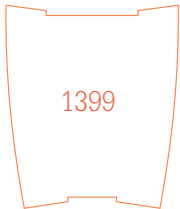
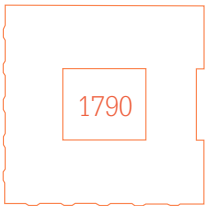
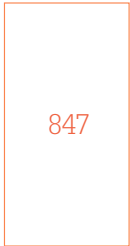
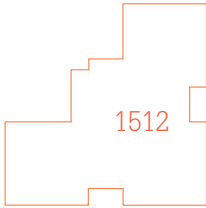
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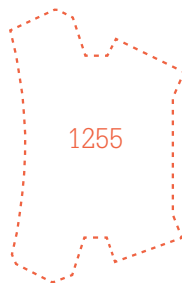
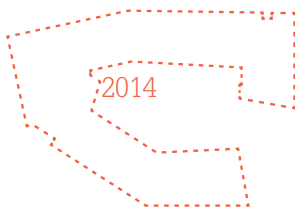
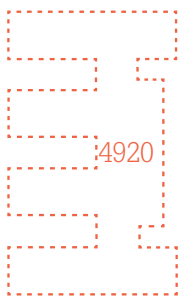
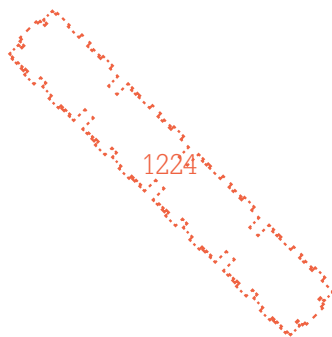
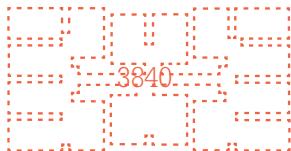
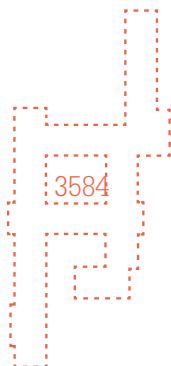
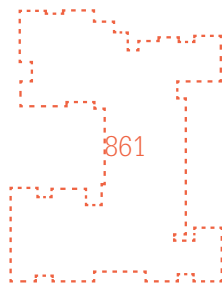
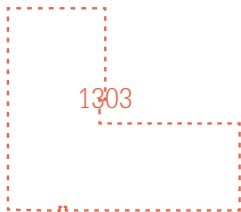
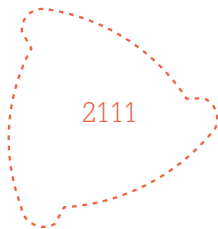




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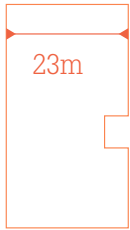
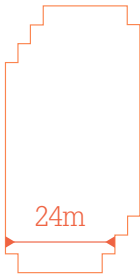
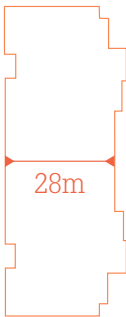
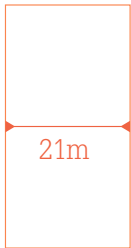
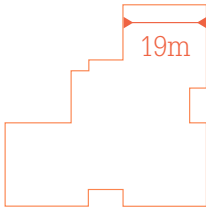
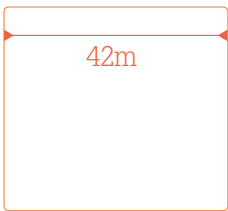
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Footprints



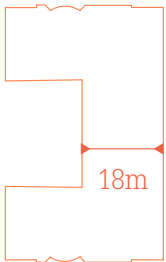
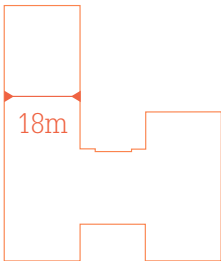
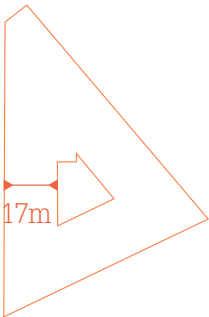
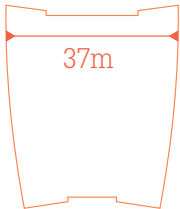
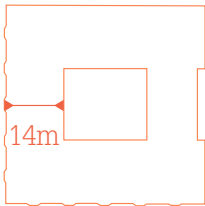
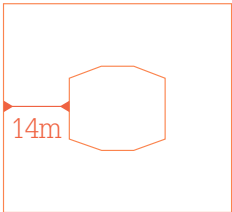


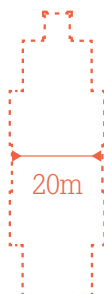
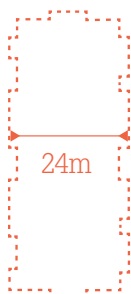
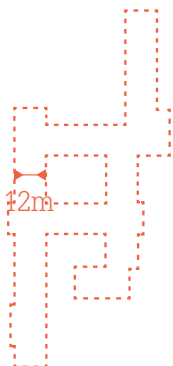
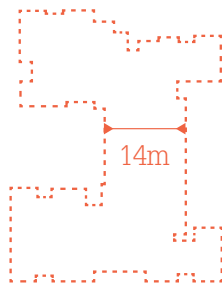
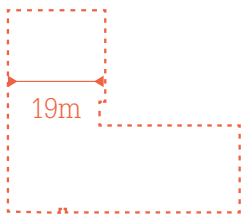
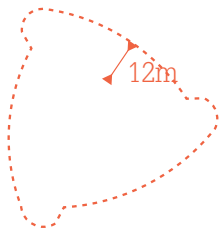
Massing

Floorplate cross dimension

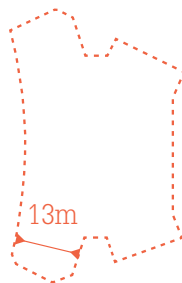
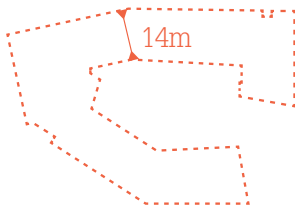
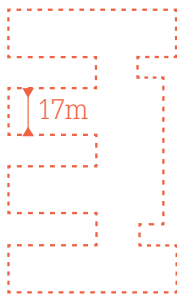
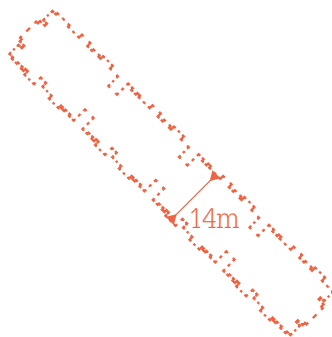
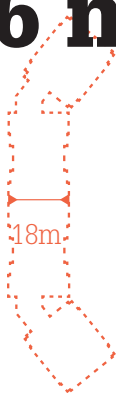
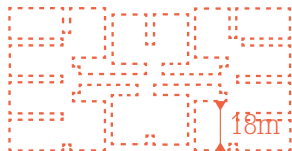


23 m

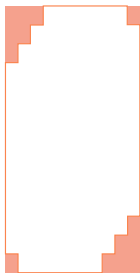
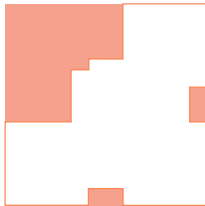
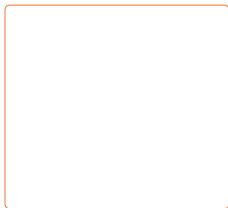




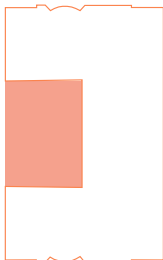
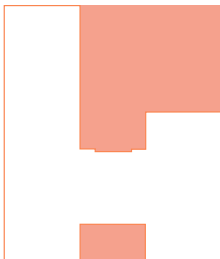
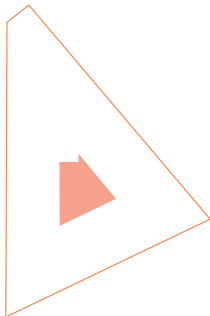
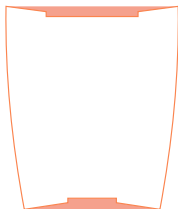
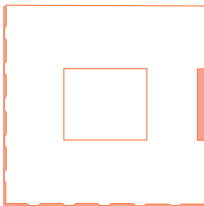
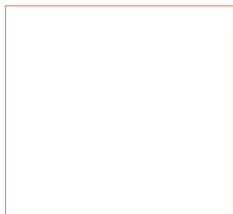
16 m

