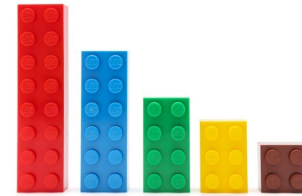




Learning From LEGO®

A Standardized and Flexible
Ambulatory Design Initiative





Molly Ironmonger
System Director, Planning
& Preconstruction
Bon Secours Mercy Health



Amy Mees
IIDA, LEED AP, EDAC
Principal, GBBN



Mickey LeRoy
AIA, ACHA
Principal, GBBN



Ivan Cheung
AIA
Principal, GBBN

LEARNING
FROM
LEGO®





www.nintendo.com
www.epic-games.com
www.gameaxis.com
www.theplasticbrick.com

LEARNING OBJECTIVES

1. Identify the goals and challenges related to implementing a systemwide ambulatory design approach that leverages design and planning standards while allowing for managed local-market design input.
2. Learn about the specific planning and design toolkit that was developed to advance scalable prototypes, including departmental guideline templates, facilitated selection exercises for both interior and exterior finish materials, and observations from global case studies.
3. Understand the stakeholder input process that was generated to solicit and prioritize design input, balancing systemwide service line experts with local market leadership and point-of-care stakeholders
4. Identify important design and construction phase lessons learned from three completed prototype-based projects and how those lessons continue to inform the design initiative.

AGENDA

1. Introduction
2. Owner's perspective
3. The design hypothesis
4. The LEGO[®] toolkit
5. Case studies/Proof of concept
6. Lessons learned
7. Q&A

The background is a solid red color with a repeating pattern of embossed LEGO logos. Each logo is a circular shape with the word "LEGO" in a stylized font, slightly recessed into the surface. The logos are arranged in a grid pattern, with four logos in each row and four logos in each column.

OWNER'S PERSPECTIVE

BACKGROUND



BON SECOURS MERCY HEALTH 



September 2018 – BSMH:

- Nation's 5th largest Catholic health care ministry
- The largest private health care provider in Ireland
- 48 hospitals across 7 states and Ireland
- \$8 billion net operating revenue

PRIORITIES

PROTOTYPE

LEGO-LIKE

ADAPTABLE

FLEXIBLE

SCALABLE

CONSISTENT

MODULAR

STANDARDIZED

OPERATIONAL EFFICIENCY

DELIVERY EFFICIENCY

BRANDING

MANAGE COST & RISK

SPEED TO MARKET

DIFFERENTIATION

PREFABRICATION

PURCHASE POWER



INITIATIVE GOAL

A design and construction initiative to optimize BSMH systemwide standards, local market implementation and project delivery efficiency.



