

# Collaborative Approach to Healthcare Design: Circle Health and Bryden Wood



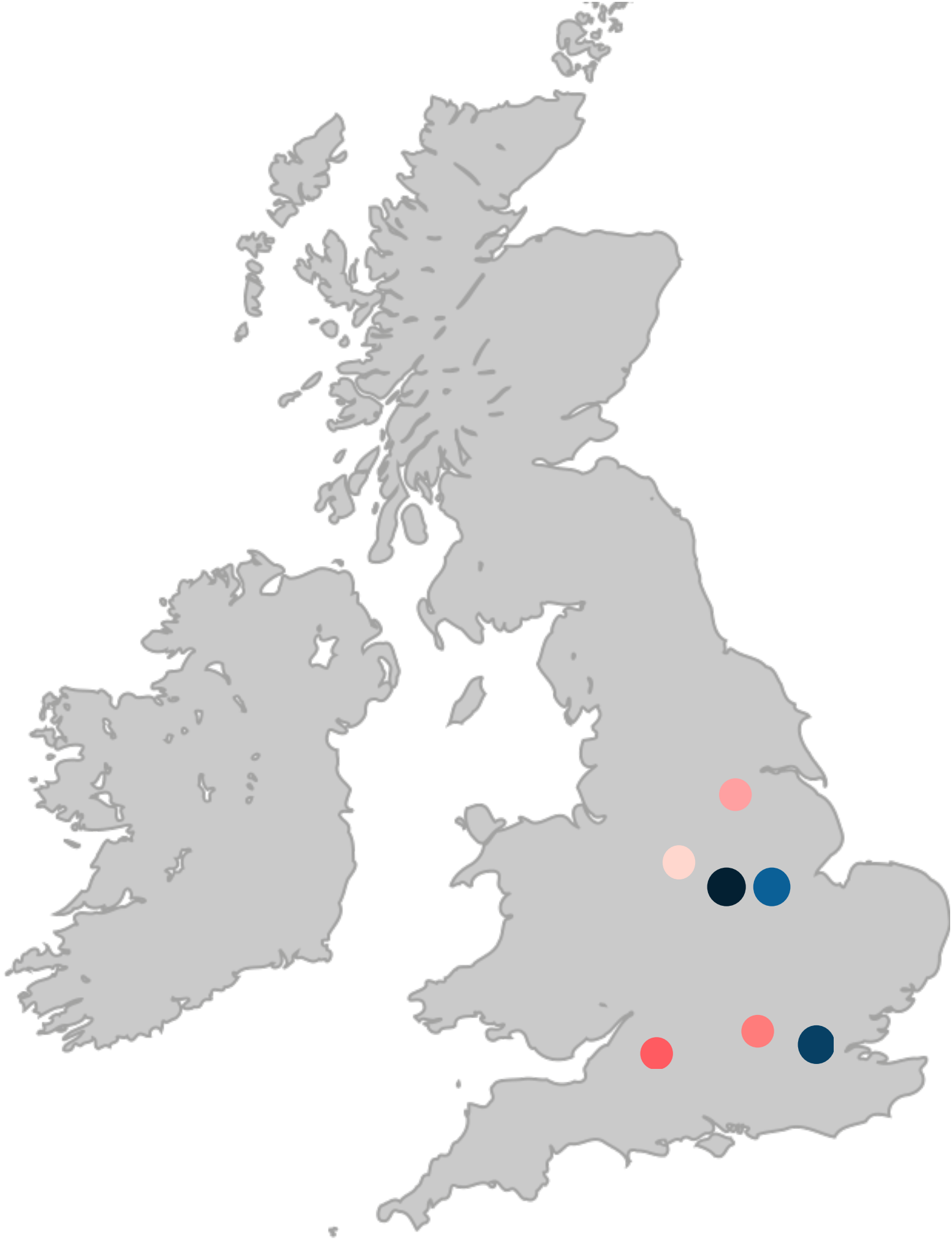


# Introduction To Circle Health

## Circle Current Operations

Location	Contract	Opening Date	CQC Rating	Patients Treated (FY16)
Nottingham	Large scale Treatment Centre	Jul-08	GOOD	231,351
Bath	Independent Hospital	Mar-10	GOOD	50,503
Reading	Independent Hospital	Aug-12	GOOD	65,050
Bedfordshire	MSK Integrated care	Apr-14	-	440,000 (pop covered)
Greenwich	MSK Integrated care	Apr-17	-	276,000 (pop covered)
Northamptonshire	MSK referral management	March 2018	-	726,000 (pop covered)
Rushcliffe	MSK referral management	Apr 2018	-	125,XXX (Pop. covered)
Birmingham	Independent Hospital	2019	-	-

- Circle Birmingham
- Circle Nottingham NHS Treatment Centre and Rushcliffe MSK
- Circle Reading
- Circle Bath
- Bedford MSK
- Greenwich MSK
- Northampton MSK
- International – Circle Harmony, Shanghai





# Introduction To Circle Health



Circle Bath Hospital

Operating Theatres	4
Consulting Rooms	9
Day beds	21
Inpatient beds	28
Employees (2017)	217
Patients treated (2017)	63,739



Circle Nottingham

Operating Theatres	5
Consulting Rooms	60
Day beds	26
Inpatient beds	16
Employees (2017)	570
Patients treated (2017)	225,049



# Introduction To Circle Health



Circle Reading Hospital

Operating Theatres	5
Consulting Rooms	15
Day beds	20
Inpatient beds	30
Employees (2017)	213
Patients treated (2017)	79,419



Circle Birmingham Hospital

Operating Theatres inc End	4
Consulting Rooms	14
Day beds inc . Ambulatory 8	23
Inpatient beds	20
Rehabilitation beds	120



# Quality at Circle Health

<p><b>Best Patient Experience</b></p> <ul style="list-style-type: none"><li>- Would Recommend rate</li><li>- Wait Times for Treatment</li><li>- Incidents/Claims rate</li><li>- Making Every Contact Count</li></ul>	<p><b>Best Clinical Outcomes</b></p> <ul style="list-style-type: none"><li>- Return to Theatre within 30 days rate</li><li>- Readmission within 30 days</li><li>- Patient Reported Outcome Measures</li><li>- Hospital Acquired Infection rate</li></ul>
<p><b>Most Engaged Staff</b></p> <ul style="list-style-type: none"><li>- Turnover rate</li><li>- Sickness rate</li><li>- Would Recommend rate</li><li>- Perkbox incentives</li></ul>	<p><b>Best Value</b></p> <ul style="list-style-type: none"><li>- Cost per Patient</li><li>- Length of Stay</li><li>- CQUIN Achievement rate</li></ul>





Care Quality Commission Ratings

	Nottingham	Bath	Reading	Bedford	Greenwich		
Overall Rating						Outstanding	
Safety						Good	
Effectiveness						Requires Improvement	
Caring							
Responsive							
Well-Led							
Surgery (incl Gynae)				N/A	N/A		
OP & Diagnostics				N/A	N/A		

# Circle Birmingham Hospital

## Acute Services

- 20 inpatient beds, expandable to 40
- 3 operating theatres, expandable to 5
- 1 minor ops / endoscopy suite
- 15 day-case beds
- 8 Ambulatory Care
- 14 consulting rooms, expandable to 23
- 3T MRI, CT, digital X-Ray

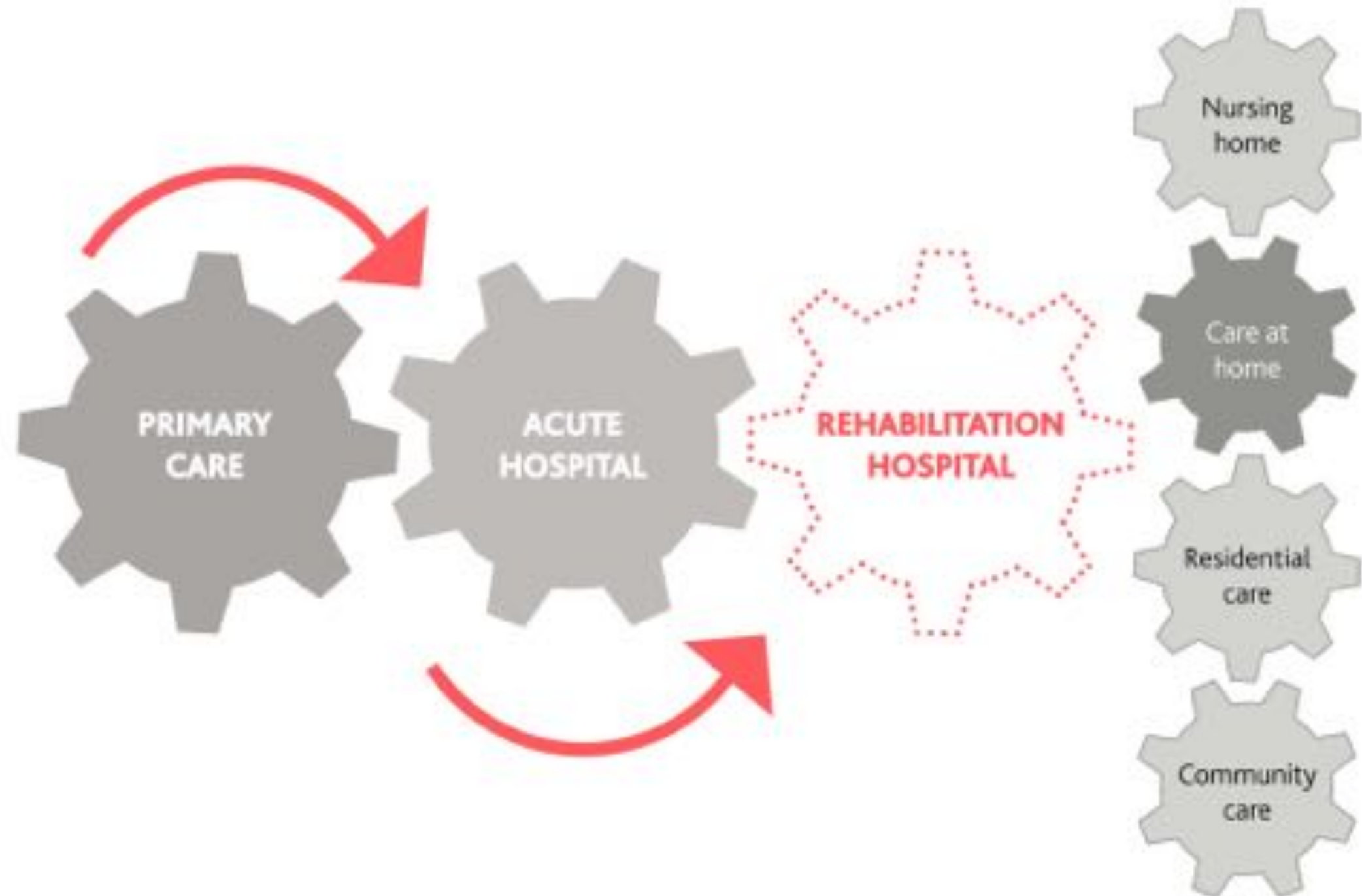




# Circle Health Rehabilitation

## Rehabilitation

- Partnership with Vamed the leading European rehabilitation
- A dedicated rehabilitation unit offering 120 beds over 2 floors
- 9 consulting rooms
- 15 day-case beds
- Over £55m invested in leading worldwide rehabilitation technologies enabling stroke patients become mobile faster, athletes perform better, and patients return home sooner