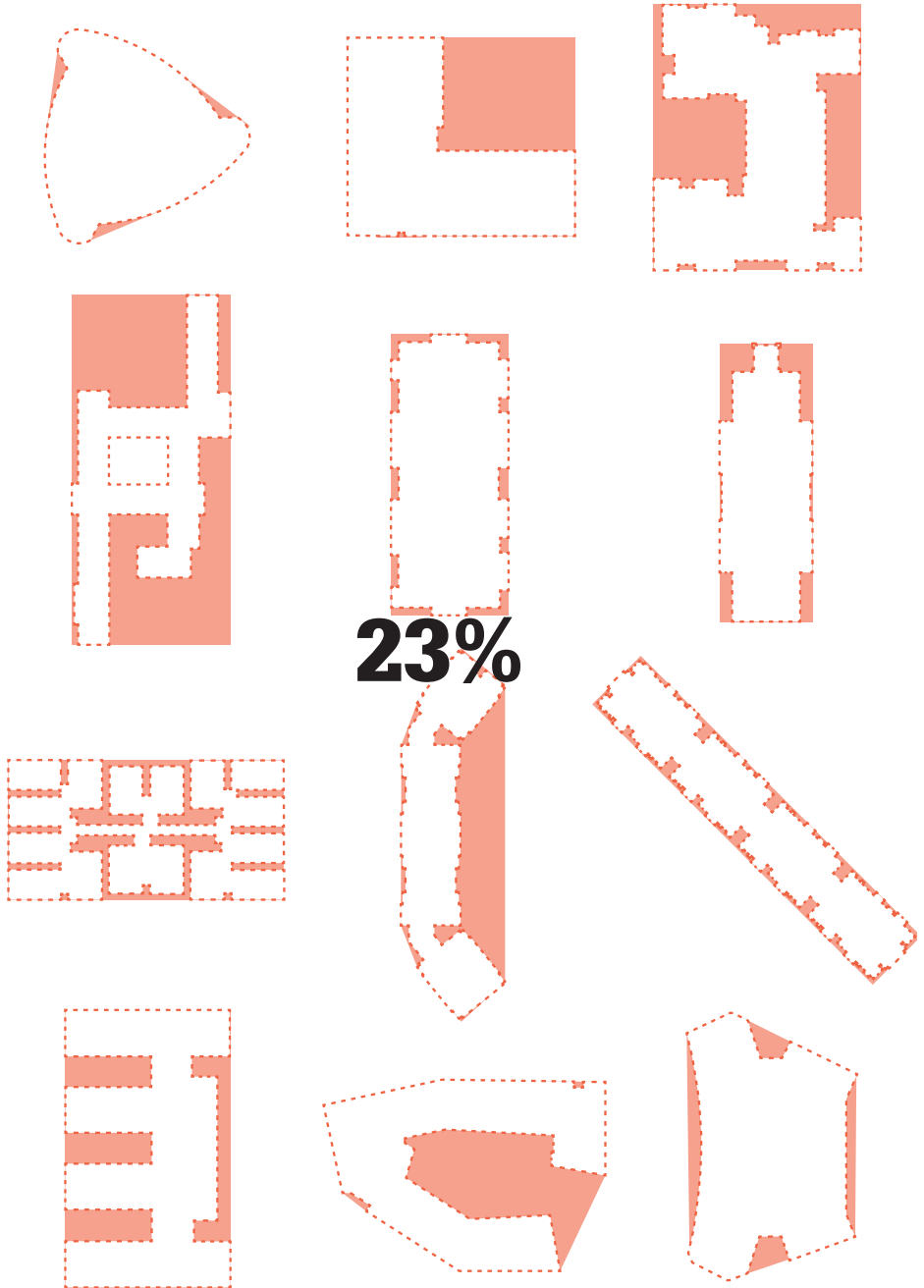


Massing
Porosity



10%



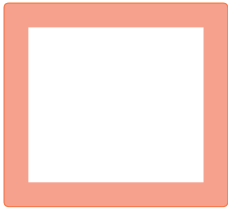




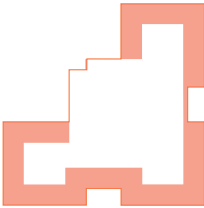
Facade

Facade

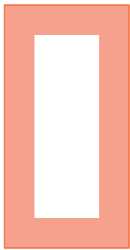
Naturally lit area



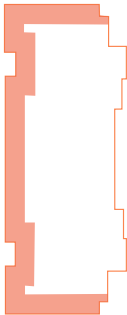
1145 m²



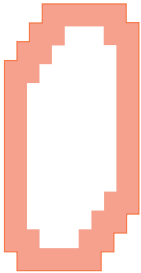
856 m²



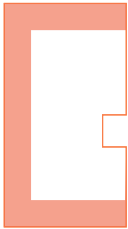
328 m²



1179 m²

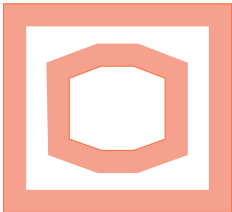


814 m²



389 m²

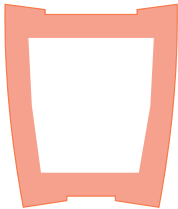
52 %



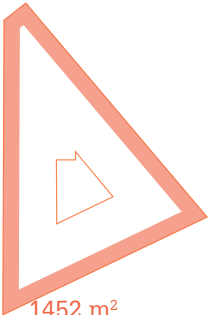
658 m²



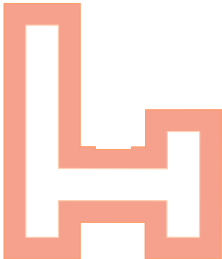
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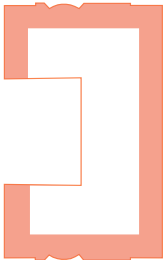
715 m²