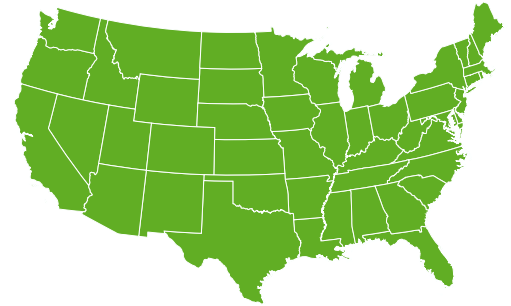
STANDARDIZED BUT ADAPTABLE



LOCAL



REGIONAL



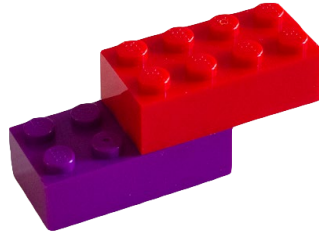
NATIONAL

SCALABLE PROTOTYPE



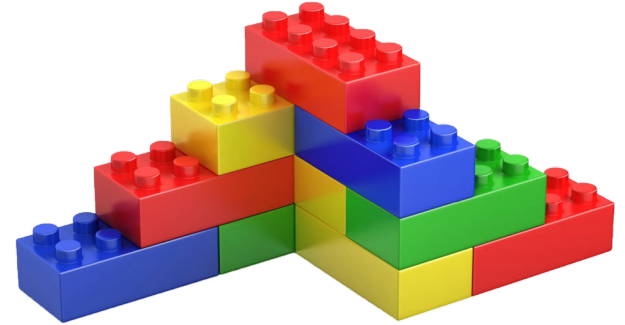
NEIGHBORHOOD

+/-25,000 SF



COMMUNITY

25,000 – 50,000 SF



REGIONAL

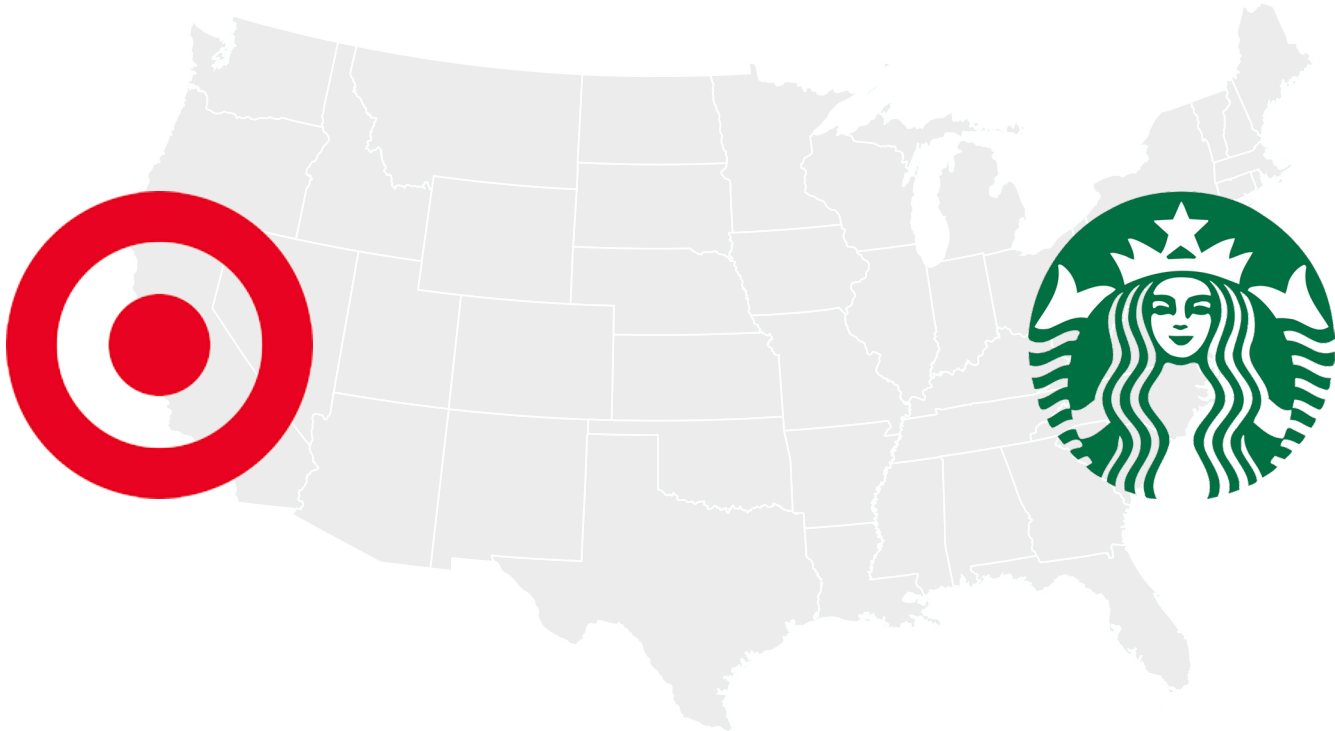
50,000 – 125,000 SF



THE DESIGN HYPOTHESIS

BRANDED ENVIRONMENTS

GUIDELINE MODELS



GOAL: IDENTIFY A COMMON LANGUAGE

GUIDELINE MODELS



BRAND IS EXPERIENCED
PURELY THROUGH THE
GLOBAL IDENTITY



GUIDELINE MODELS



GLOBAL BRANDED
IDENTITY IS EXPERIENCED
THROUGH A LOCAL LENS

BRANDED ENVIRONMENTS

GUIDELINE MODELS