## Circle Health Rehabilitation

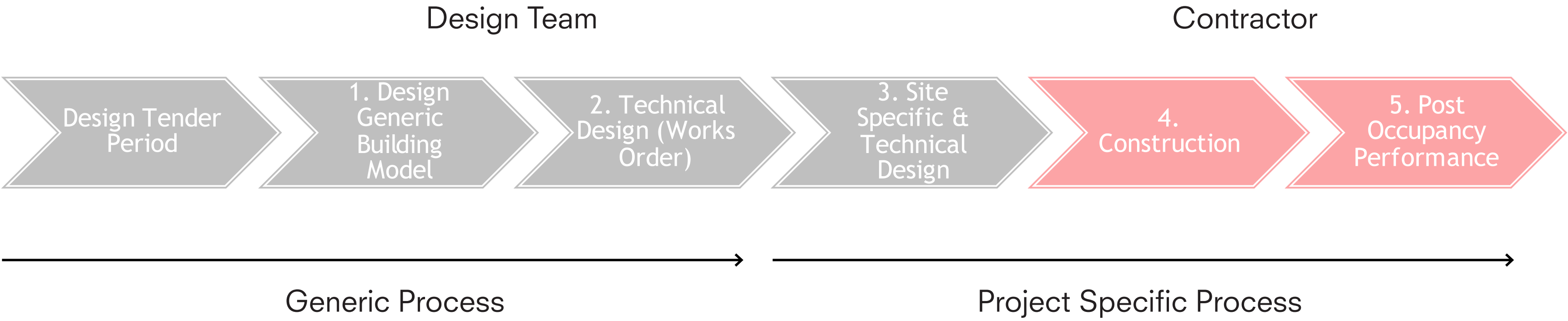
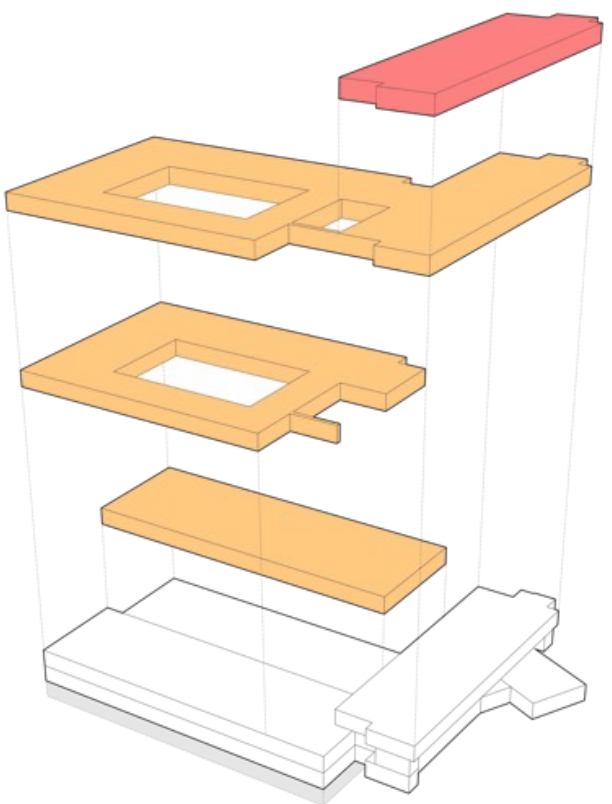




# Circle Health Rehabilitation

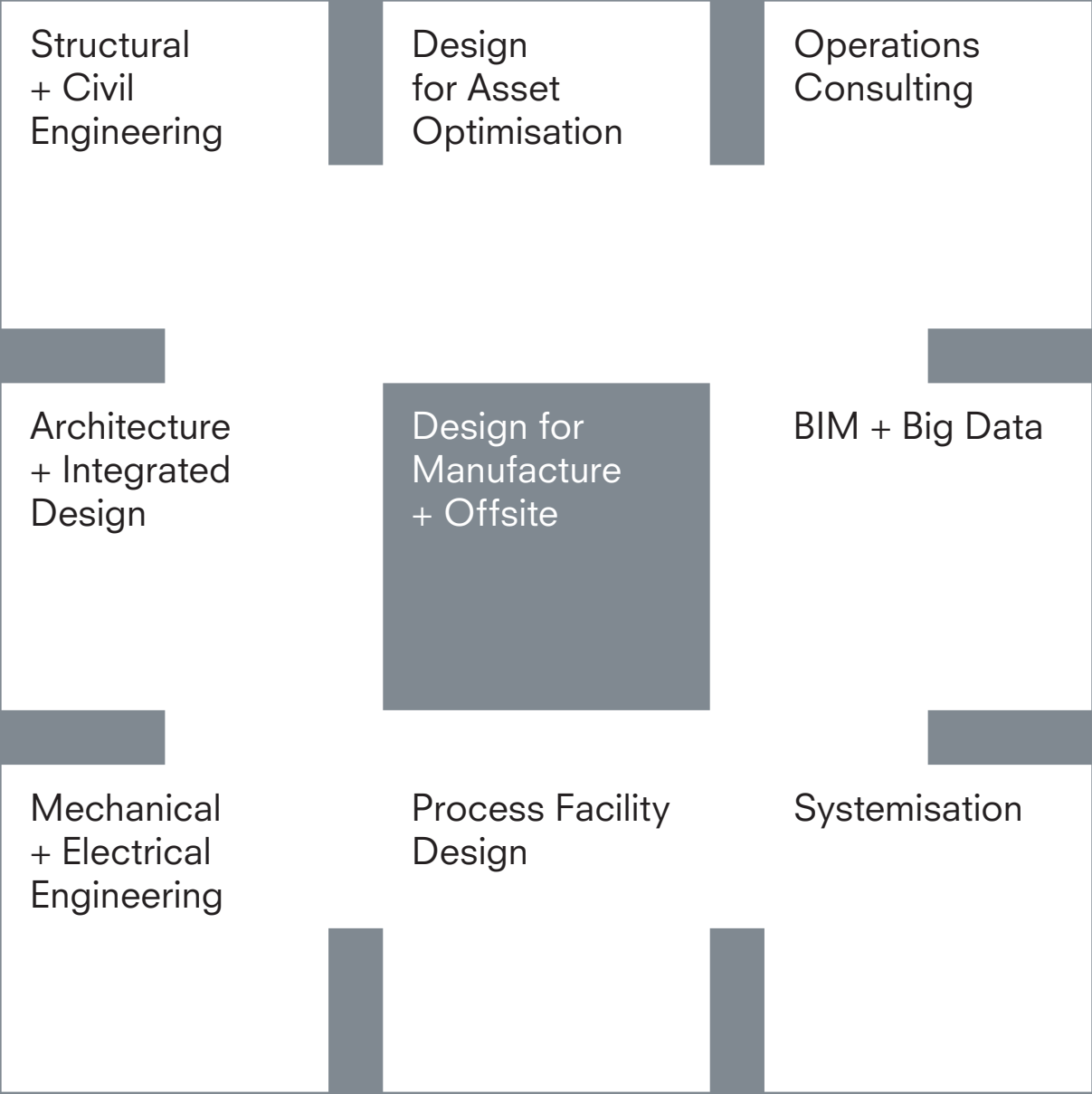
## Rehabilitation

- Framework Approach: Generic model delivered by design team, with contractor to design and build Site Specific Design
  - Design Team incentivised on reducing project specific costs
  - Abnormal costs should be measured and part of the pain calculation to Design Team
- Project Contract Sum: lump-sum fixed price, tendered to medium-size main contractor
- GIFA of Rehab Unit 8,500m2
- Potential for modular build