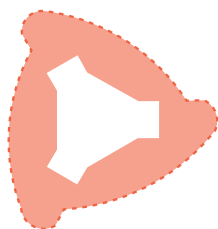
1452 m²



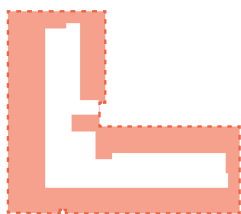
731 m²



1065m²



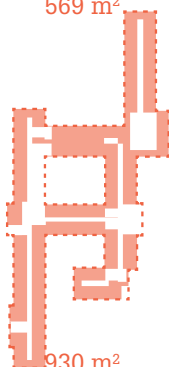
569 m²



463 m²



109 m²



930 m²

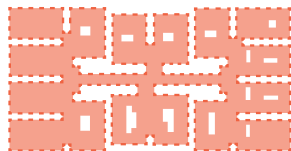


403 m²

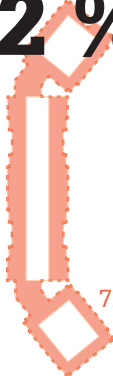


436 m²

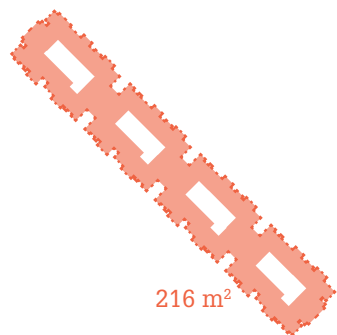
72 %



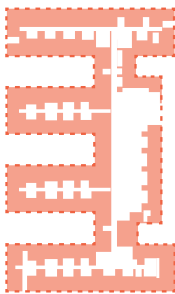
168 m²



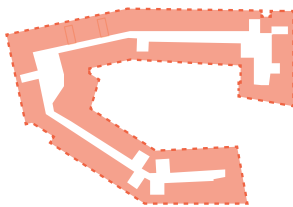
723 m²



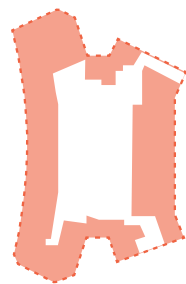
216 m²



1571 m²

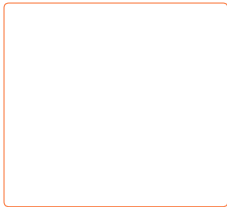


498 m²

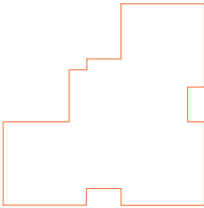


493 m²

Facade
Envelope area



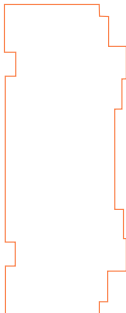
173 m



201 m



123 m



236 m

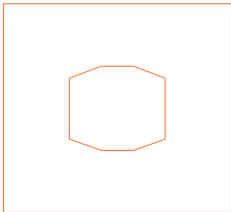


158 m

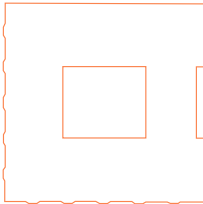


139 m

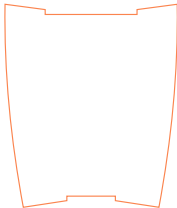
3.5%



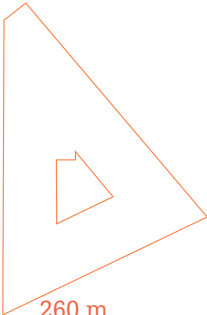
192 m



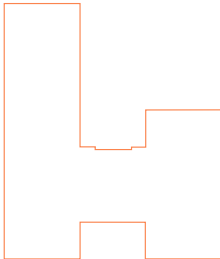
191 m



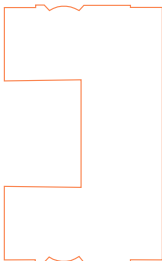
157 m



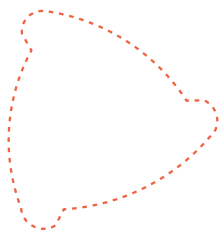
260 m



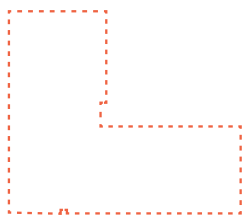
254 m



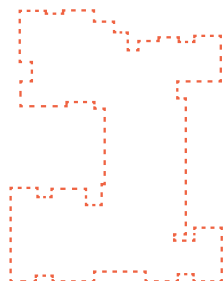
215 m



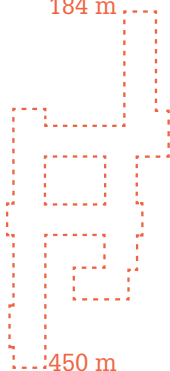
184 m



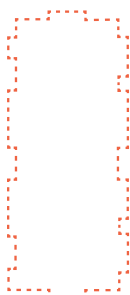
181 m



223 m



450 m

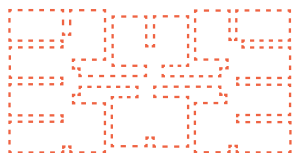


189 m



166 m

5%



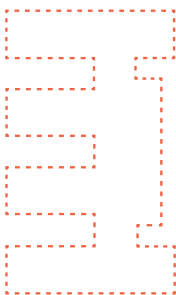
940 m



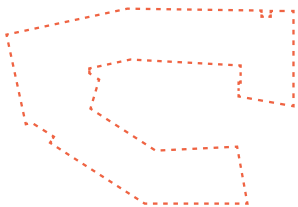
334 m



320 m



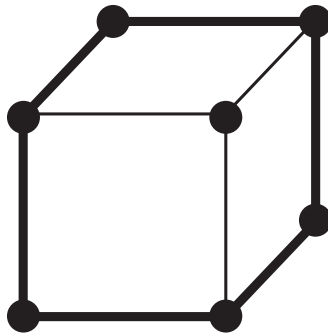
577 m



322 m

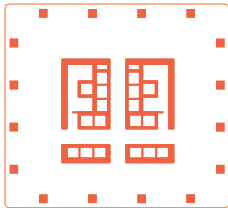


164 m

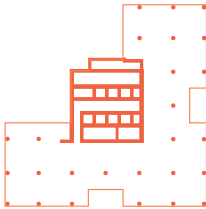


Structure

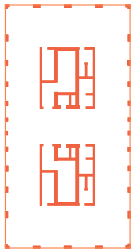
Structure
Load-bearing area



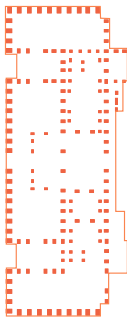
120 m²



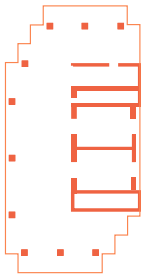
58 m²



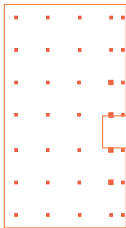
36 m²



100 m²

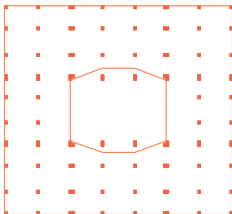


113 m²

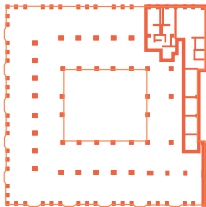


8 m²

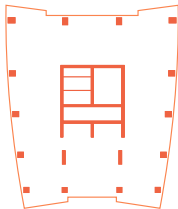
17 %



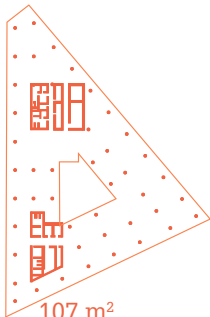
34 m²



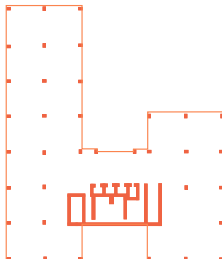
91 m²



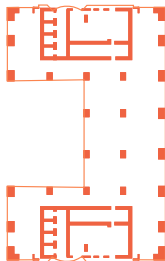
51 m²



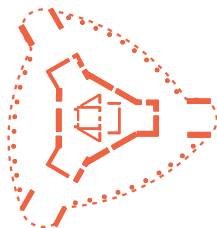
107 m²



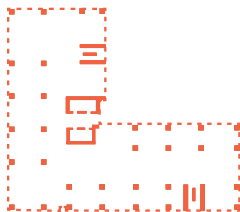
36 m²



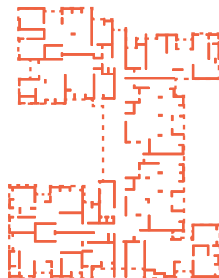
134 m²



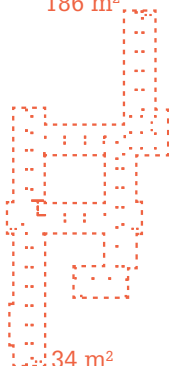
186 m²



60 m²



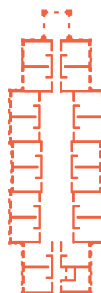
89 m²



34 m²



40 m²

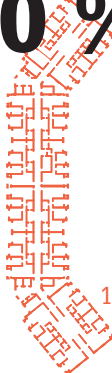


103 m²

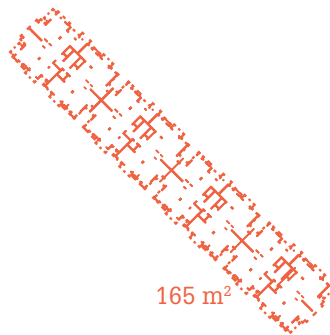
30 %



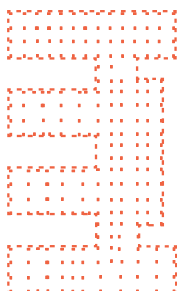
467 m²



167 m²



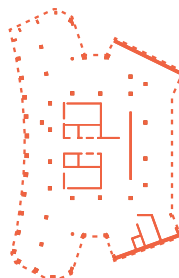
165 m²



92 m²

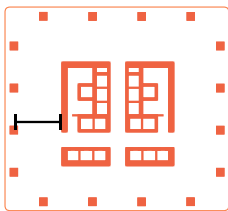


190 m²

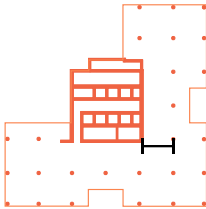


57 m²

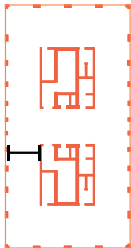
Structure
Maximum support spacing



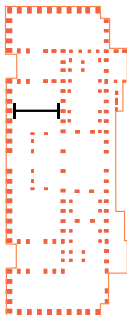
10.7 m



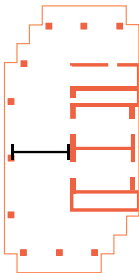
7.5 m



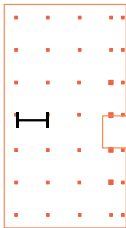
5.9 m



12.7 m

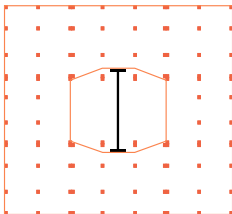


13.4 m

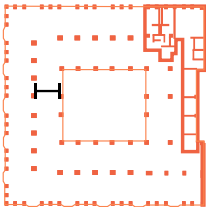


6.2 m

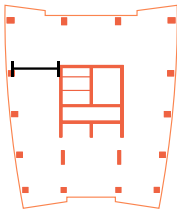
10 m



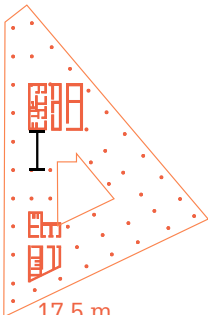
13.7 m



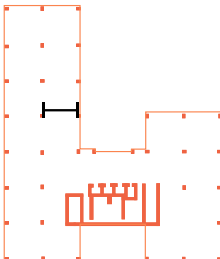
6.3 m



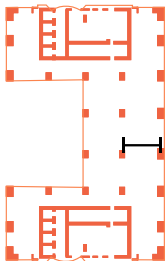
10.1 m



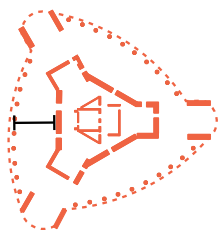
17.5 m



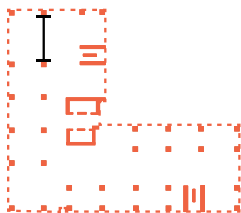
8.7 m



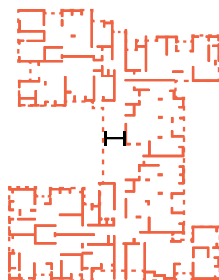
6.8 m



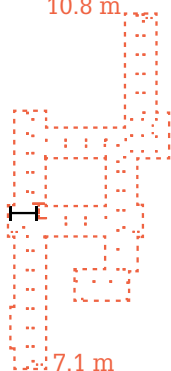
10.8 m



7.9 m



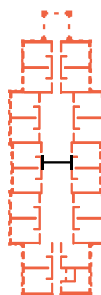
4.2 m



7.1 m

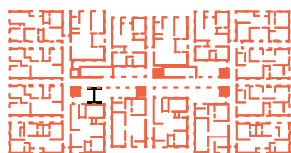


6.6 m

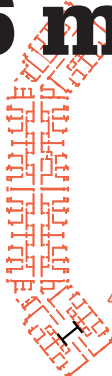


7.2 m

6 m



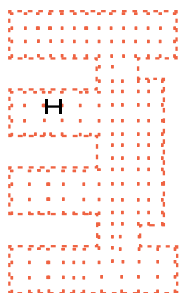
6.8 m



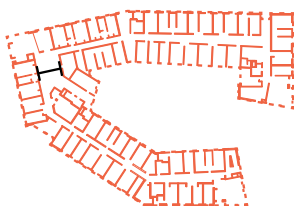
4.9 m



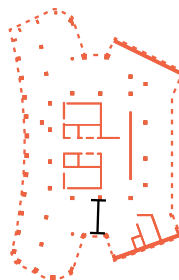
5.4 m



6.9 m



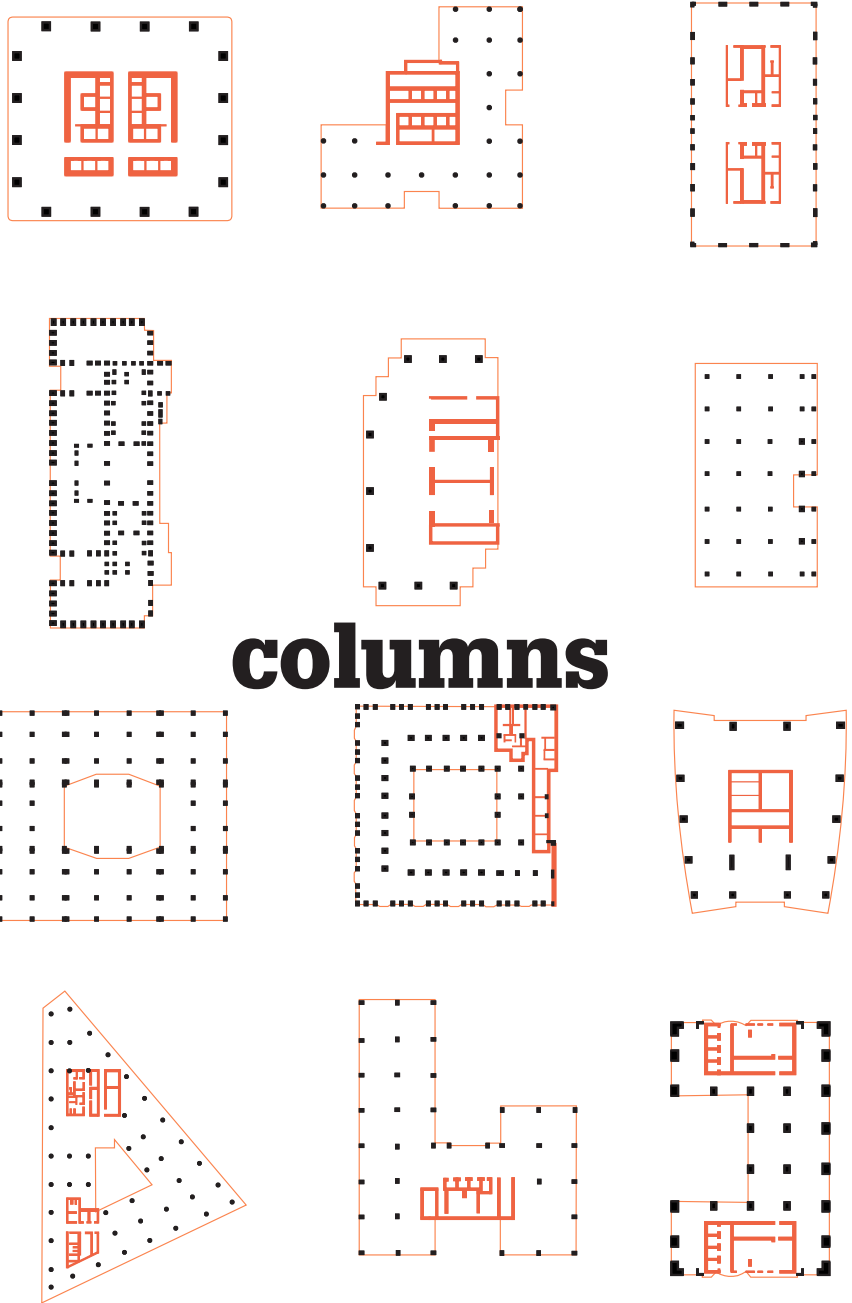
5.1 m



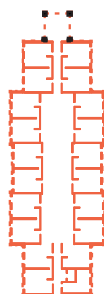
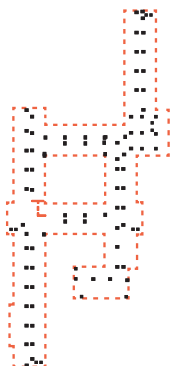
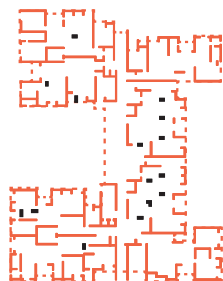
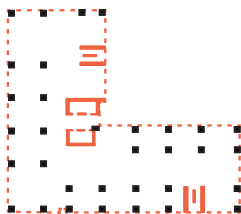
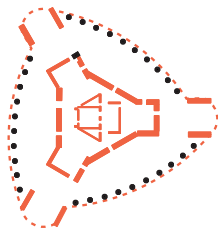
5.5 m