90% STANDARDIZED

10% ADAPTED



25% STANDARDIZED

75% ADAPTED

GOAL: DEFINE A PROJECT APPROACH

BRANDED ENVIRONMENTS

GUIDELINE MODELS

BON SECOURS MERCY HEALTH



90% STANDARDIZED

10% ADAPTED

75% STANDARDIZED

25% ADAPTED

25% STANDARDIZED

75% ADAPTED



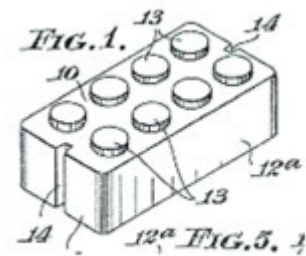
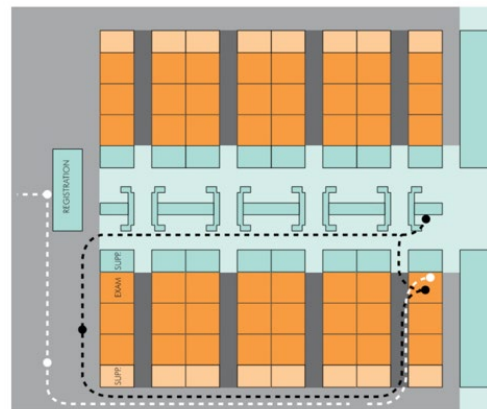
GOAL: DEFINE A PROJECT APPROACH

AMBULATORY PROTOTYPE PRECEDENT





Sunlit hallways (right) highlighted in plan blue (above).

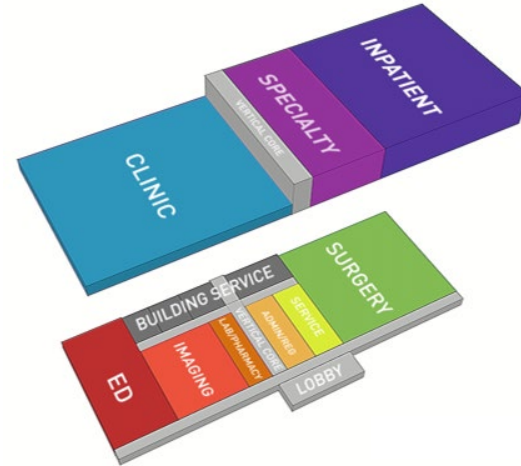
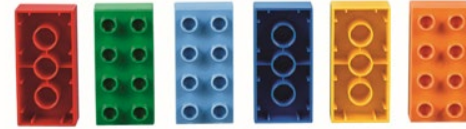


CLINIC MODULES



Sunlit hallways (right) highlighted in plan blue (above).