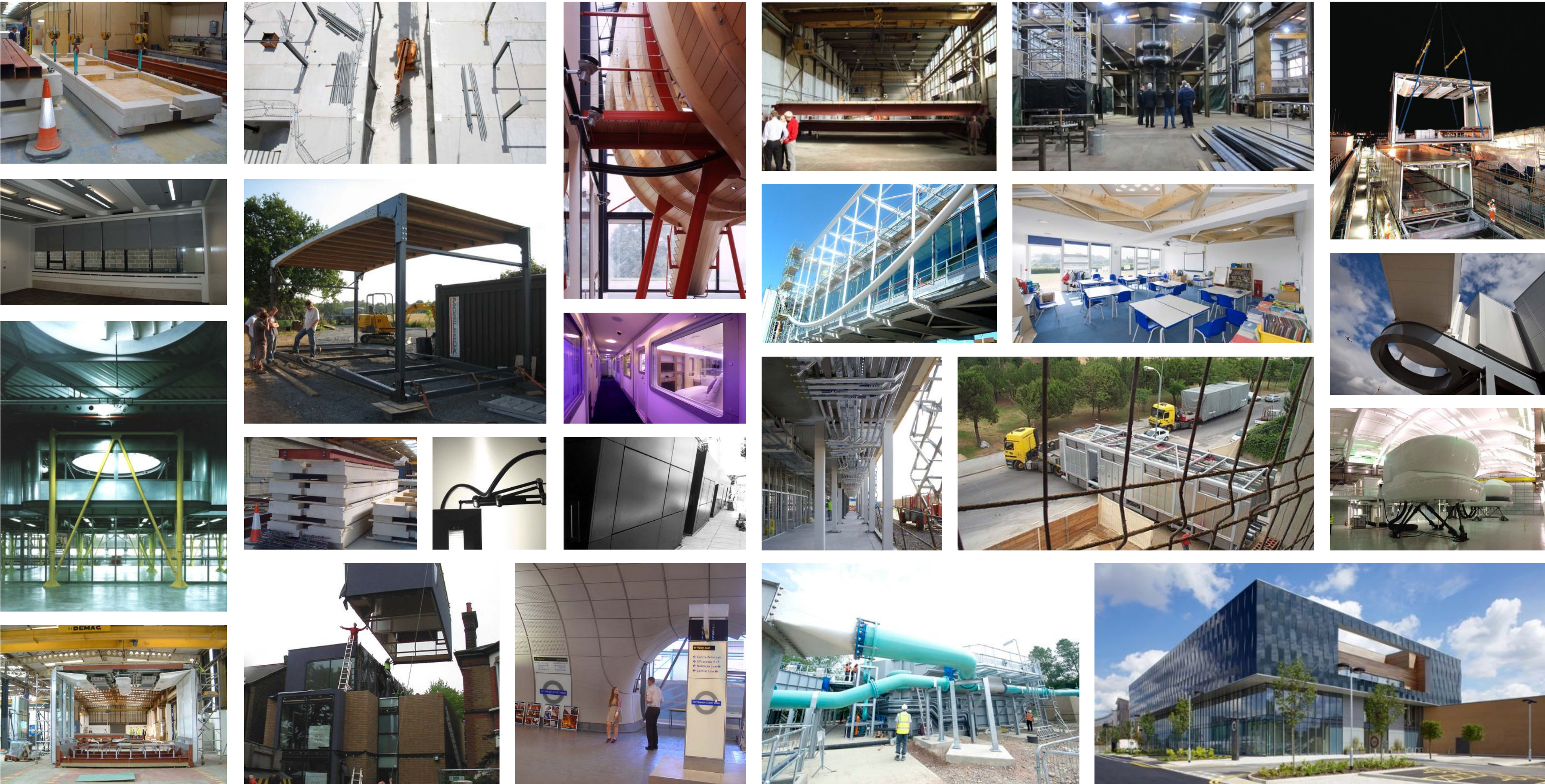




Bryden Wood



Bryden Wood - About us // DfMA







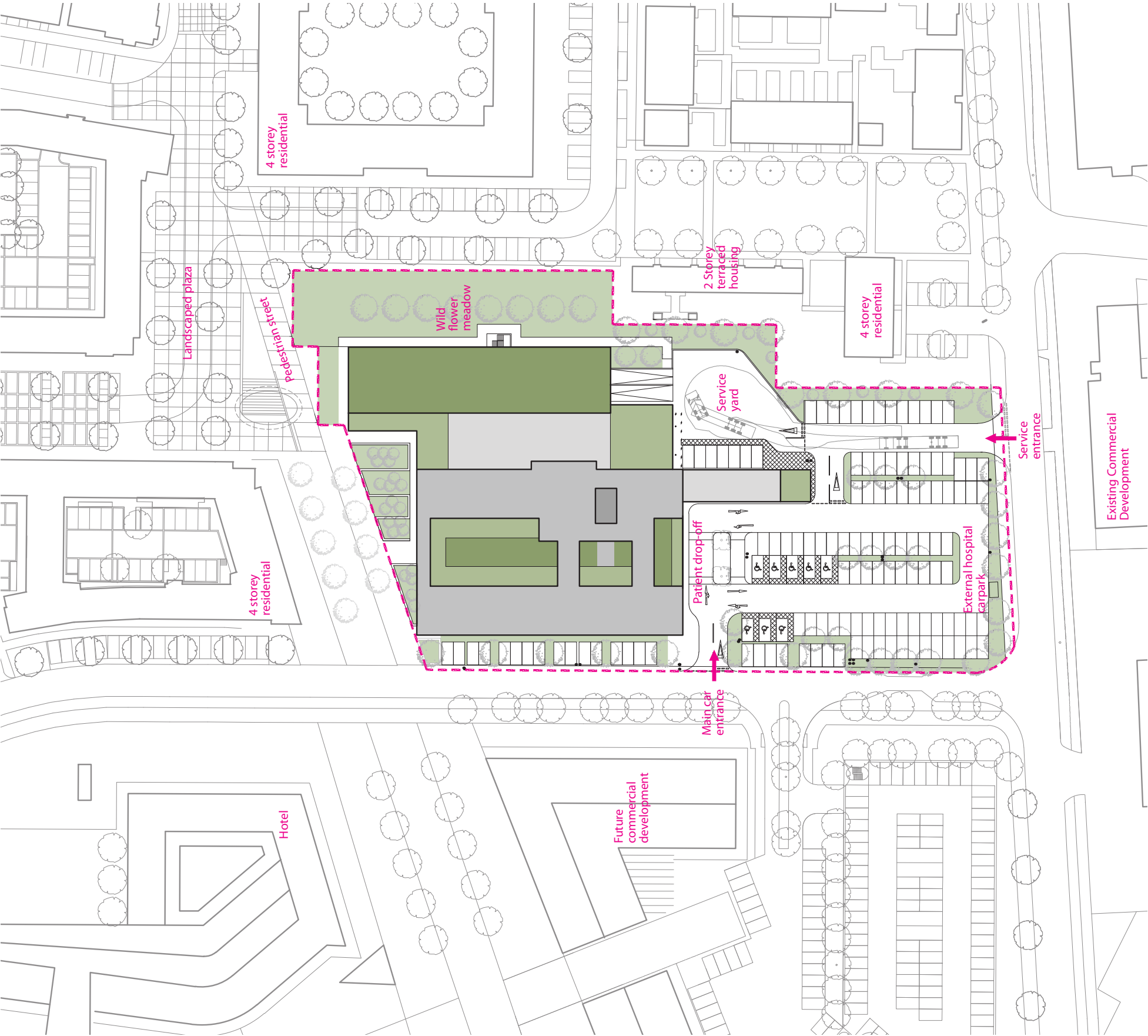


Circle Reading Hospital





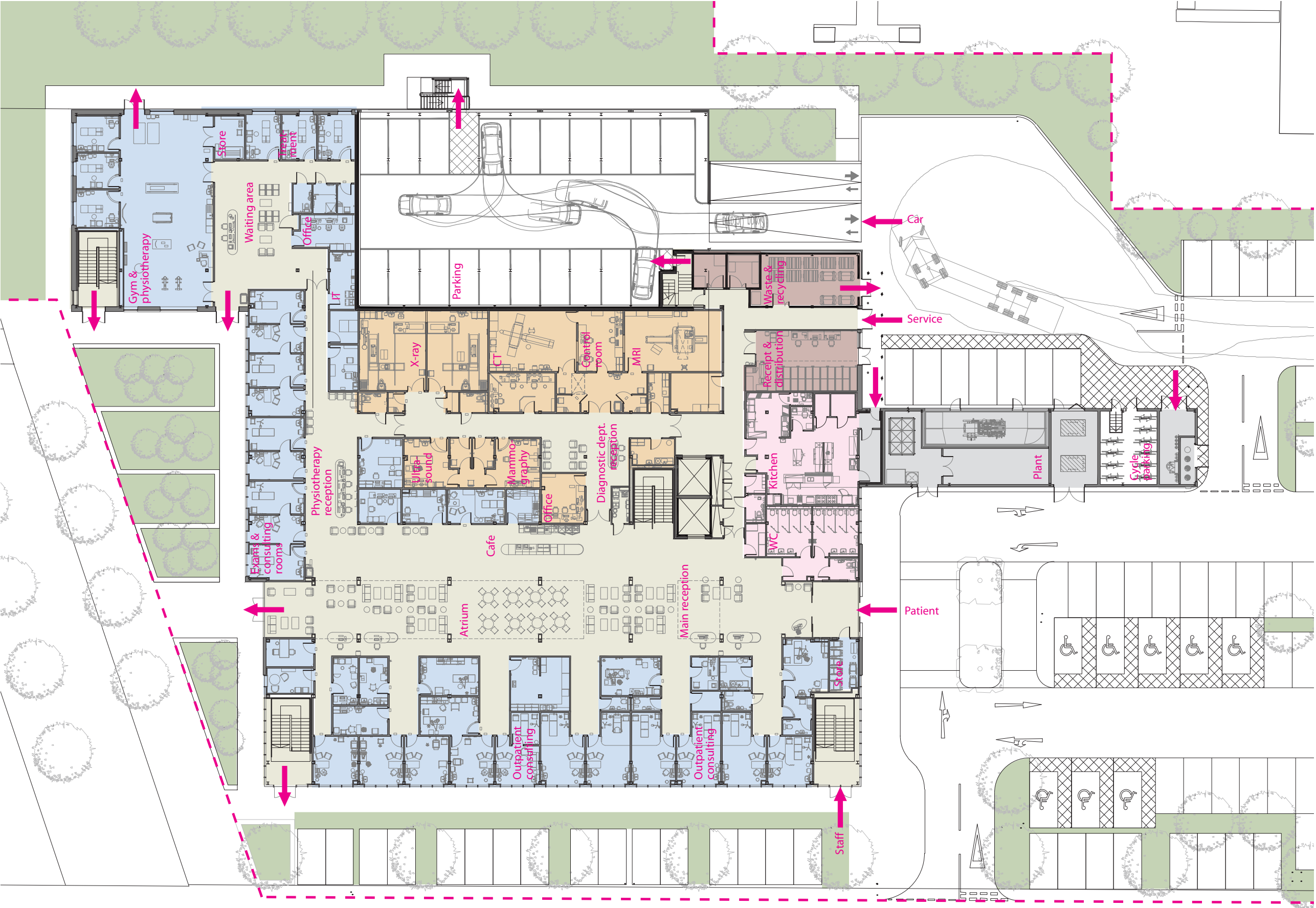
Design  
Site Plan





Design

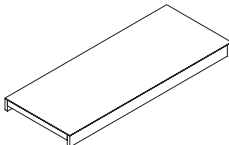
Ground Floor Plan



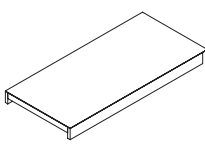


# Design

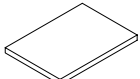
## Creating Circle Health's HP Way



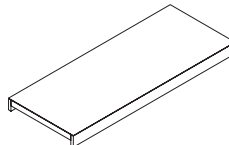
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Roof Cassette T1



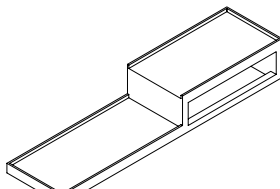
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Floor Cassette T2



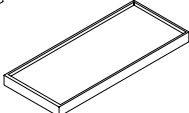
**19x**  
Floor Cassette T3




**19x**  
Floor Cassette T1



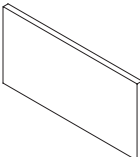
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Roof Cassette T2



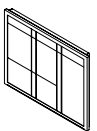
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Roof Cassette T3



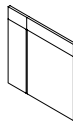
**26x**  
Glazing Unit



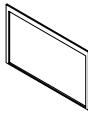
**22x**  
Cladding Panel T1




**22x**  
Cladding Panel T2




**22x**  
Cladding Panel T3



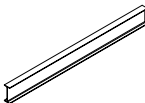
**12x**  
Cladding Panel T4



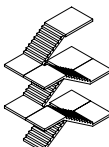
**231x**  
Generic Structural Column (steel)



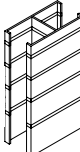
**42x**  
Generic Structural Column (timber)



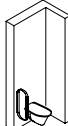
**62x**  
Generic Structural Beam (steel)



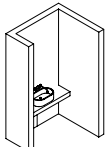
**4x**  
Stair Riser T1



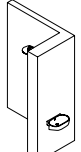
**1x**  
Lift Core



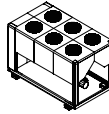
**30x**  
WC Wall Unit



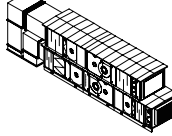
**30x**  
WHB Wall Unit



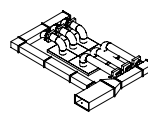
**30x**  
Shower Wall Unit



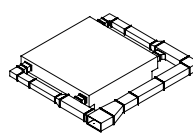
**2x**  
Chiller



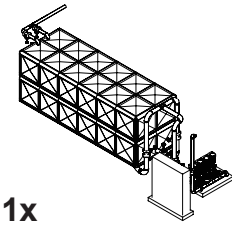
**12x**  
AHU  
5x clinical (identical)  
7x non-clinical (various sizes)