Structure

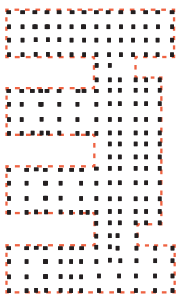
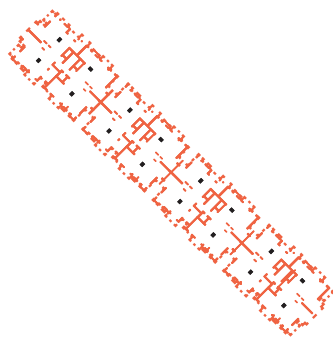
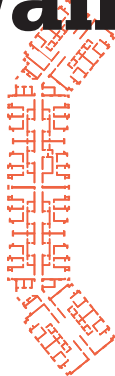
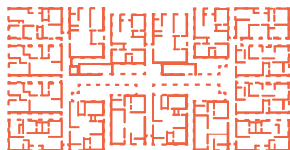
Type of structure

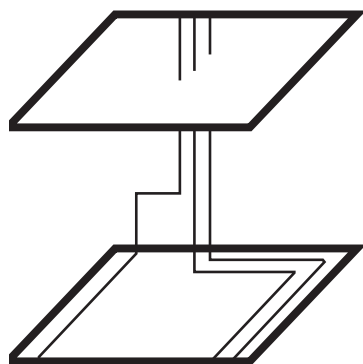


columns



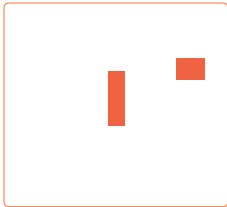
walls



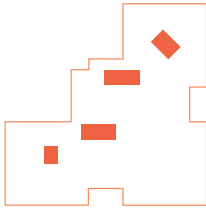


Services

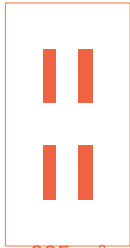
Services
Wet Area Cores



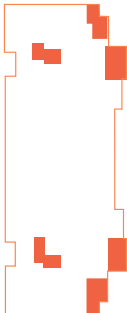
333 m²



336 m²



225 m²



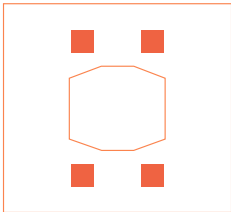
577 m²



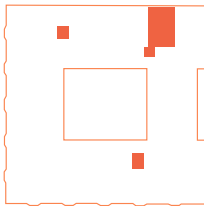
3.5
66 m²



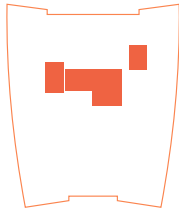
346 m²



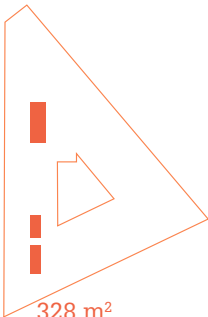
318 m²



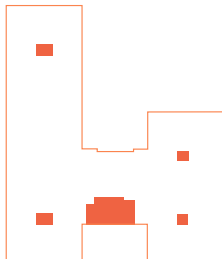
191 m²



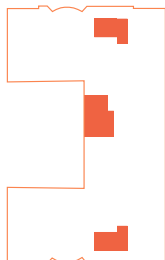
412 m²



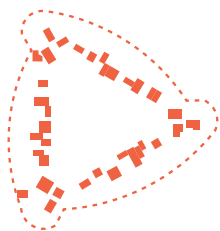
328 m²



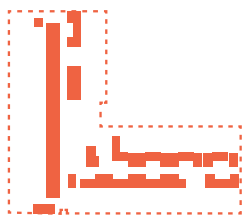
260 m²



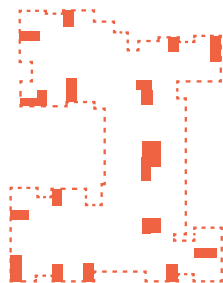
430 m²



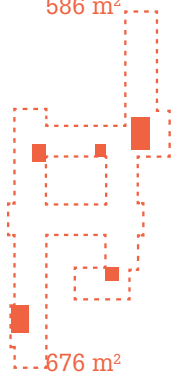
586 m²



672 m²



223 m²



676 m²

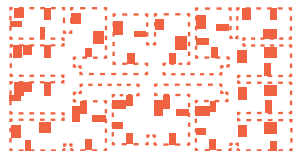


501 m²



479 m²

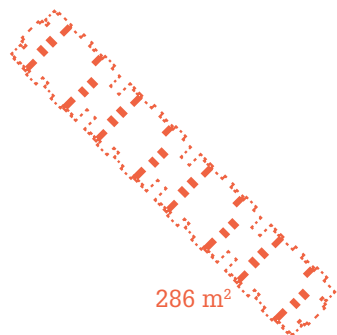
19



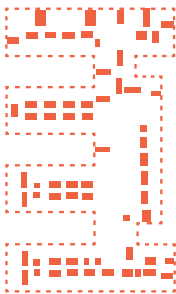
1369 m²



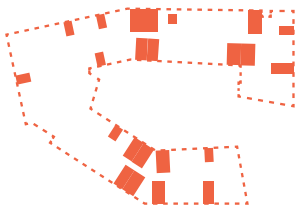
863 m²



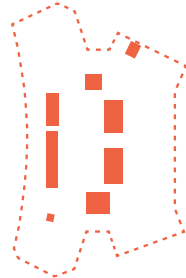
286 m²



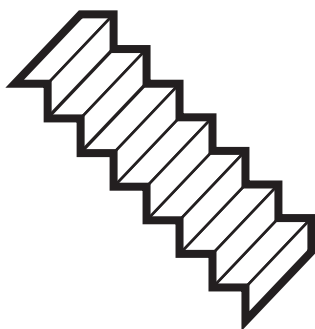
1555 m²



779 m²



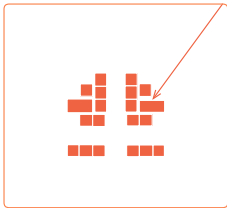
373 m²



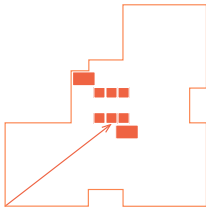
Access

Access

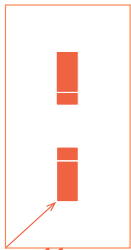
Distance to core



24 m



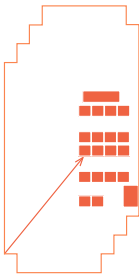
31 m



11 m



24 m

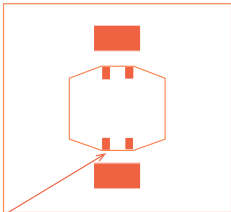


28 m

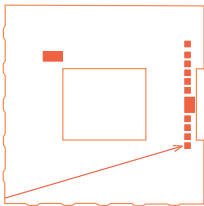


18 m

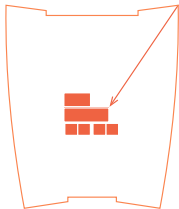
30 m



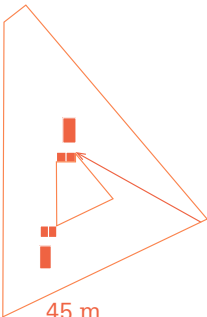
25 m



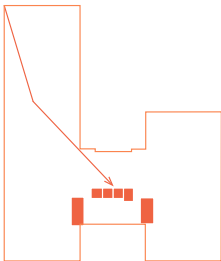
44 m



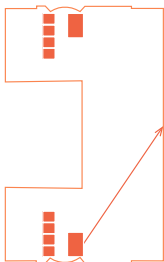
26 m



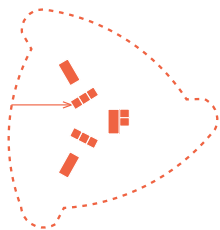
45 m



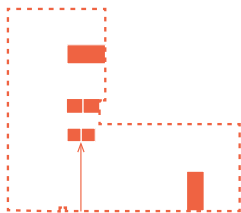
50 m



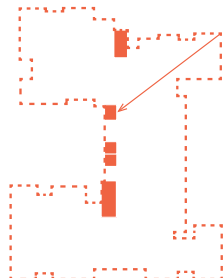
31 m



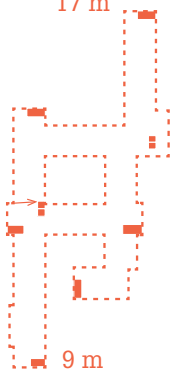
17 m



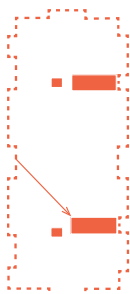
14 m



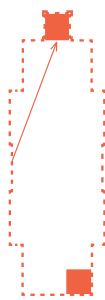
20 m



9 m

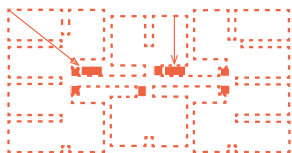


16 m

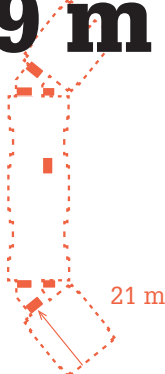


28 m

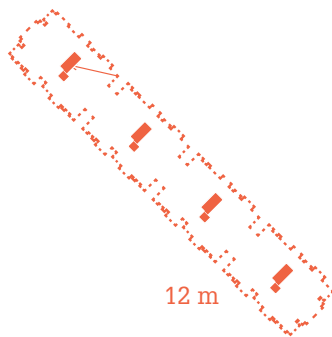
19 m



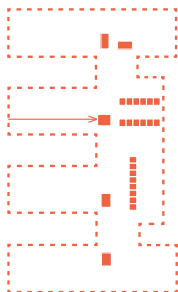
31 m



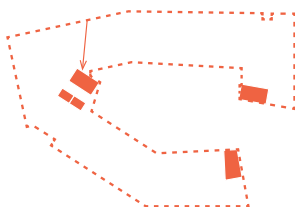
21 m



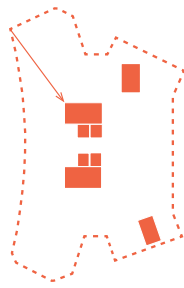
12 m



34 m

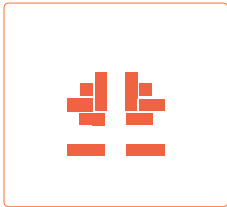


13 m

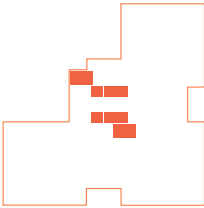


17 m