DEPARTMENTAL MODULES



PROTOTPYE CONCEPT

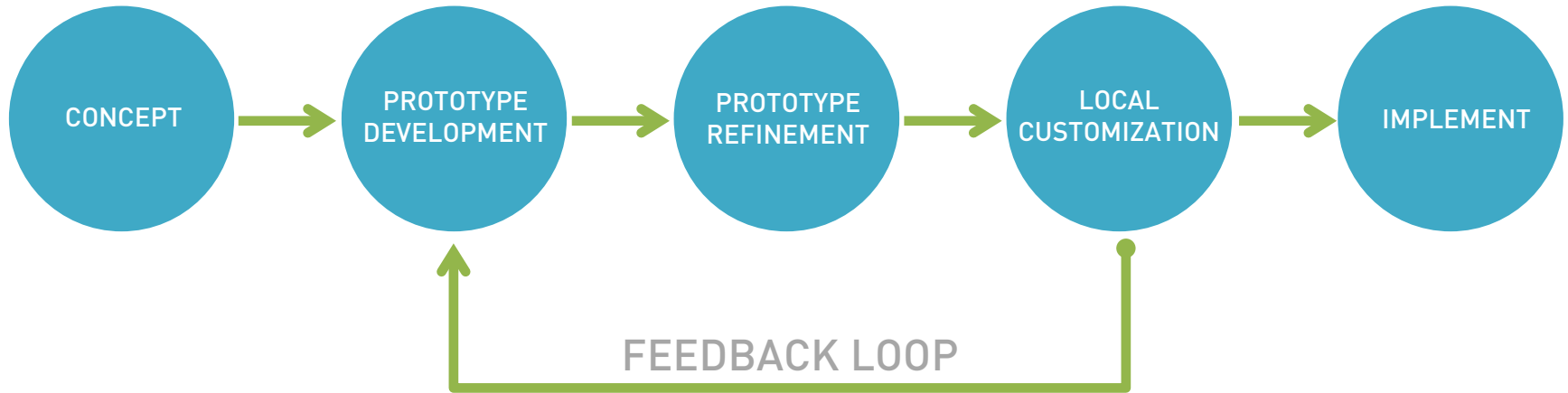




THE LEGO® TOOLKIT



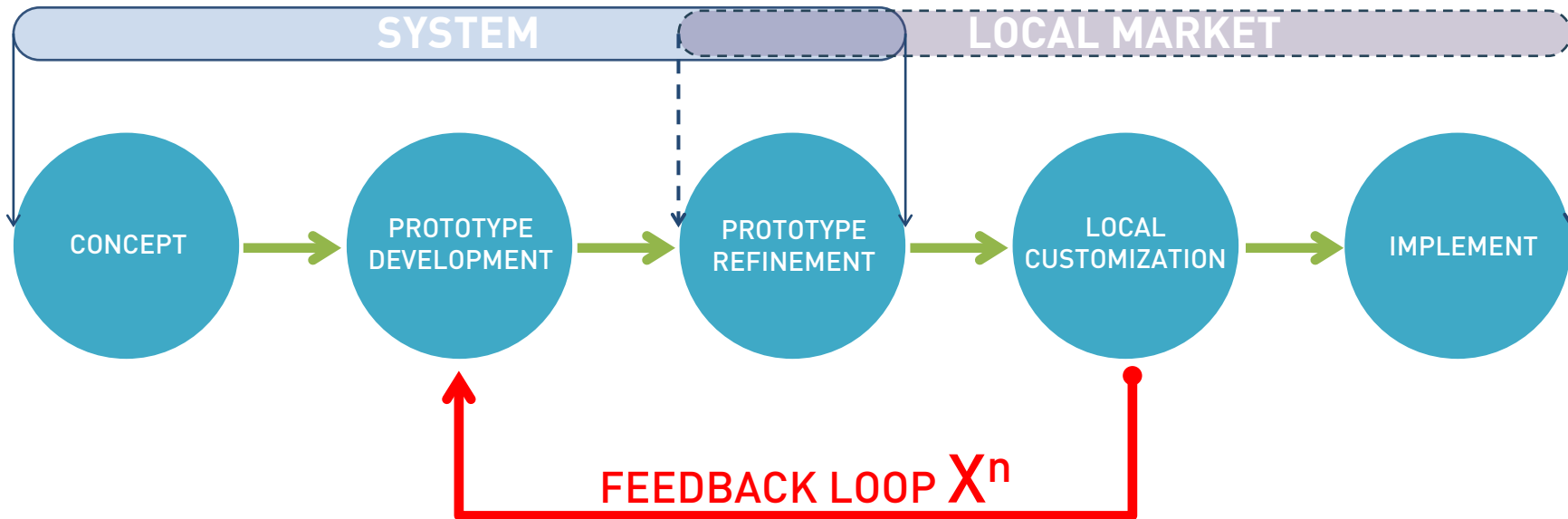
DECISION MAKING



TYPICAL PROTOTYPING PROCESS

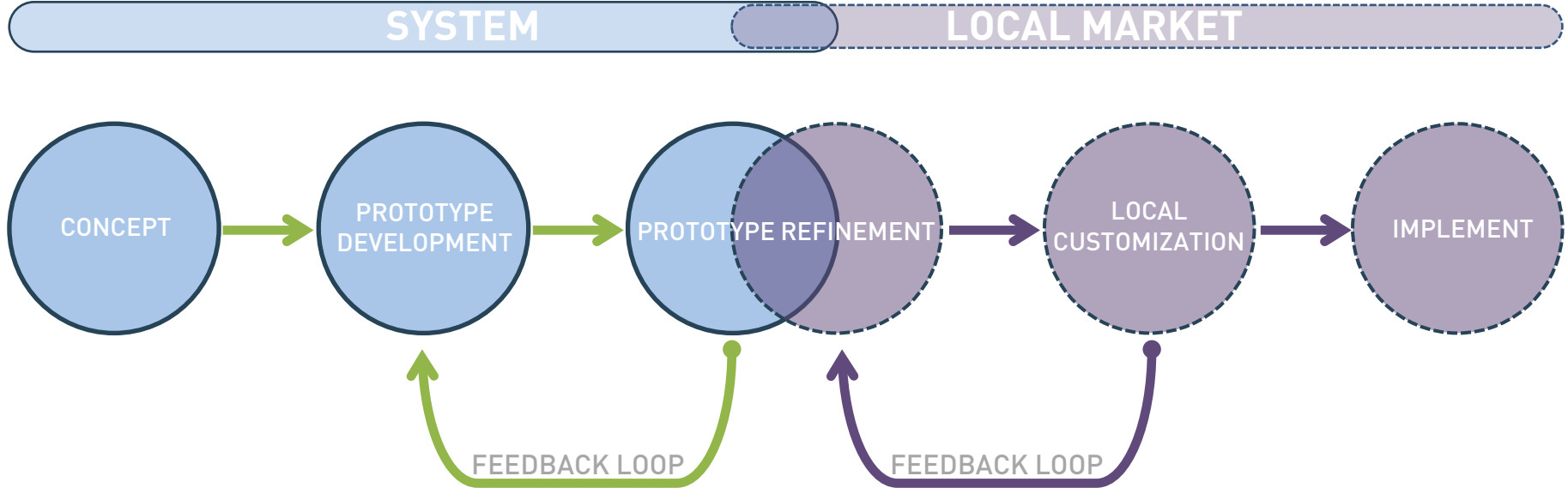


DECISION MAKING





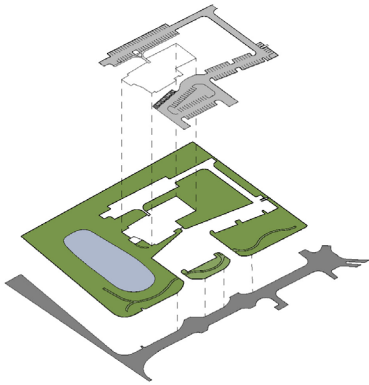
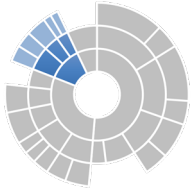
DECISION MAKING



COMPARTMENTALIZED For More Focused & Empowered Decision Making