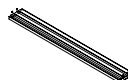
**5x**  
Laminar Flow Panel



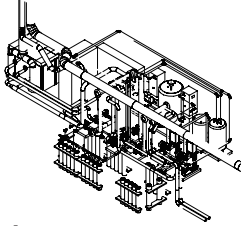
**2x**  
UCV Canopy



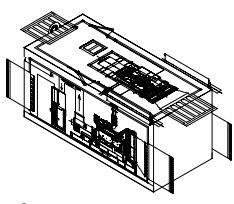
**1x**  
Water Tank and Plant Set



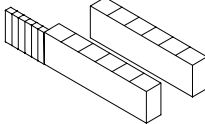
**40x**  
Chilled Beam Unit



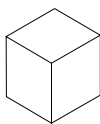
**1x**  
Boiler Plant Room



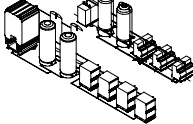
**1x**  
Generator



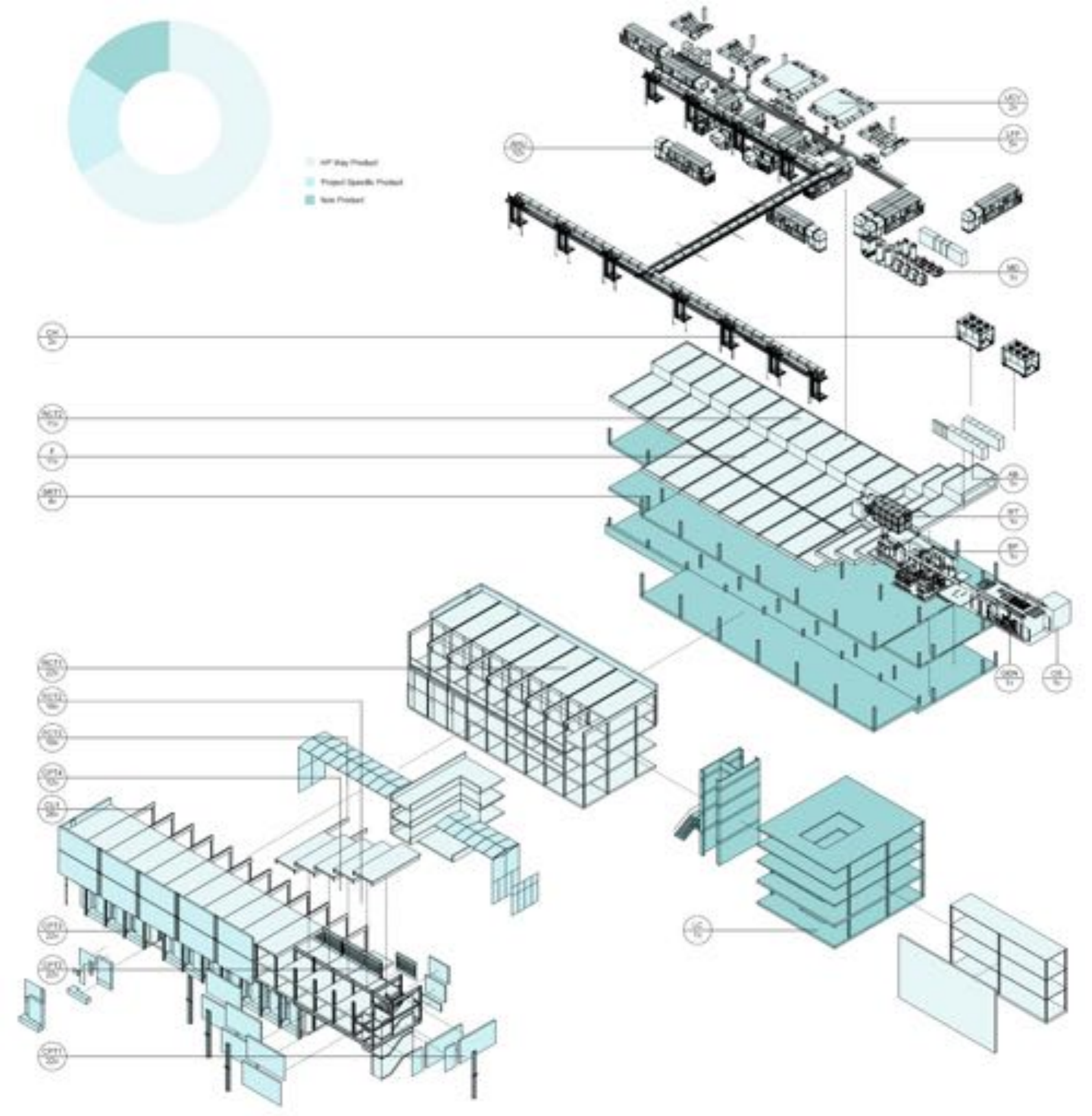
**1x**  
2x (row) of LV Panel  
6x (units) UPS Panel



**1x**  
Oil Store



**1x**  
Medical Gas

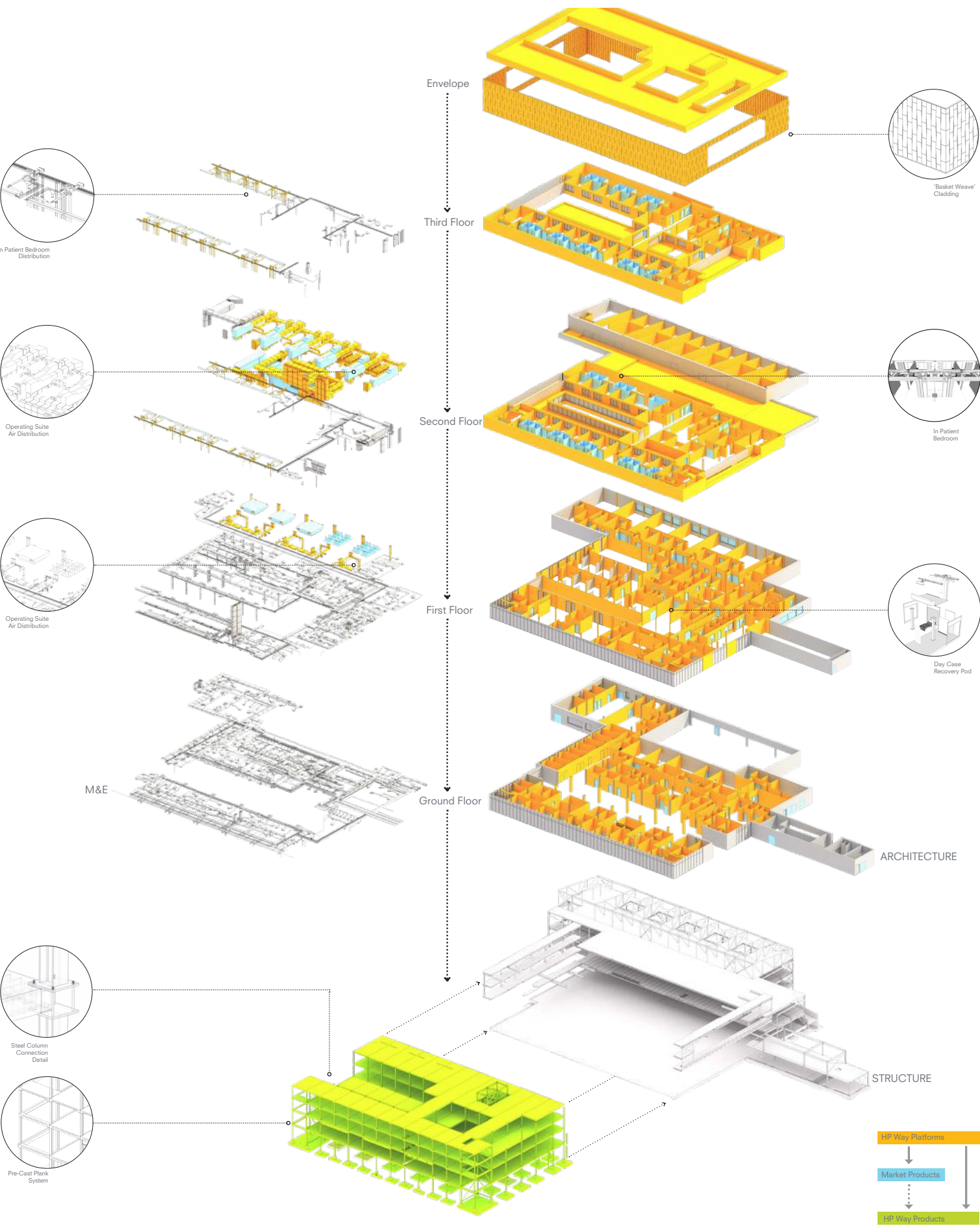




Design

Creating Circle Health's HP Way

60% Platforms  
20% Products







25% More affordable





25% More affordable

20% Quicker to build



25% More affordable

20% Quicker to build



25% More compact





Awarded 'Best patient experience' at  
Building Better Healthcare Awards, UK





Awarded 'Best patient experience' at Building Better Healthcare Awards

"Excellent in every way... Attractive clean surroundings, helpful friendly staff, everything efficient and on time."







Awarded 'Best patient experience' at Building Better Healthcare Awards

"Excellent in every way... Attractive clean surroundings, helpful friendly staff, everything efficient and on time."



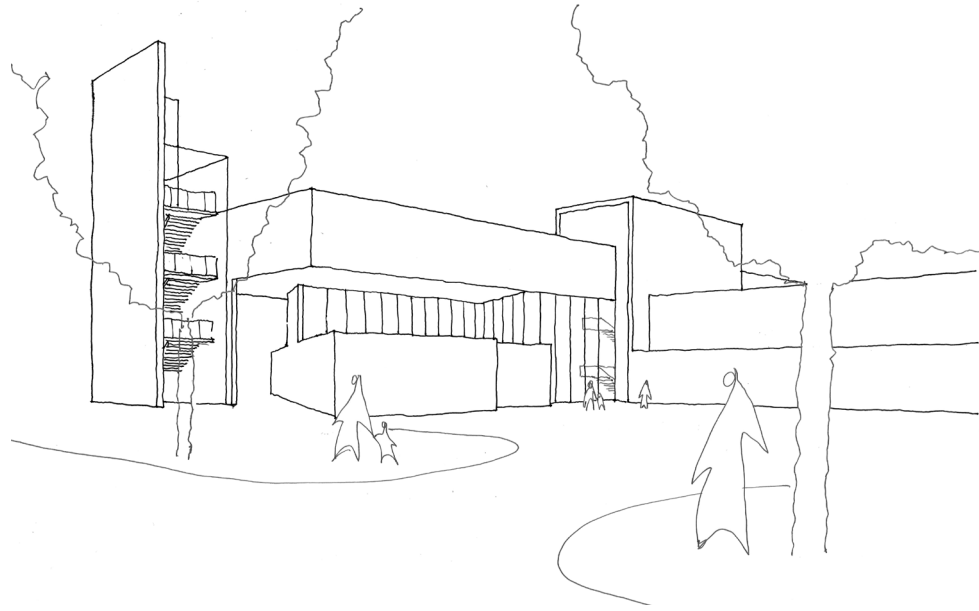
"Mummy, I thought you said we were going to a Hospital?"