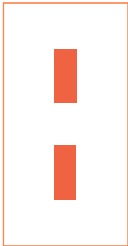
Access
Vertical shafts



144 m²



72 m²



66 m²



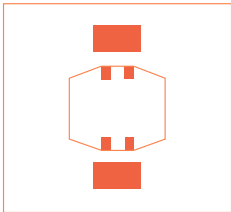
209 m²



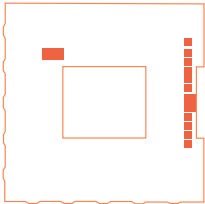
6 % 168 m²



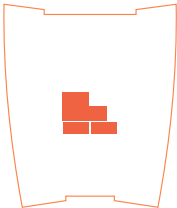
74 m²



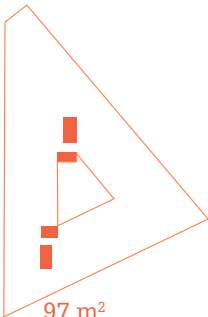
121 m²



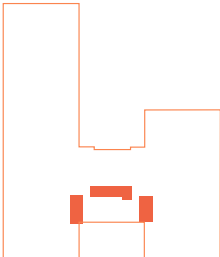
91 m²



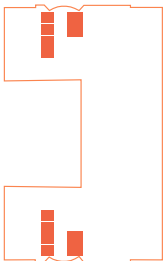
73 m²



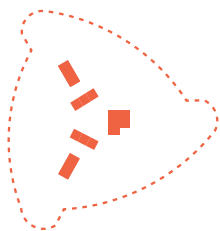
97 m²



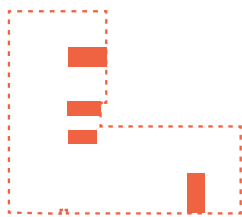
64 m²



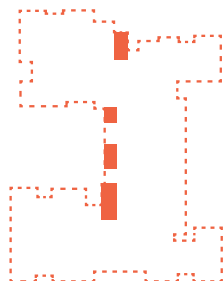
86 m²



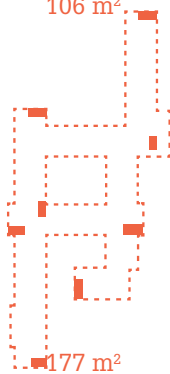
106 m²



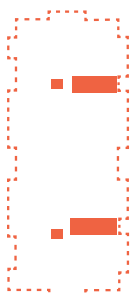
97 m²



34 m²



177 m²

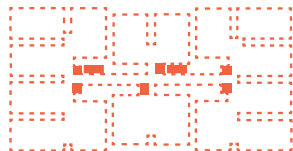


72 m²

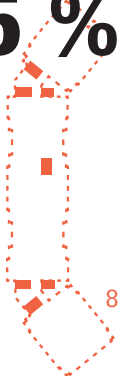


62 m²

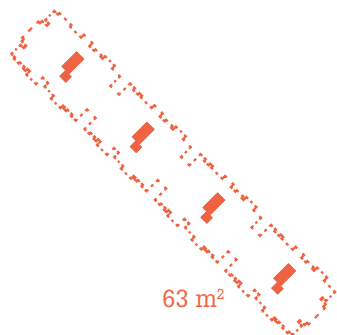
5 %



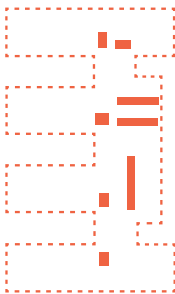
111 m²



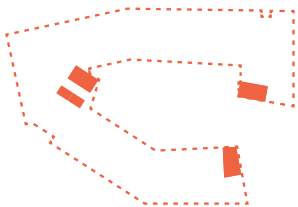
87 m²



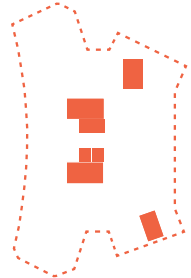
63 m²



232 m²



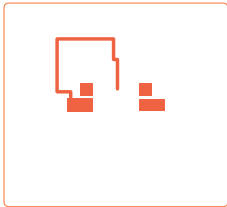
102 m²



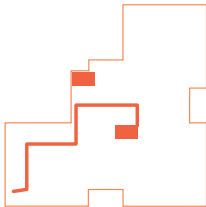
124 m²

Access

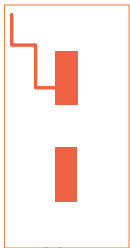
Distance to stair



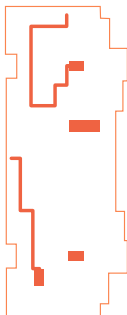
39 m



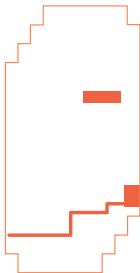
53 m



20 m



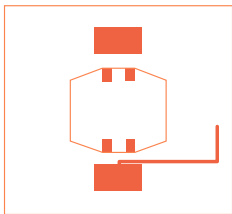
53 m



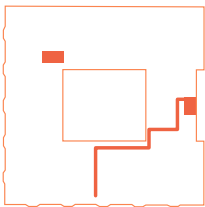
33 m



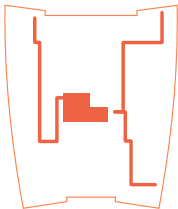
30 m



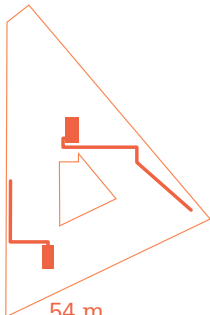
32 m



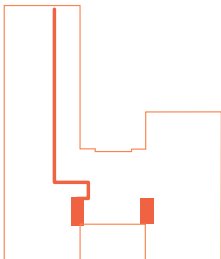
44 m



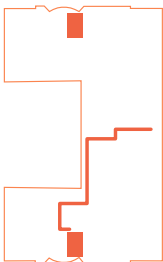
44 m



54 m

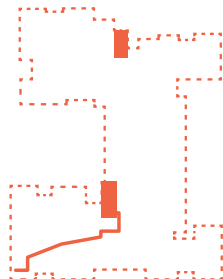
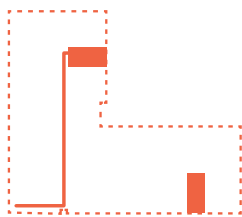
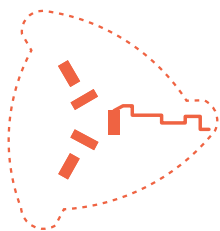


54 m



43 m

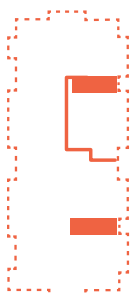
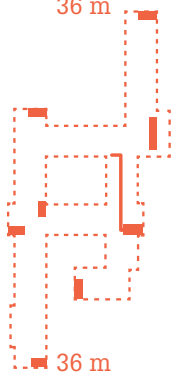
42 m



36 m

44 m

24 m

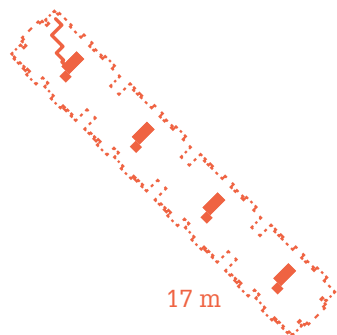
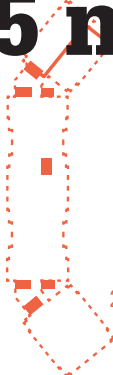
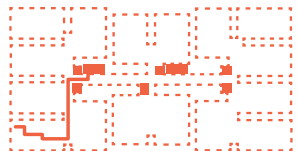


36 m

31 m

34 m

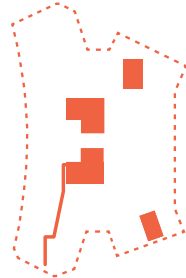
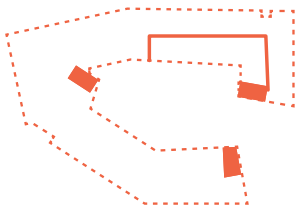
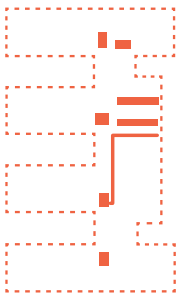
35 m



53 m

28 m

17 m

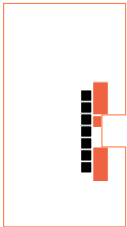
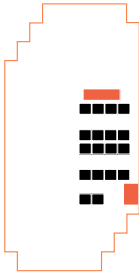
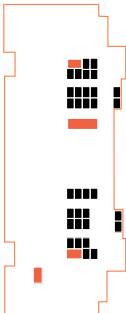
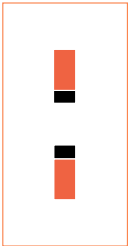
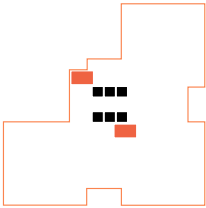
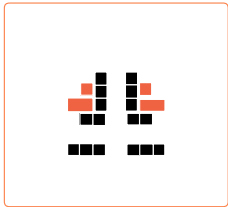


43 m

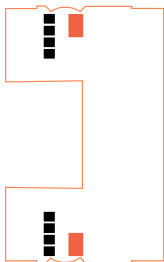
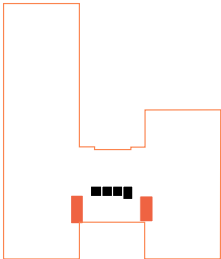
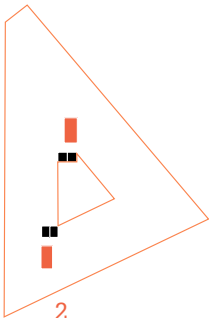
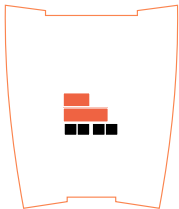
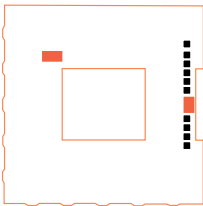
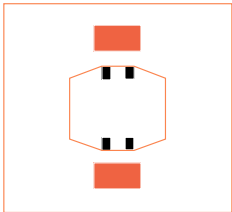
50 m