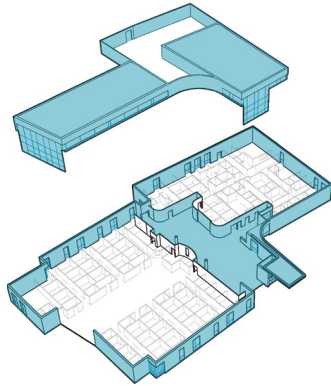
DECISION MAKING BY EXPERTISE

SITE MODULE



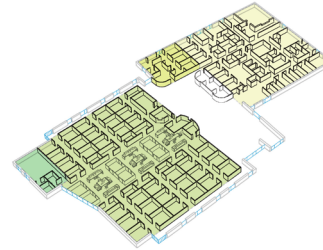
- Orientation & Configuration
- Circulation & Parking
- Local zoning codes
- Landscape design

ARCHITECTURAL MODULE



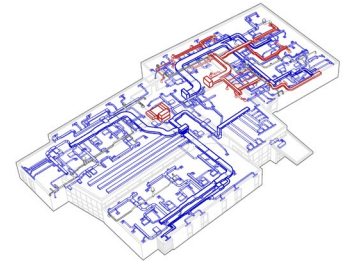
- Exterior
- Arrival experiences
- Public & Respite spaces
- Wayfinding strategy