## Hospital Flexibility / Adaptability - Phase 1 and Completed Hospital

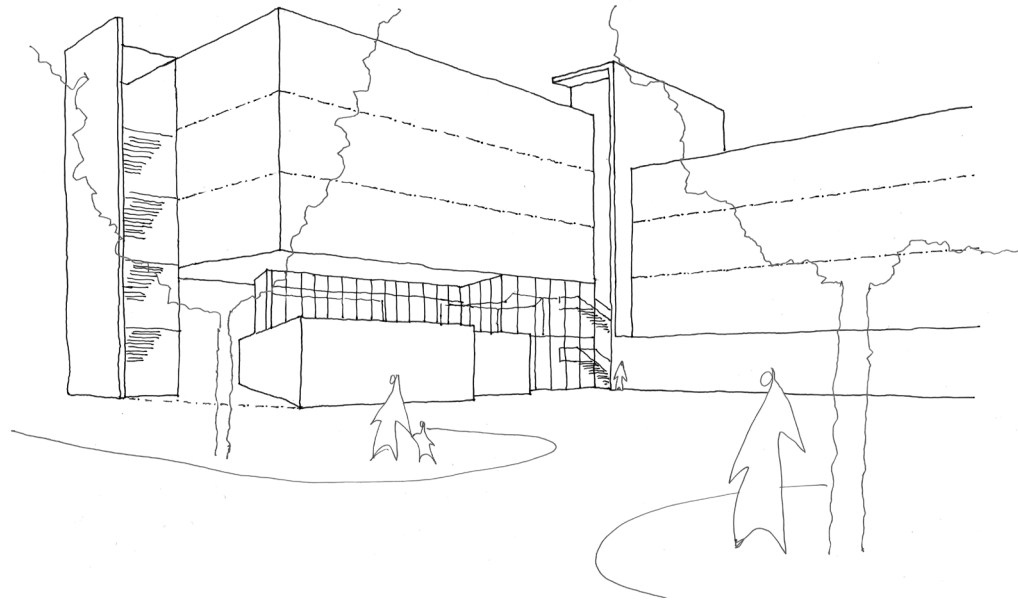
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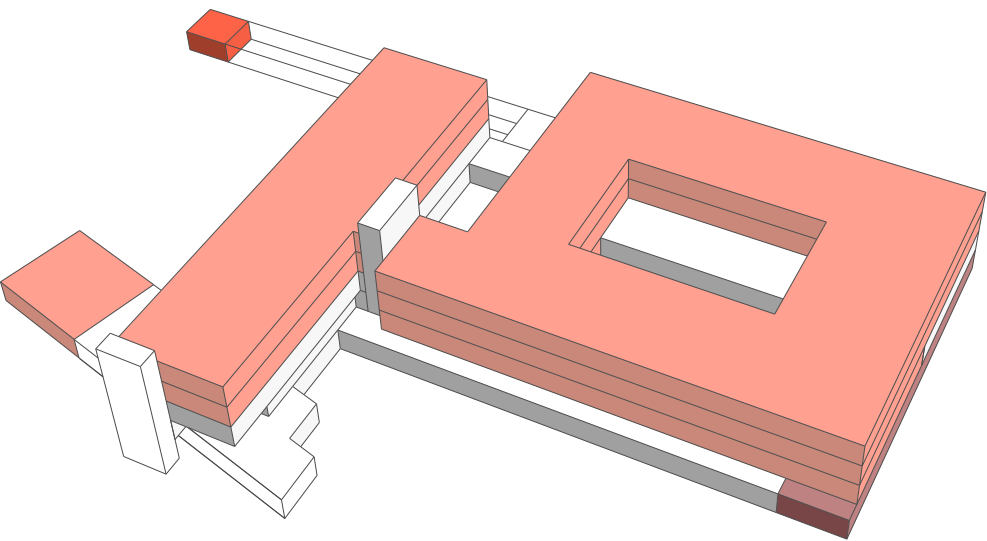
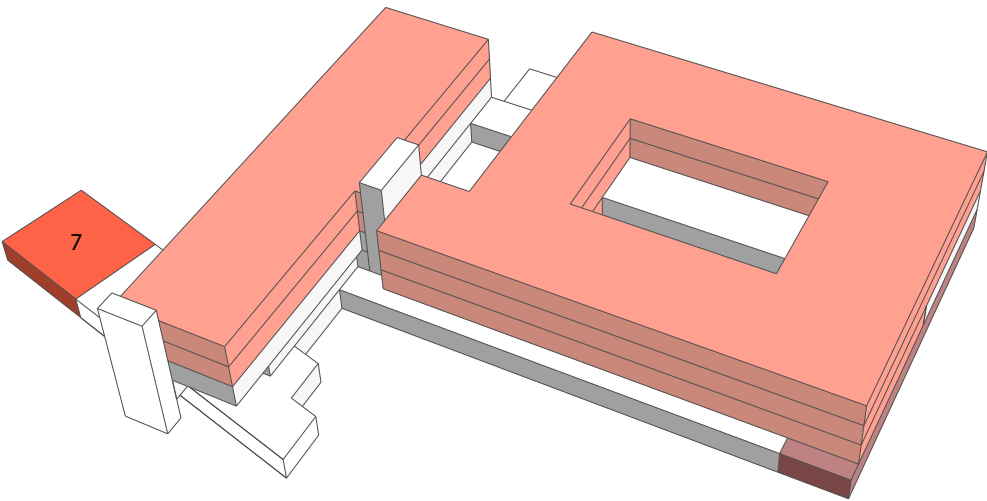
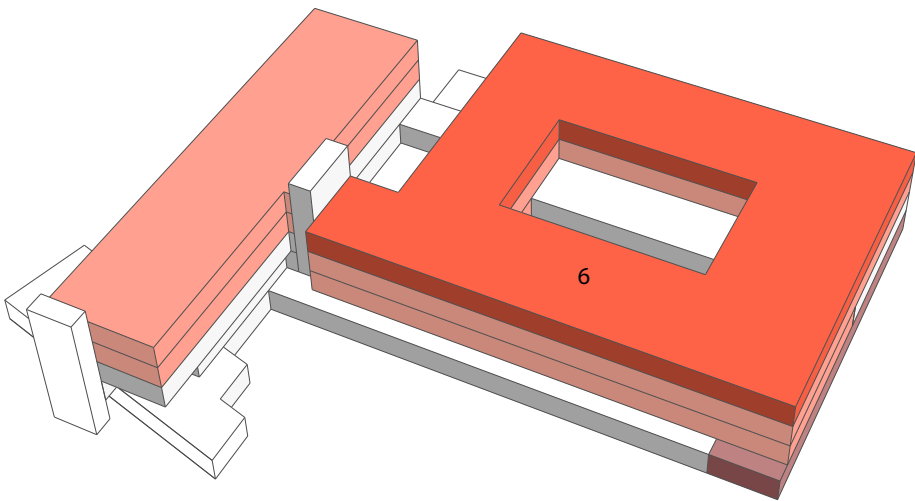
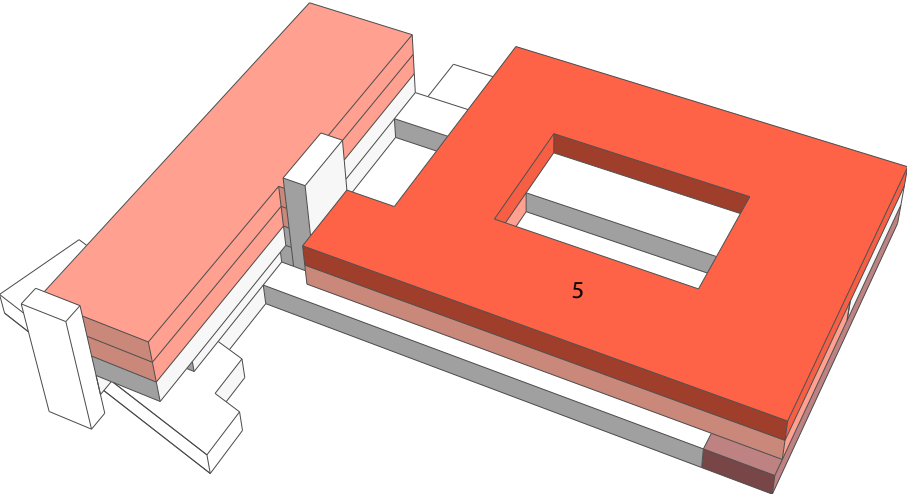
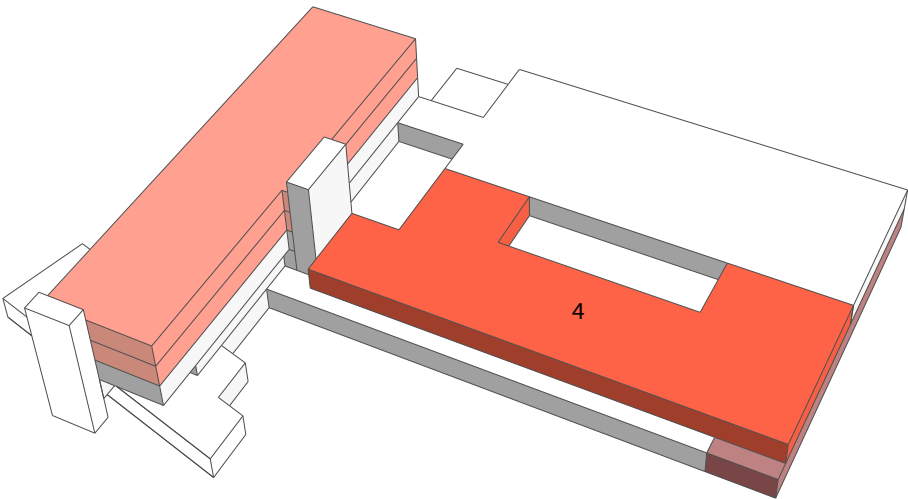
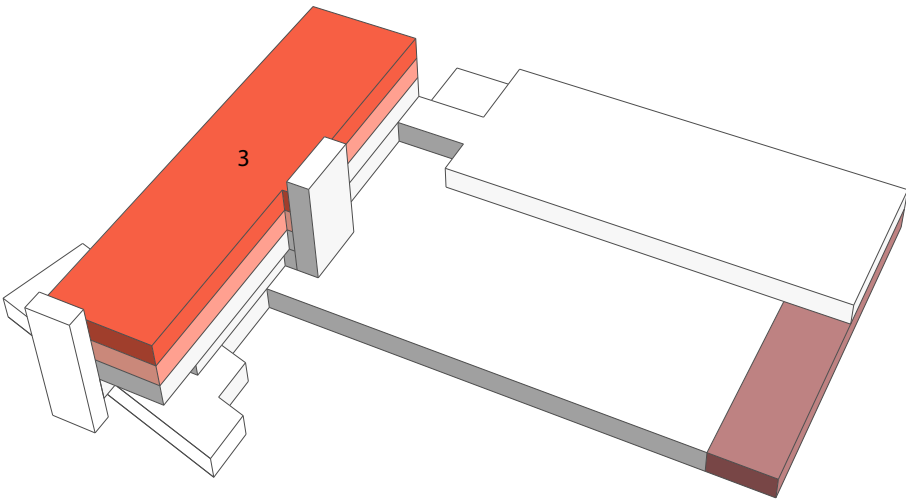
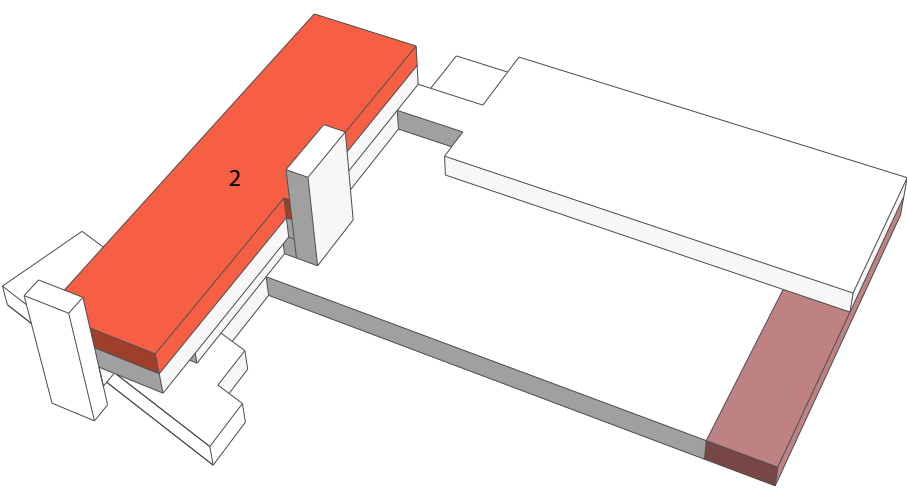
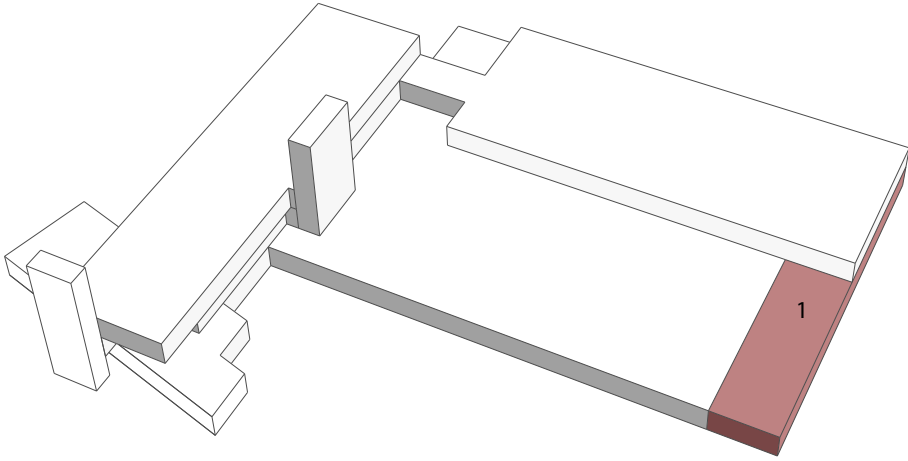
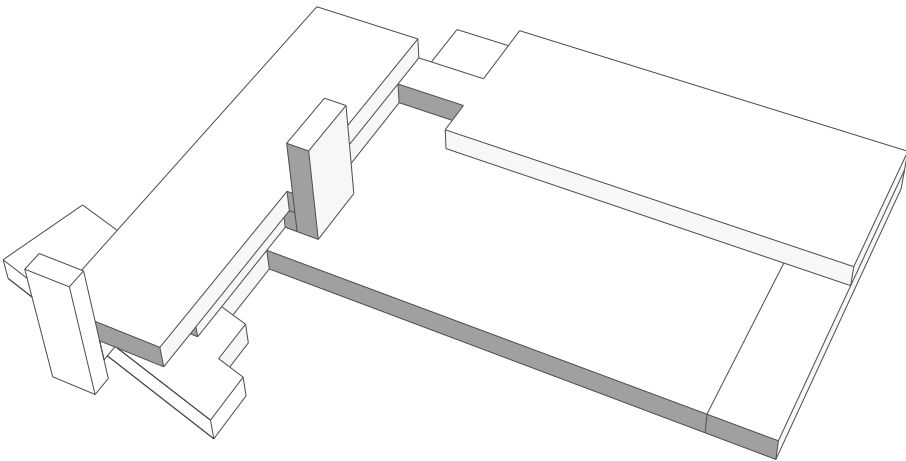
## Hospital Flexibility / Adaptability - Phase 1 and Completed Hospital