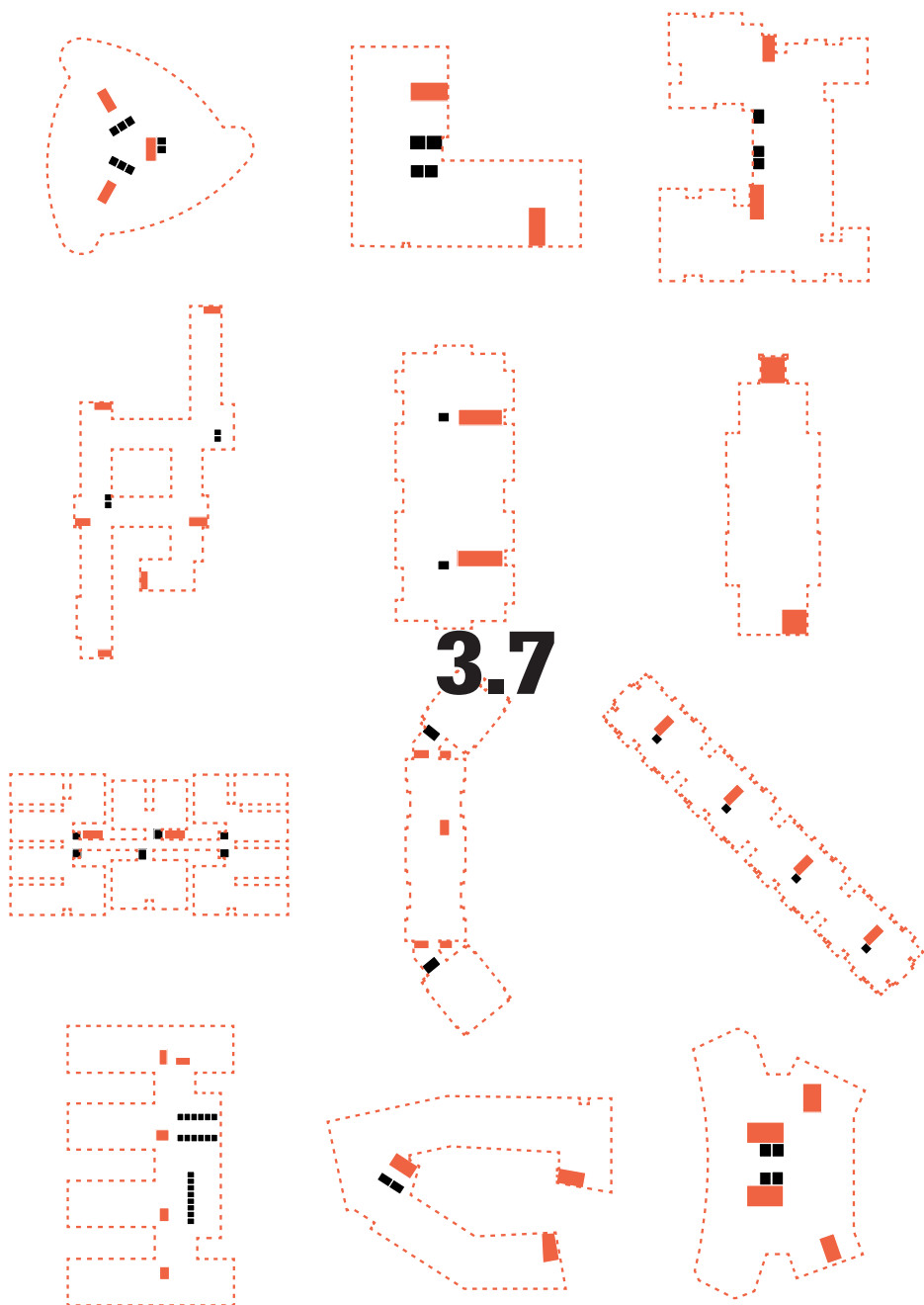
23 m

**Access
Cores**

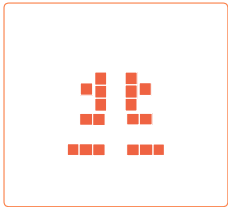


1.4

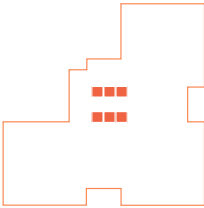




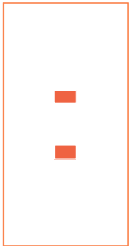
Access Lifts



18



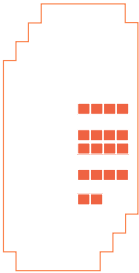
6



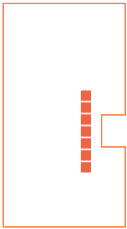
2



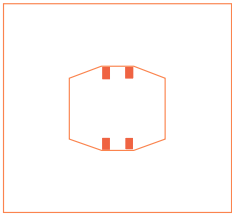
32



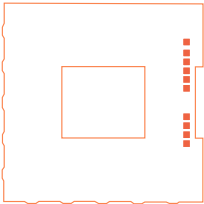
10



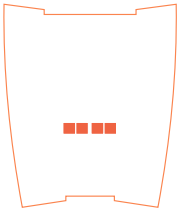
7



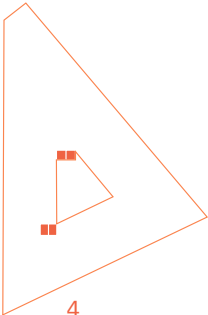
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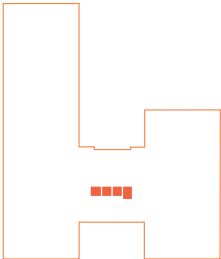
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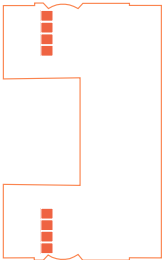
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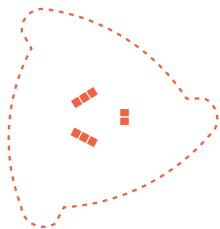
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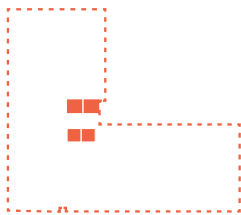
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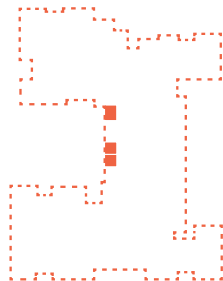
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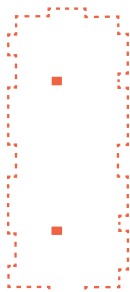
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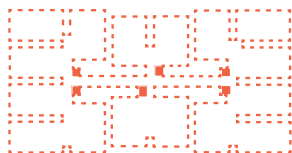


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2

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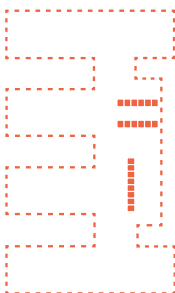
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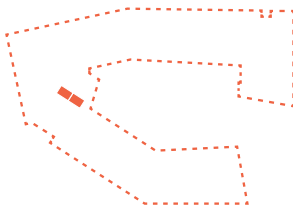
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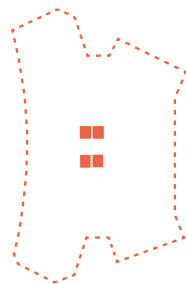
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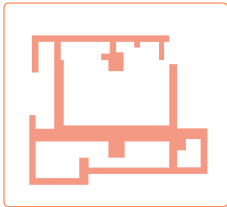
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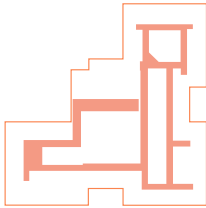
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Access

Horizontal circulation



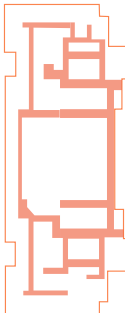
335 m²



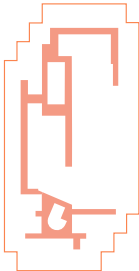
303 m²



207 m²



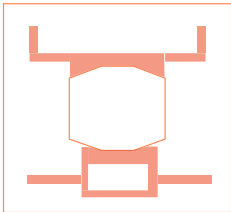
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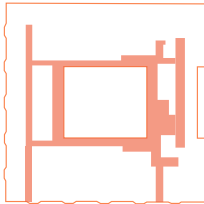
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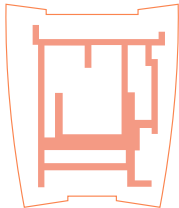
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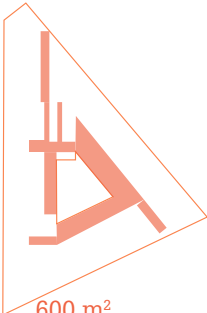
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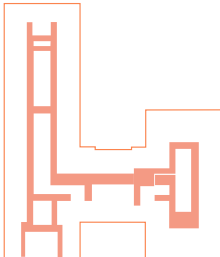
398 m²



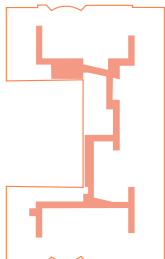
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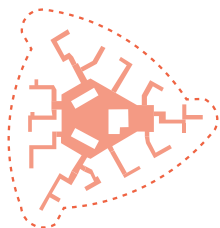
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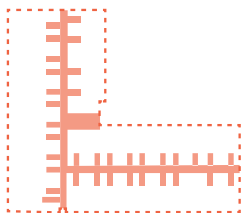
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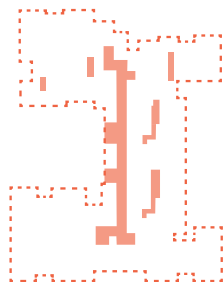
190 m²



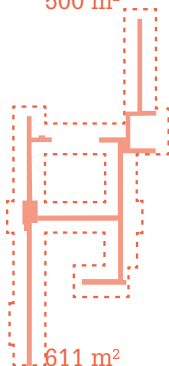
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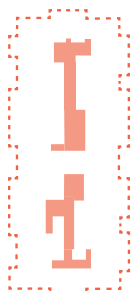
176 m²



99 m²



611 m²

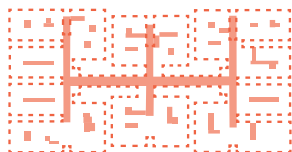


248 m²

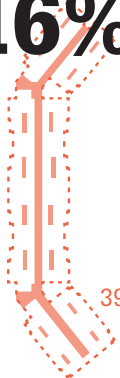


145 m²

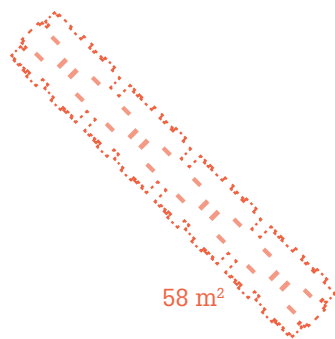
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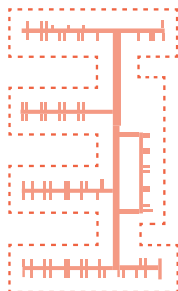
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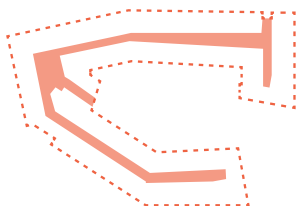
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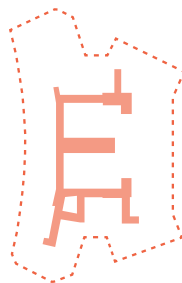
58 m²