CLINICAL MODULE



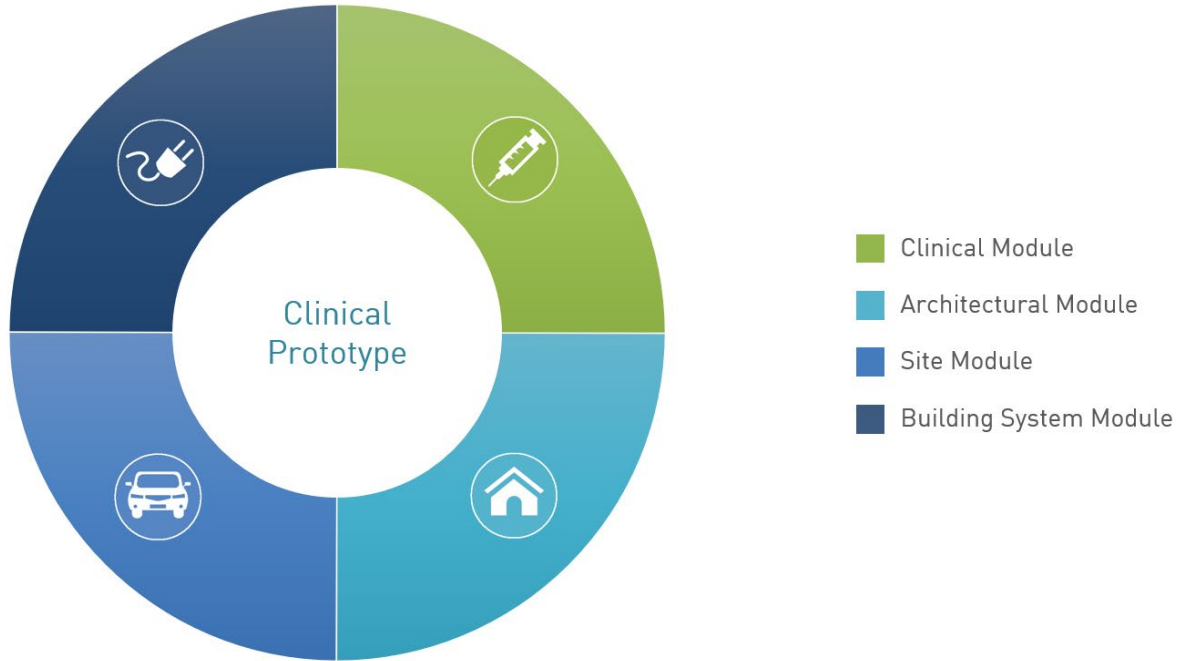
- Medical planning
- Patient experiences
- Staff experiences
- Interior design