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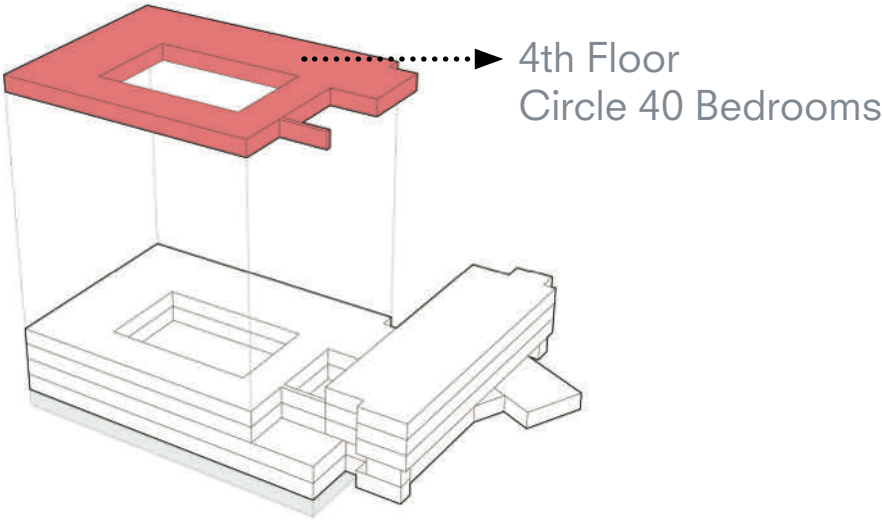
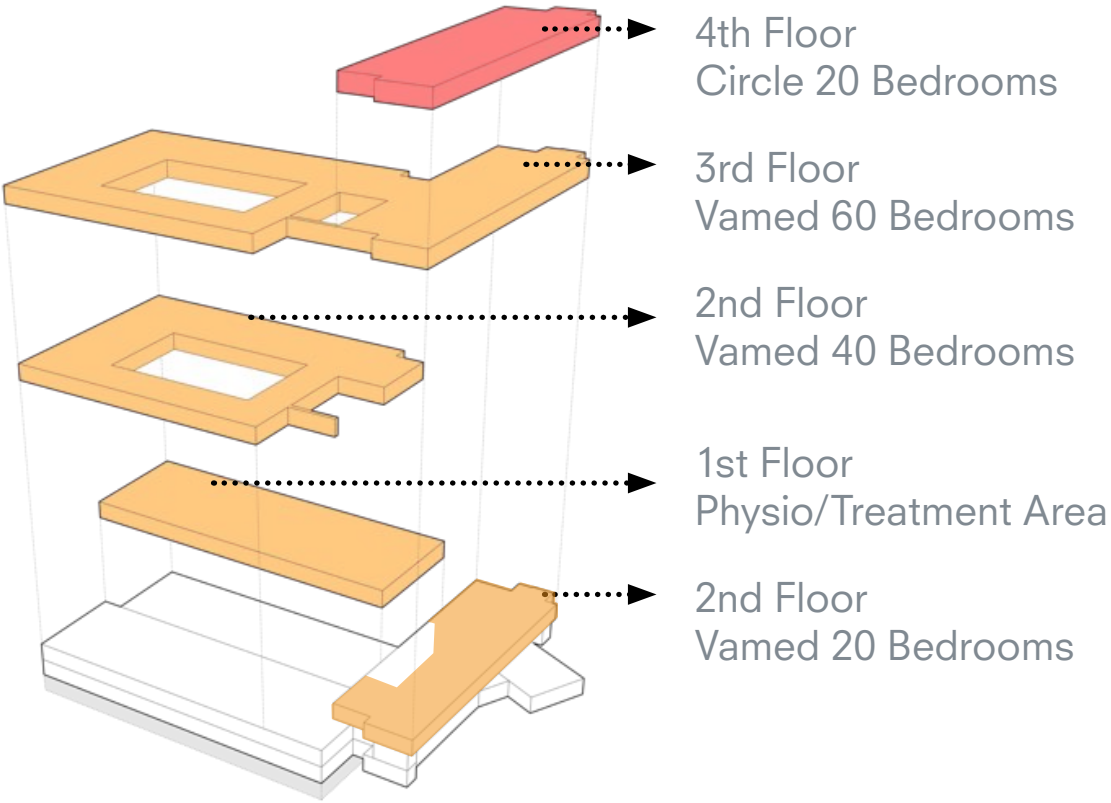
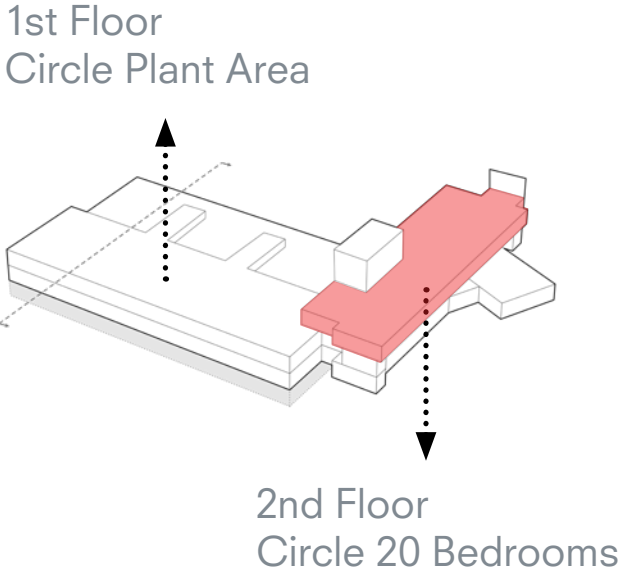
The future proofing strategy







# Introduction of the 120-bed Rehabilitation Facility



PHASE 1 DESIGN

REHABILITATION FACILITY EXPANSION

REHABILITATION FUTURE PROOFING





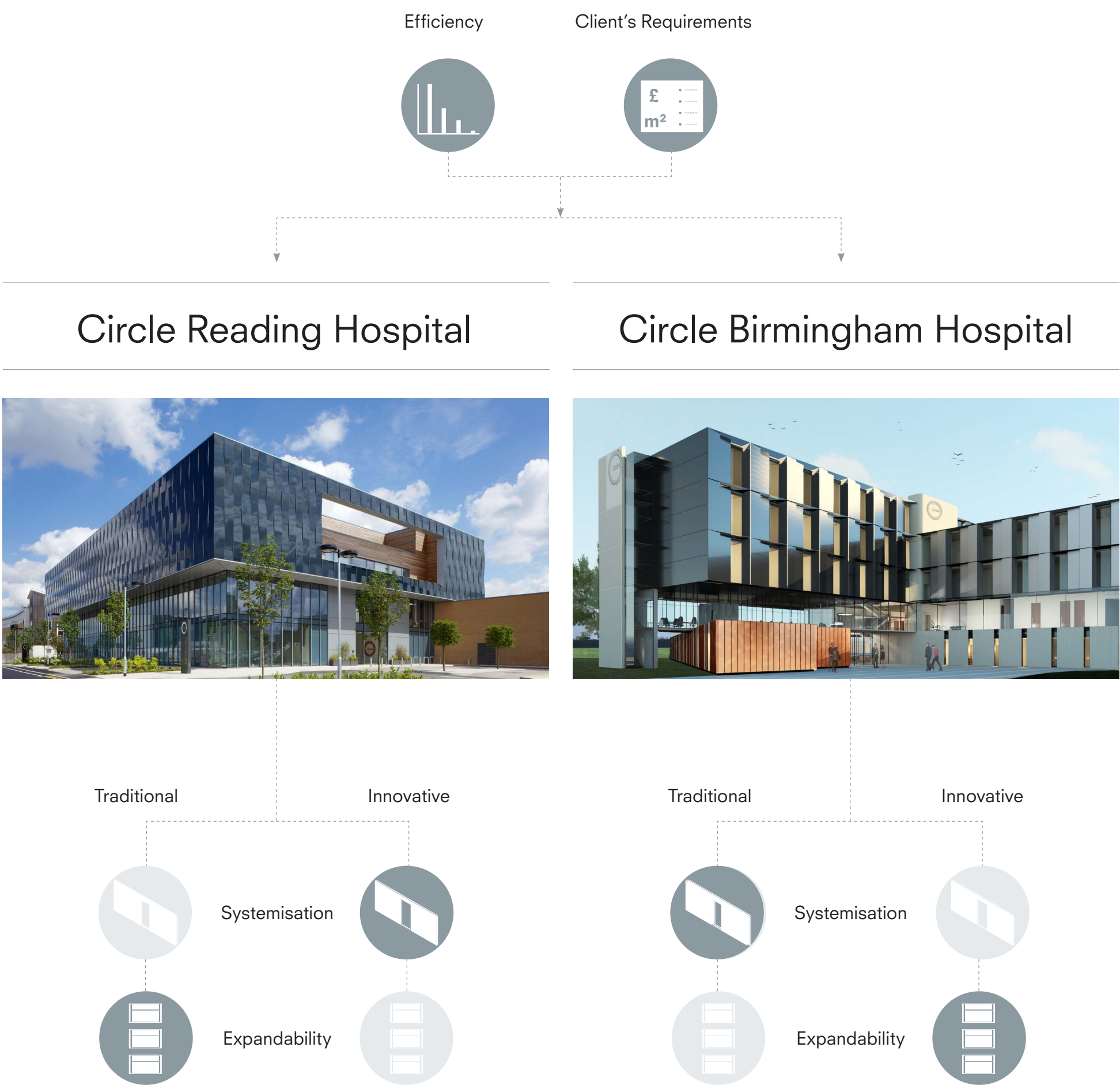








# Conclusions and future goals



How Can We Combine Offsite Solutions With Flexibility/Expandability Requirements?