806 m²



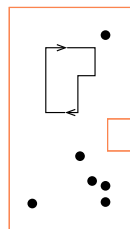
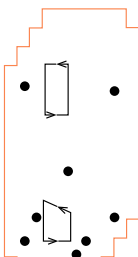
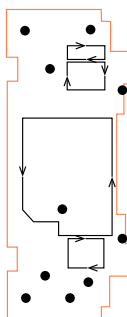
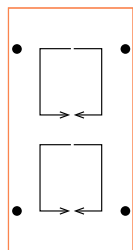
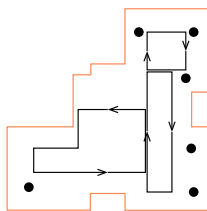
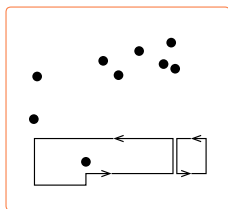
417 m²



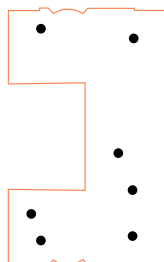
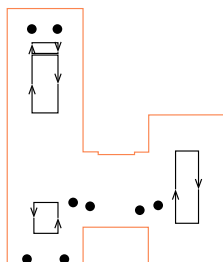
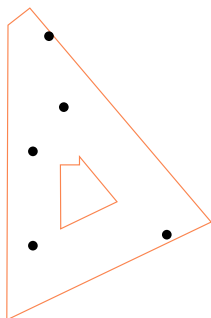
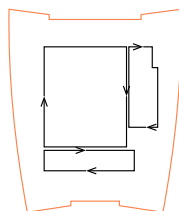
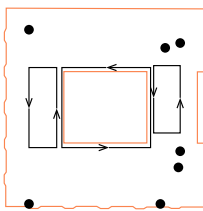
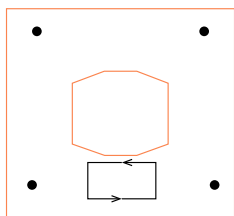
161 m²

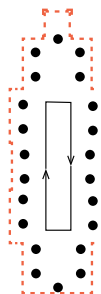
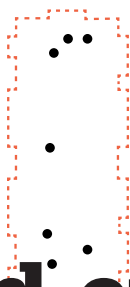
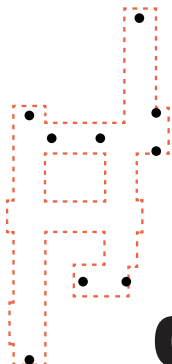
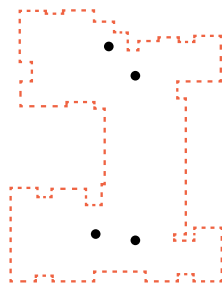
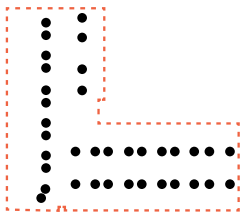
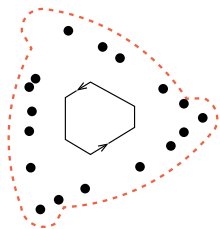
Access

Horizontal circulation typology

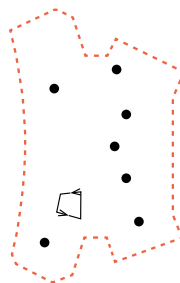
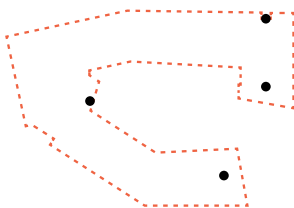
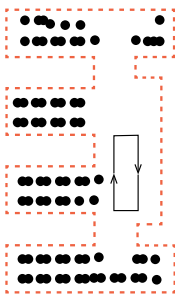
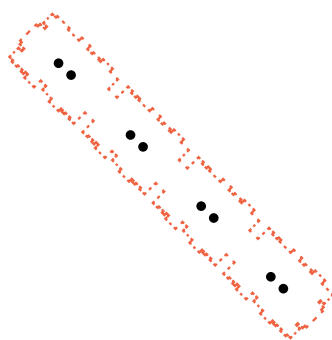
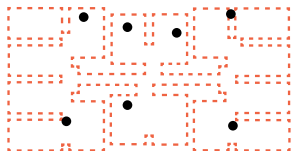


loops





dead-ends



Appendix

Appendix

Office Calculations

	MASSING			SERVICES				
	Footprint	Width	Porosity (m2)	Footprint + Porosity	% of porosity	Service Areas	% of overall	Wet Area
2CORES	841	21	0	841	0	291	35	225
NEXXUS	938	23	27	965	3	419	45	346
KERRY PLAZA 2	1399	37	90	1489	6	485	35	412
KALPATARU	1468	18	401	1869	21	515	35	430
AIA TOWER	1512	19	405	1917	21	407	27	336
THREE PACIFIC	1606	24	164	1770	9	827	51	667
ATRIUM	1790	14	353	2143	16	281	16	191
BOLERO	1867	18	258	2125	12	323	17	260
KERRY PLAZA 3	1922	42	0	1922	0	476	25	333
SANNO PARK	2207	28	238	2445	10	785	36	577
CURVY	2317	14	353	2670	13	438	19	318
TRIANGLE	3121	17	229	3350	7	425	14	328
Average	1749	23			10		29	

Housing Calculations

	MASSING			Services				
	Footprint	Width	Porosity	Footprint + Porosity	% of porosity	Service Areas	% of overall	Wet Area
4Houses	906	14	443.3	1349	32.9	257	28	223
ResidenceHall	1009	20	218.8	1228	17.8	541	54	479
4 Towers	1224	14	184.8	1409	13.1	348	28	286
Colonel Fabien	1255	13	484.8	1740	27.9	497	40	373
Gamma Tower	1303	19	7	1310	0.5	769	59	672
6ChineseApts	1331	24	653.5	1985	32.9	573	43	501
Titled ends	1898	18	212	2110	10.0	949	50	863
Scholars Hall	2014	14	970	2984	32.5	881	44	779
Helix	2111	12	784	2895	27.1	691	33	586
Right Angled	3584	12	1594	5178	30.8	852	24	676
16 Houses	3840	18	1097.9	4938	22.2	1479	39	1366
4 Legs	4920	17	1622	6542	24.8	1787	36	1555
Average	2116	16			23		40	

ACCESS									
as	% Services	Vertical Access Areas (m2)	Shafts' Area (%)	No. of lifts	Cores	Distance to exit	Max. distance from core	Horizontal Circulation Area	% Circulation
as	27	66	8	2	2	20	11	207	25
	37	73.5	8	7	1	30	18	149	16
	29	73	5	4	1	44	26	291	21
	29	85.5	6	8	2	43	31	190	13
	22	71.5	5	6	1	53	31	303	20
	42	160	10	18	1	33	28	239	15
	11	90.5	5	10	1	44	44	398	22
	14	63.5	3	4	1	54	50	372	20
	17	143.5	7	18	2	39	24	335	17
	26	208.5	9	32	1	53	24	476	22
	14	120.5	5	4	2	32	25	279	12
	11	97	3	4	2	54	45	600	19
23			6	10	1.4	42	30	320	18.5
ACCESS									
as	% Services	Access Areas	% Shafts	No. of lifts	Cores	Distance to exit	Max. distance from core	Circulation Area	% Circulation
as	25	34	4	3	4	24	20	98.9	10.9
	47	62	6	1	2	34	28	145.2	14
	23	62.5	5	4	4	17	12	57.6	5
	30	124	10	4	4	23	17	161.3	13
	52	97	7	4	3	44	14	176.2	14
	38	72	5	2	2	31	16	248.2	19
	45	86.5	5	6	3	28	21	398	21
	39	102	5	2	3	50	13	416.7	21
	28	105.5	5	8	1	36	17	500	24
	19	176.5	5	4	8	36	9	611.7	17
	36	110.5	3	6	6	53	31	719.1	19
	32	232.4	5	20	4	43	34	805.9	16
34			5	5	3.7	35	19	362	16.0
ACCESS									
as	% Services	Access Areas	% Shafts	No. of lifts	Cores	Distance to exit	Max. distance from core	Circulation Area	% Circulation
5	25	34	4	3	4	24	20	98.9	10.9
	47	62	6	1	2	34	28	145.2	14
	23	62.5	5	4	4	17	12	57.6	5
	30	124	10	4	4	23	17	161.3	13
	52	97	7	4	3	44	14	176.2	14
	38	72	5	2	2	31	16	248.2	19
	45	86.5	5	6	3	28	21	398	21
	39	102	5	2	3	50	13	416.7	21
	28	105.5	5	8	1	36	17	500	24
	19	176.5	5	4	8	36	9	611.7	17
	36	110.5	3	6	6	53	31	719.1	19
	32	232.4	5	20	4	43	34	805.9	16
34			5	5	3.7	35	19	362	16.0

Appendix

Office Calculations

	STRUCTURE				FACADE			
	% Circulation	% Access	Load bearing Area	% Structure	Max support spacing	Length	Facade / Footprint (%)	Artificially lit area (m2)
2CORES	25	32	36	4.3	5.9	123	15	328
NEXXUS	16	24	8	0.9	6.2	139	15	389
KERRY PLAZA 2	21	26	51	3.6	10.1	157	11	715
KALPATARU	13	19	134	9.1	6.8	215	15	1065
AIA TOWER	20	25	58	3.8	7.5	201	13	856
THREE PACIFIC	15	25	113	7.0	13.7	178	11	814
ATRIUM	22	27	91	5.1	6.3	191	11	684
BOLERO	20	23	36	1.9	8.7	254	14	731
KERRY PLAZA 3	17	25	120	6.2	10.7	173	9	1145
SANNO PARK	22	31	100	4.5	12.7	236	11	1179
CURVY	12	17	34	1.5	13.7	192	8	658
TRIANGLE	19	22	107	3.4	17.5	260	8	1452
Average	18.5	24.7		4.3	10.0	193.25	12	