BUILDING SYSTEM MODULE

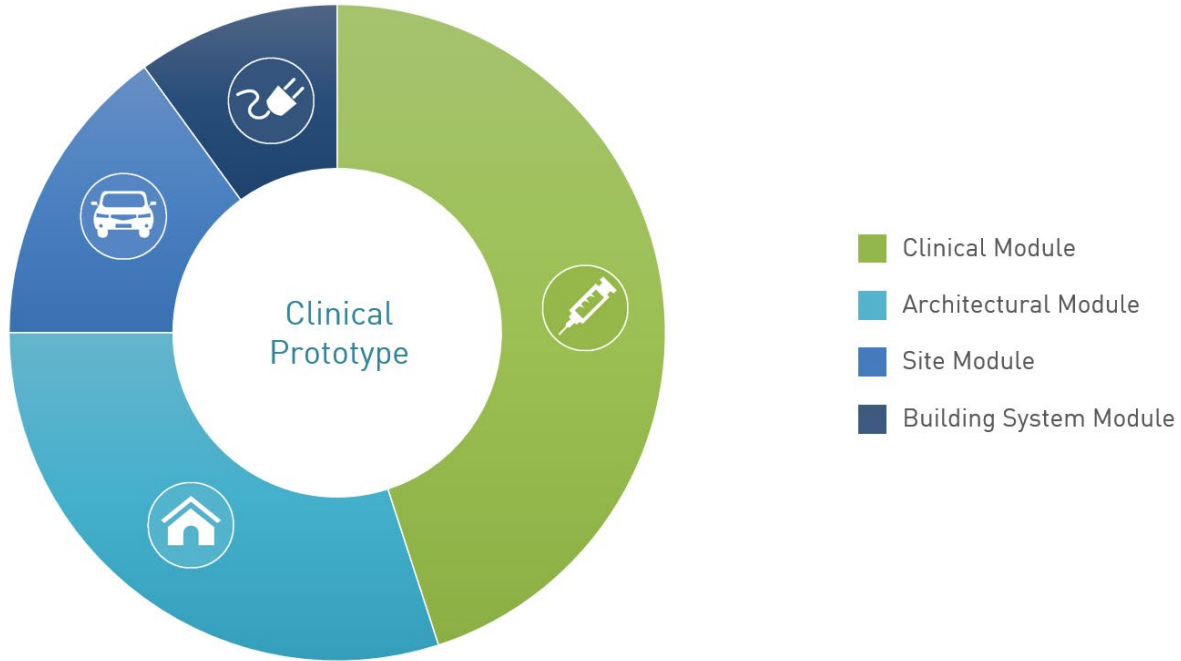


- Mechanical systems
- Performance modeling
- Material management
- BOH

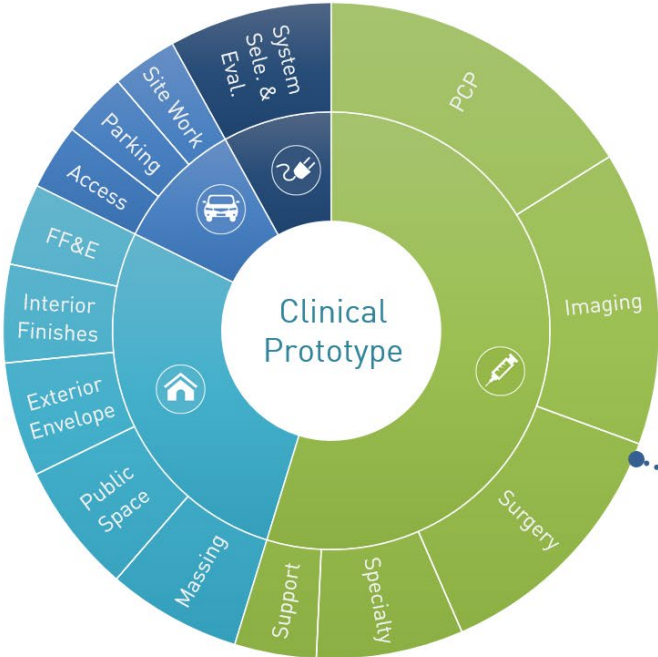
DECISION MAKING BY EXPERTISE



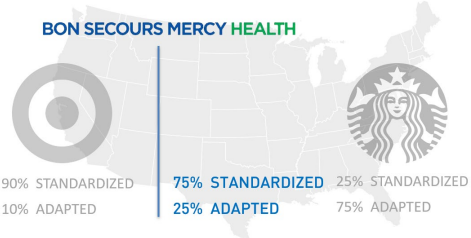
DECISION MAKING BY EXPERTISE



DECISION MAKING BY EXPERTISE

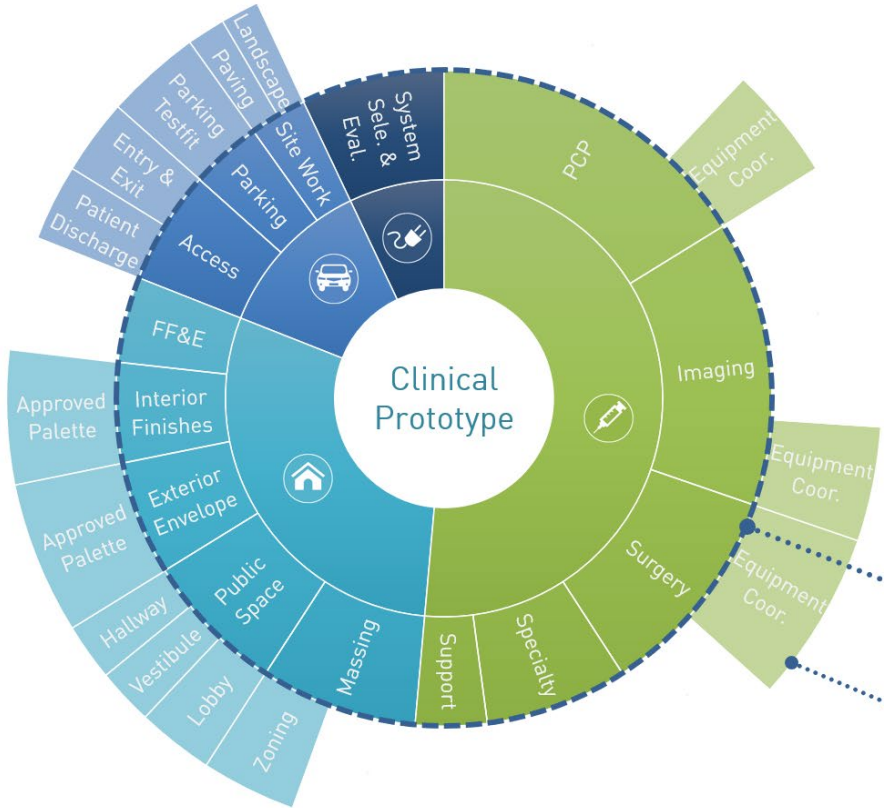


- Clinical Module
- Architectural Module
- Site Module
- Building System Module



Core Standardization – “75%”