# Conclusions and future goals - Hospitals Standardisation

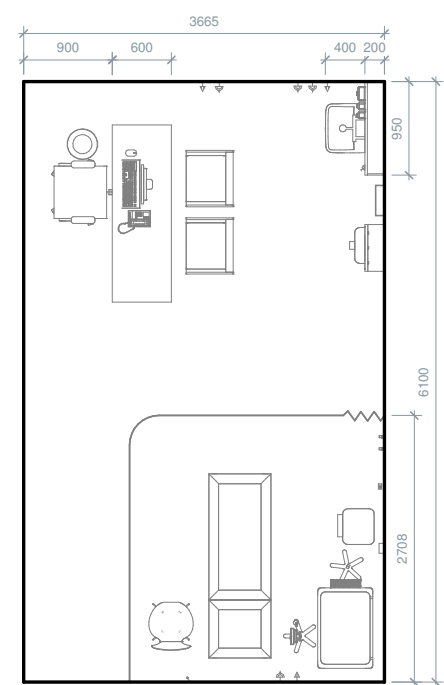


Figure 1. Consultation Room

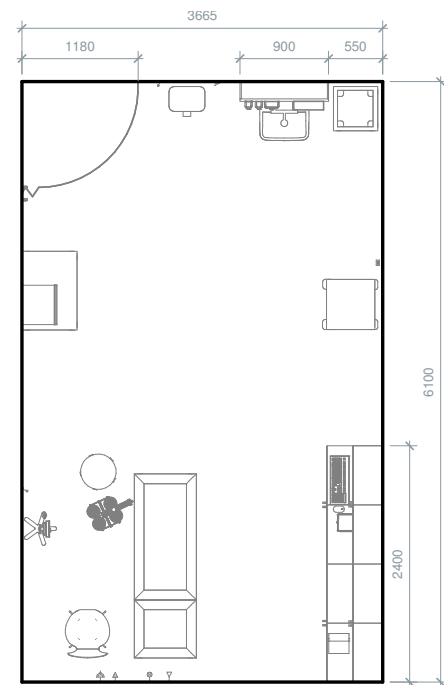
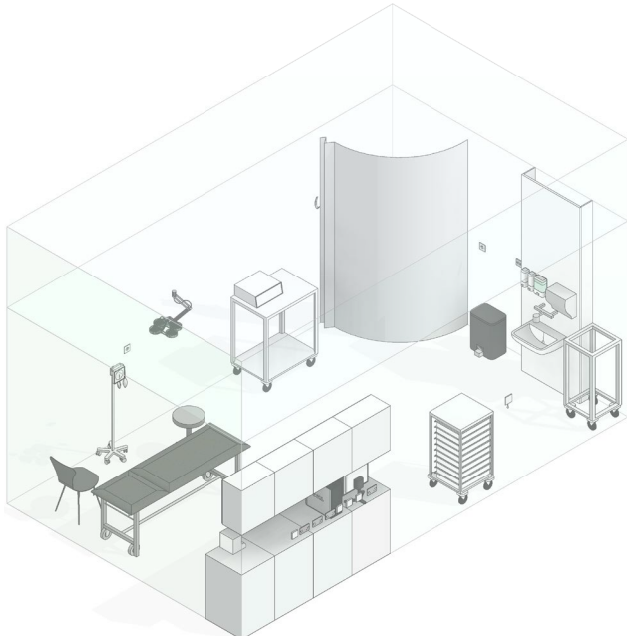
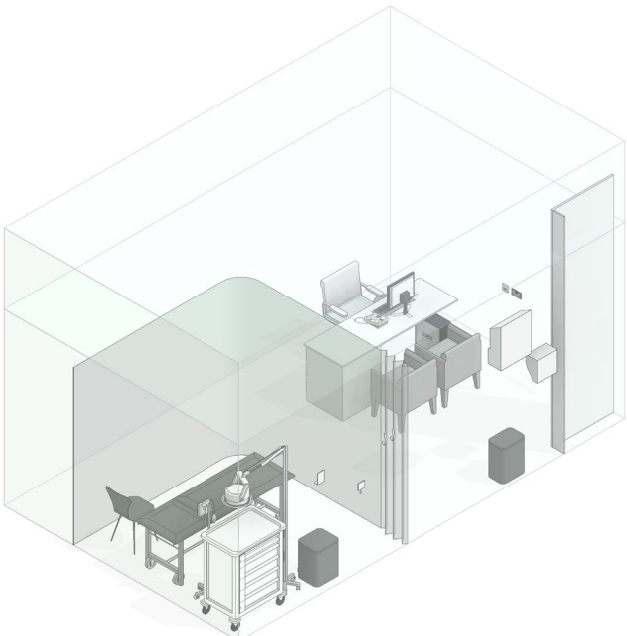
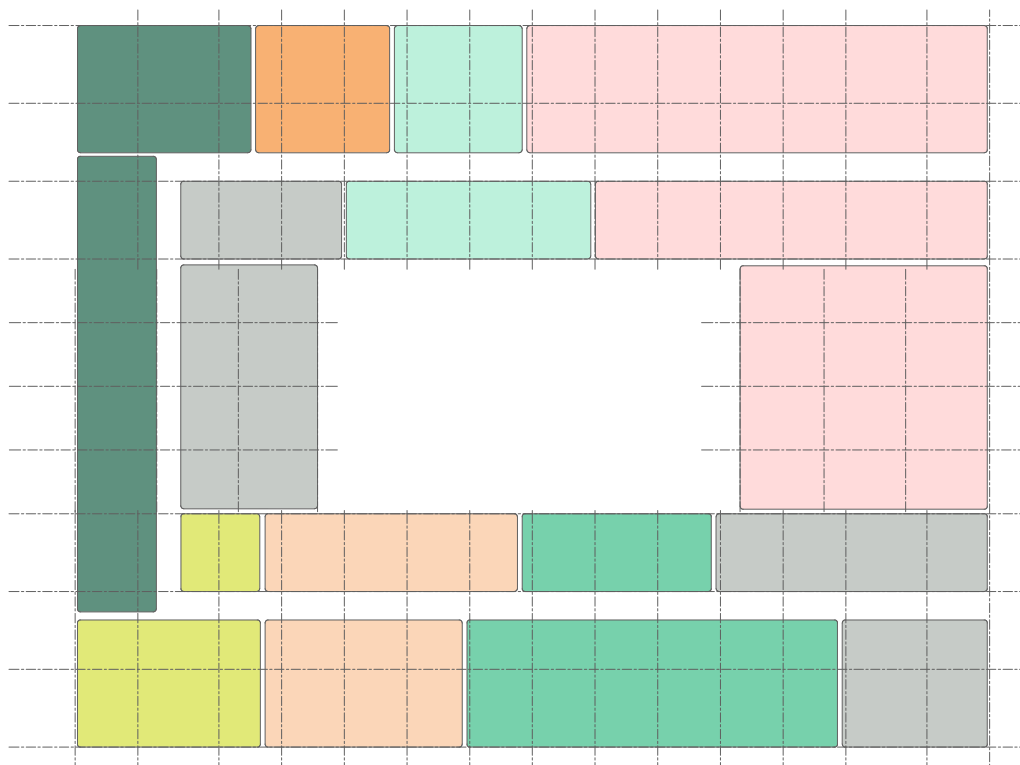
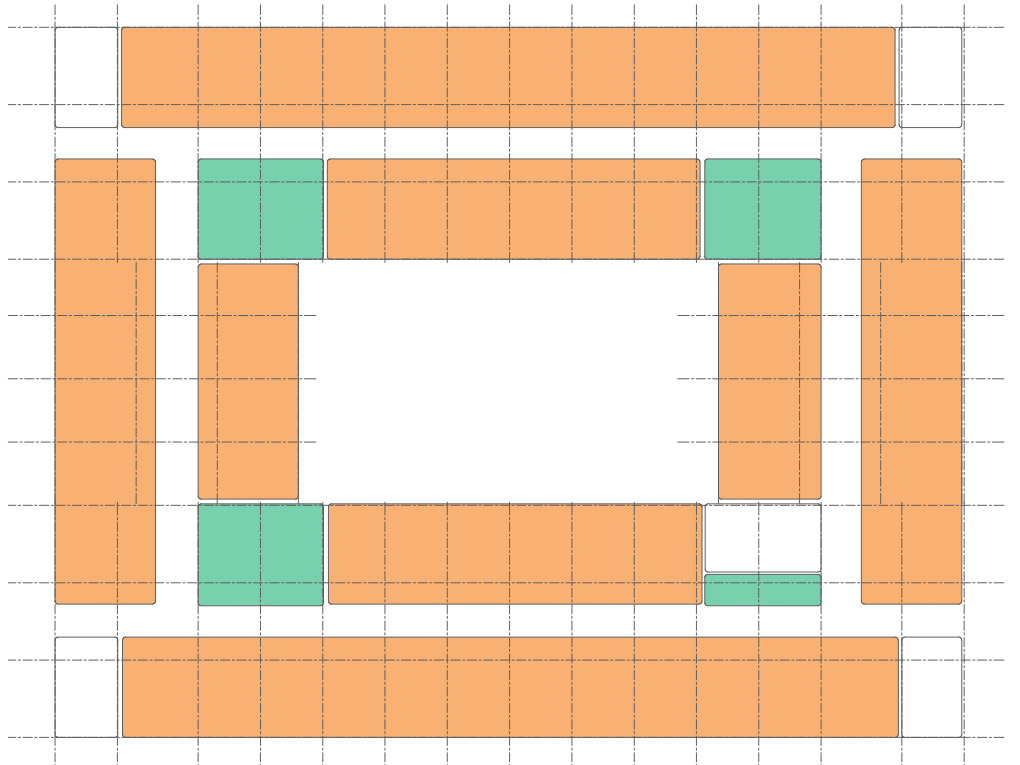
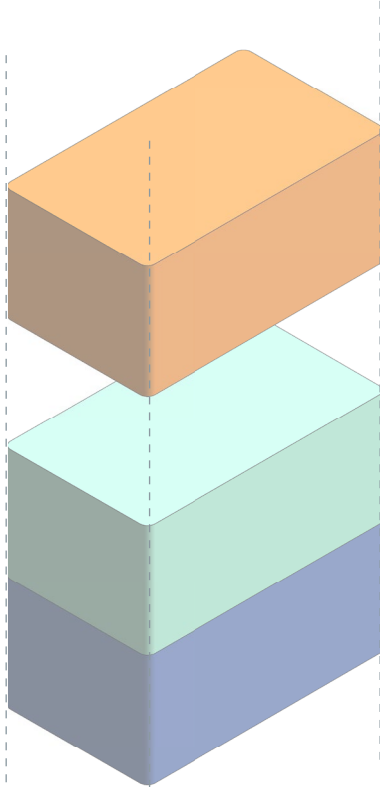