Housing Calculations

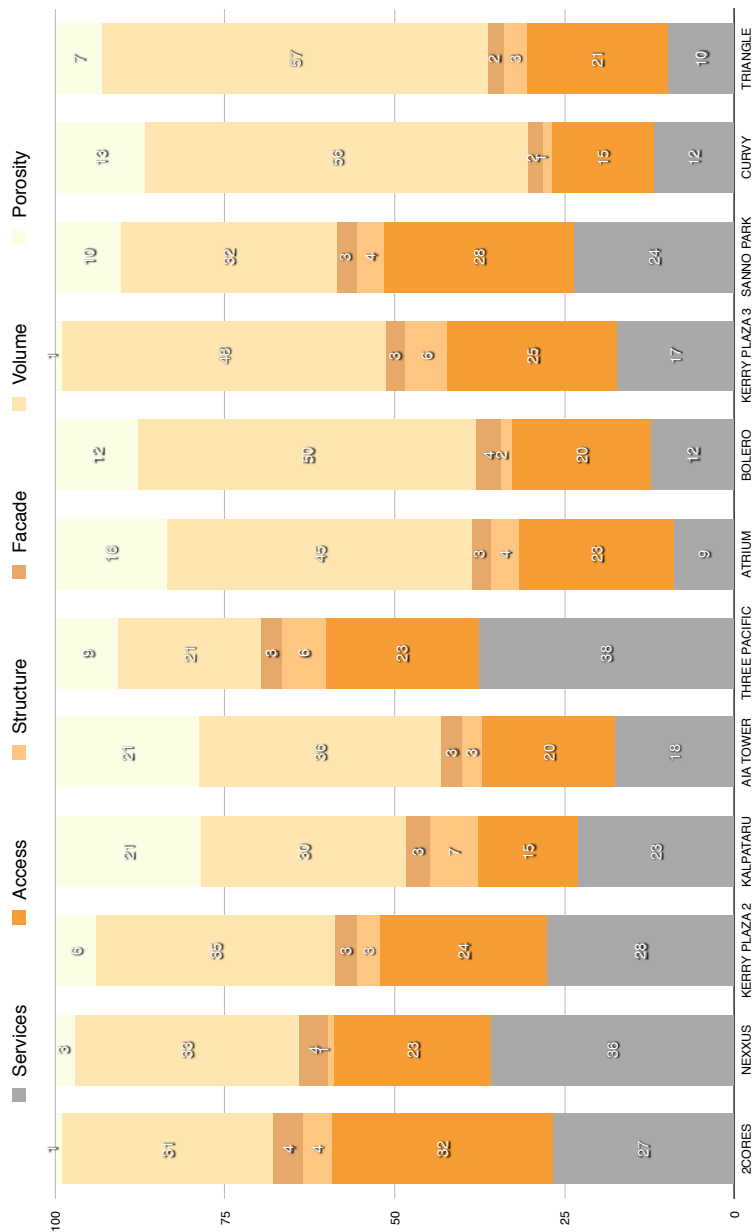
	STRUCTURE				FACADE			
	% Circulation	% Access	Load bearing Area	% Structure	Max support spacing	Length	Facade / Footprint (%)	Artificially lit area (m2)
4Houses	10.9	15	89	10	4.2	223	25	109
ResidenceHall	14	21	103	10	7.2	166	16	436
4 Towers	5	10	165	13	5.4	320	26	216
Colonel Fabien	13	23	57	5	5.5	164	13	493
Gamma Tower	14	21	60	5	7.9	181	14	463
6ChineseApts	19	24	40	3	6.6	189	14	403
Titled ends	21	26	167	9	4.9	334	18	723
Scholars Hall	21	26	190	9	5.1	322	16	498
Helix	24	29	186	9	10.8	184	9	569
Right Angled	17	22	34	1	7.1	450	13	930
16 Houses	19	22	467	12	6.8	940	24	168
4 Legs	16	21	92	2	6.9	577	12	1571
Average	16.0	21.5		7.3	6.5	337.5	17	

Naturally lit interior (% of area)	Facade Area	% Facade	% Usable Volume	Services	Access	Structure	Facade	Volume	Porosity
61	37	4.4	32	27	32	4	4	31	1
59	42	4.4	34	36	23	1	4	33	3
49	47	3.4	38	28	24	3	3	35	6
27	65	4.4	38	23	15	7	3	30	21
43	60	4.0	45	18	20	3	3	36	21
49	53	3.3	23	38	23	6	3	21	9
62	57	3.2	54	9	23	4	3	45	16
61	76	4.1	57	12	20	2	4	50	12
40	52	2.7	49	17	25	6	3	48	1
47	71	3.2	35	24	28	4	3	32	10
72	58	2.5	65	12	15	1	2	56	13
53	78	2.5	61	10	21	3	2	57	7
52		3.5	44	21	22	4	3	40	10

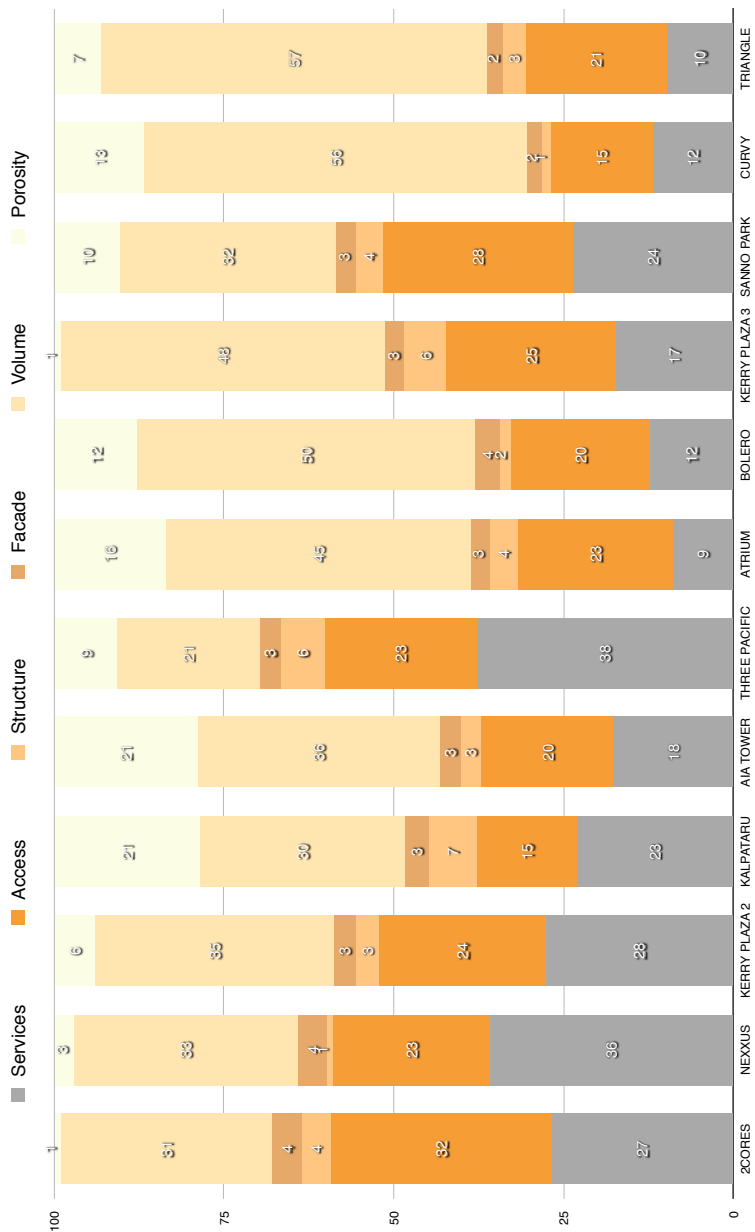
naturally lit interior (% of footprint)	Facade Area	% Facade	% Usable Volume	Services	Access	Structure	Facade	Volume	Porosity
88	67	7.4	44	17	10	7	5	29	33
57	50	4.9	17	39	17	8	4	14	18
82	96	7.8	46	20	9	12	7	40	13
61	49	3.9	39	21	16	3	3	28	28
64	54	4.2	19	51	21	5	4	19	1
70	57	4.3	31	25	16	2	3	21	33
62	100	5.3	15	41	23	8	5	13	10
75	97	4.8	21	26	17	6	3	14	33
73	55	2.6	32	20	21	6	2	23	27
74	135	3.8	54	13	15	1	3	38	31
96	282	7.3	23	28	17	9	6	18	22
68	173	3.5	42	24	16	1	3	32	25
72		5.0	32	27	16	6	4	24	23

Appendix

Office Calculations

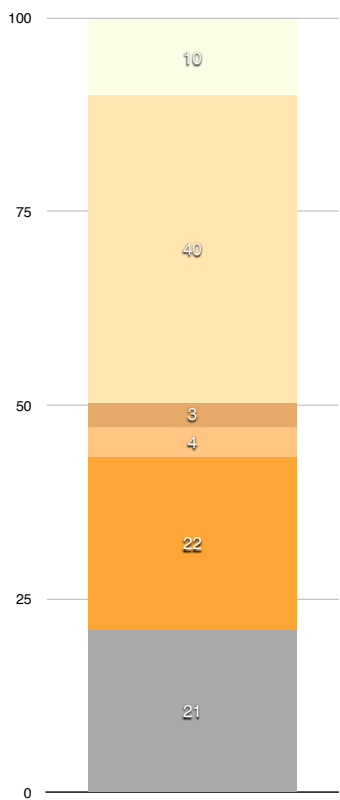


Housing Calculations

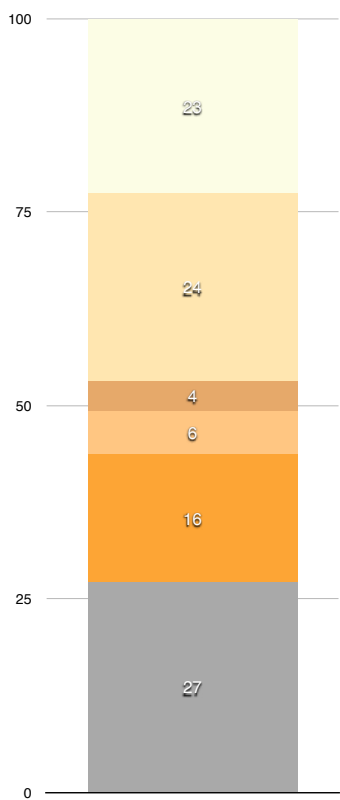


Conclusion

Office



Housing



- Services
- Access
- Structure
- Facade
- Volume
- Porosity

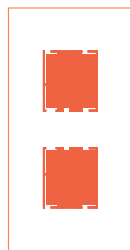
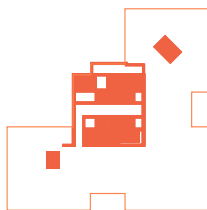
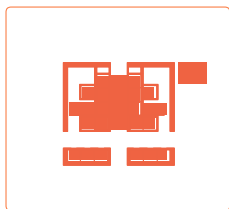
A large percent of overall footprints is consumed by static and therefore non-flexible elements; namely by Structure, Facade, Services and Access cores. These take up 50% of office space and 54% of residential.

Access is discovered to be the most footprint-consuming sector, responsible for 40% and 24% of static space in office and housing respectively.

Overall, although only slightly higher, residential fixation is more problematic, as elements such as plumbing fixtures and access shafts are considerably less compact, while the use of loadbearing walls and the 20% higher need for natural light, all hinder the potential flexibility of the space.

Static spaces

Access + Services + Facade + Structure



50%