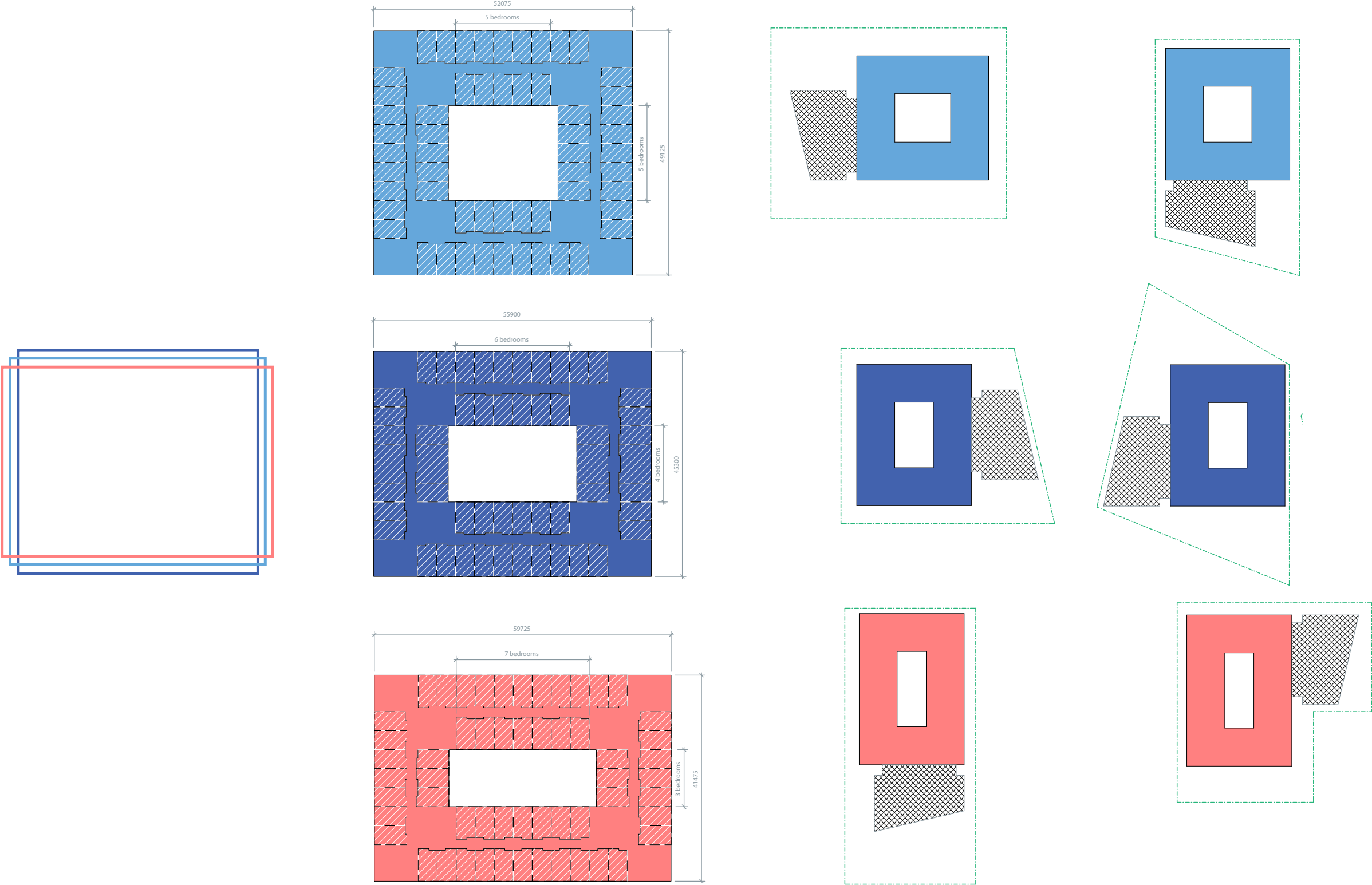
Figure 2. Treatment Room

Bedroom  
Treatment Room  
Consultation Room





# Conclusions and future goals - Hospitals Standardisation



# Conclusions and future goals - Platforms

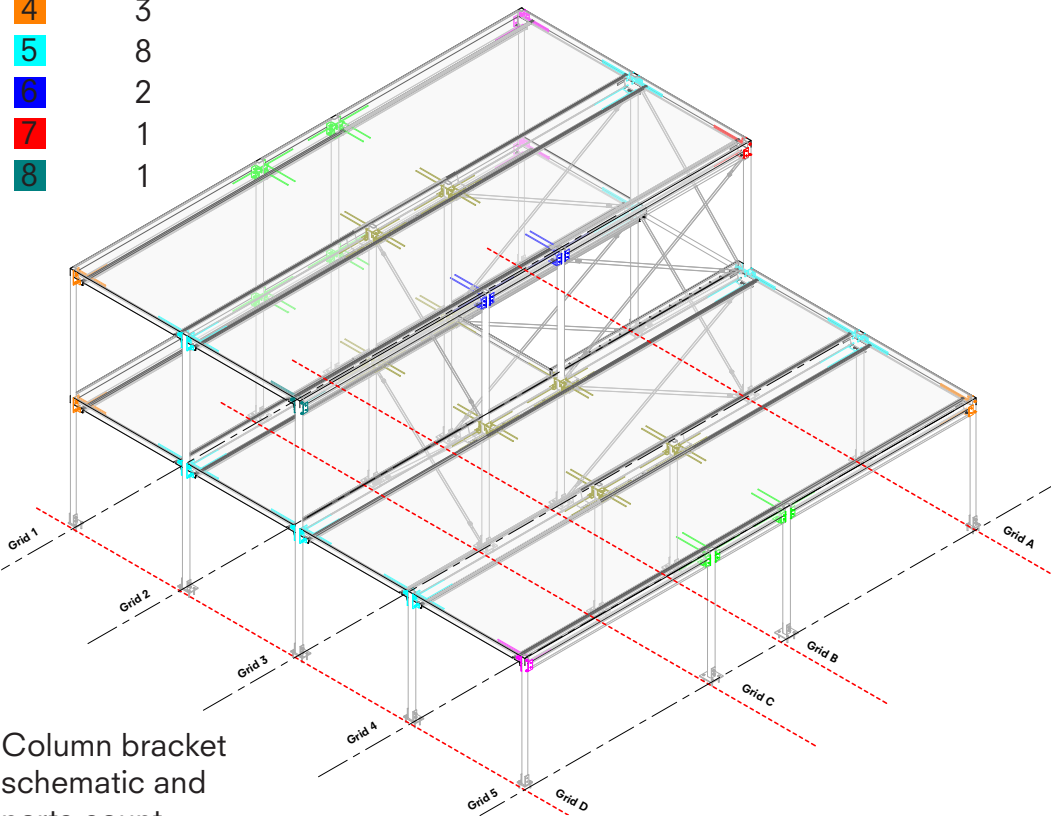
## Intelligent, accurate interfaces

The diagram below shows the bracketry required for the sample section. It should be noted that regardless of the size of the facility constructed using Platform 2, there are only:

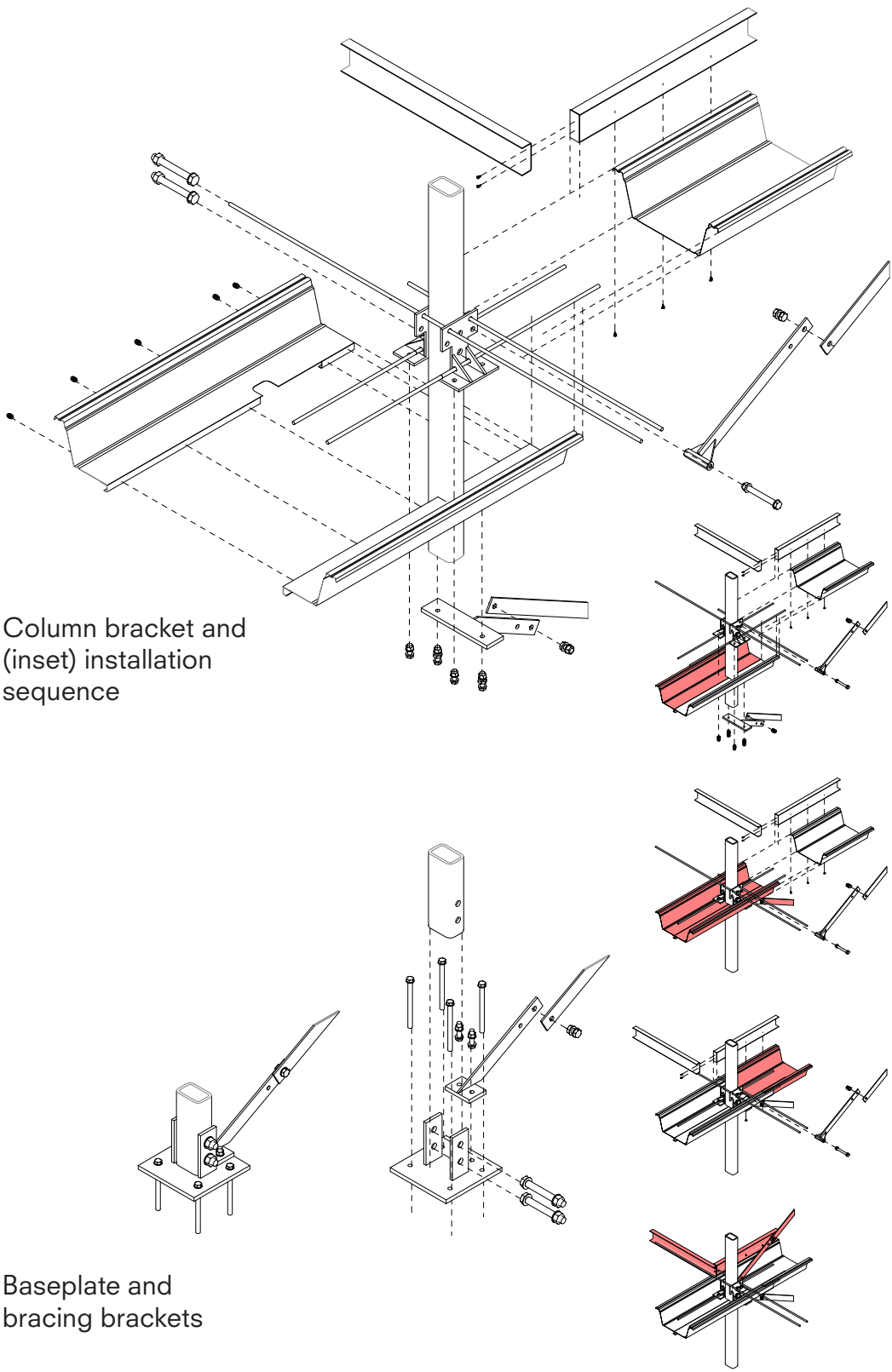
- 8 types of column brackets;
- 10 types of baseplate brackets for all conditions
- 12 types of bracing brackets

These are fabricated in large numbers to very high degrees of accuracy.

Type	Quantity
1	8
2	6
3	3
4	3
5	8
6	2
7	1
8	1



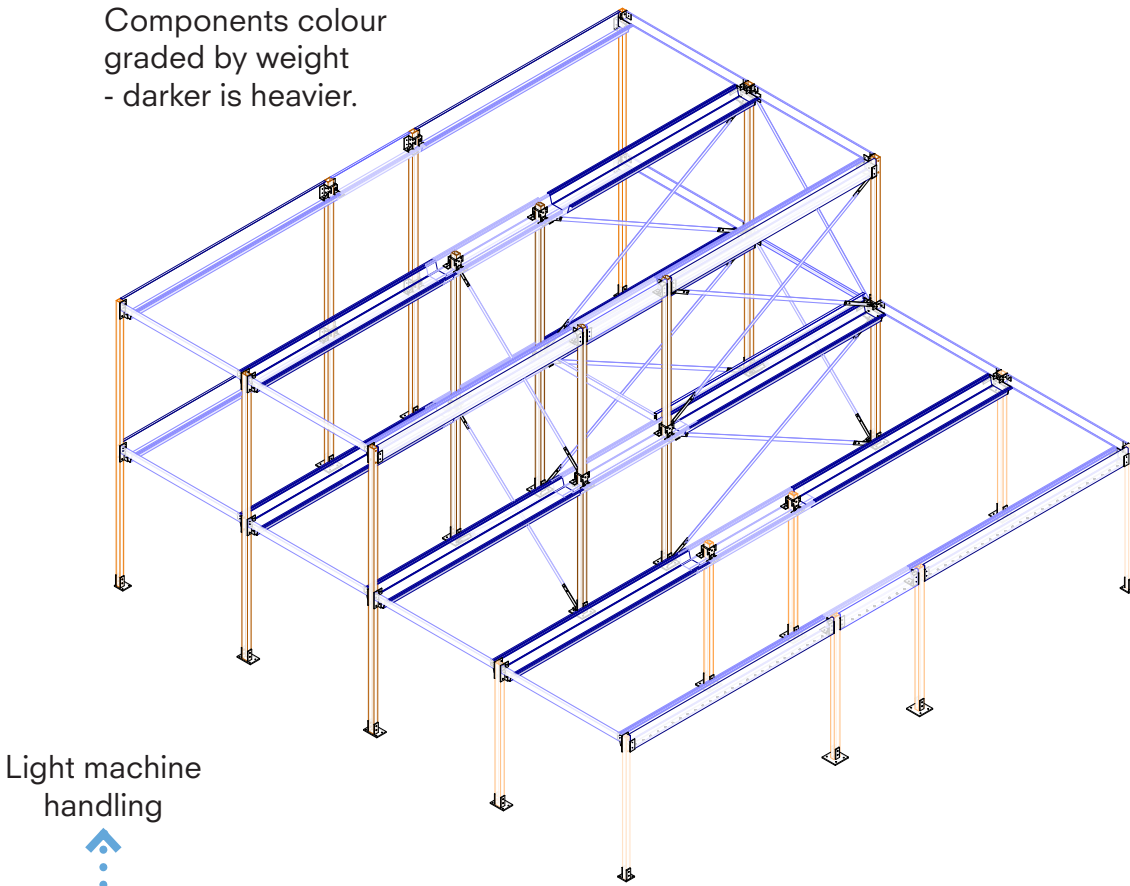
Column bracket schematic and parts count



Column bracket and (inset) installation sequence

Baseplate and bracing brackets

Components colour graded by weight - darker is heavier.



Light machine handling

1 or 2 person lift





## Conclusions and future goals - Platforms







Thank You