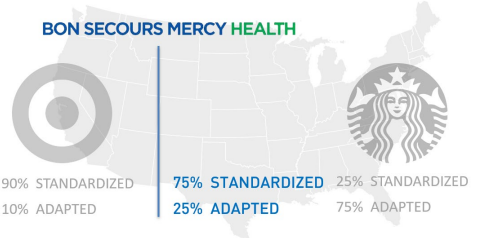
DECISION MAKING BY EXPERTISE



- Clinical Module
- Architectural Module
- Site Module
- Building System Module

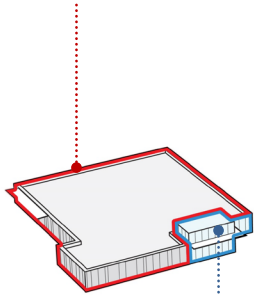
Core Standardization – “75%”

Project Adaptation – “25%”



APPLICATION THRU SCALES

75% Standard - Clinical

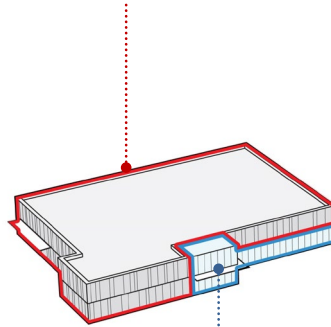


25% Adaptation - Public

NEIGHBORHOOD

+/- 25,000 SF
3-5 ACRES
<125 CARS

75% Standard - Clinical

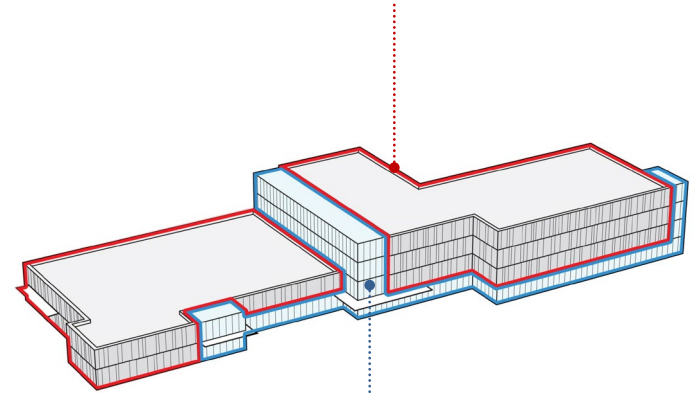


25% Adaptation - Public

COMMUNITY

25,000 – 50,000 SF
4-6 ACRES
125-250 CARS

75% Standard - Clinical



25% Adaptation - Public

REGIONAL

50,000 – 125,000 SF
6-12 ACRES
250-600 CARS

SCALE AND MATERIAL MATRIX

EXTERIOR MATERIALS

BRICK

GFRC

TERRACOTTA

METAL PANEL

REGIONAL



SCALE

COMMUNITY

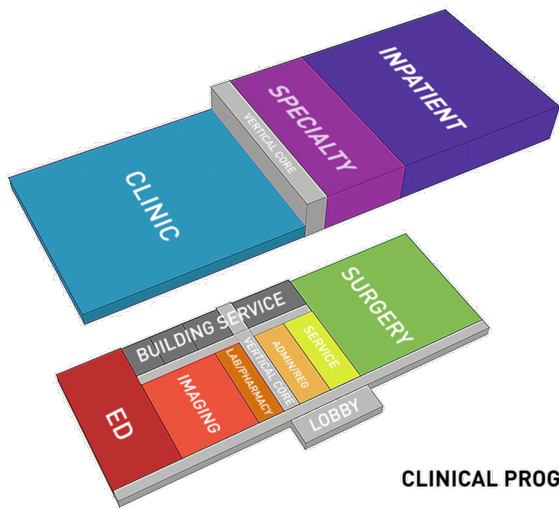
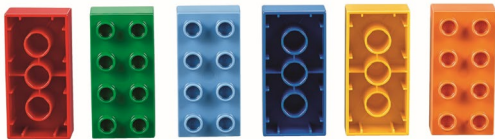


NEIGHBORHOOD



THE “LEGO® BRICKS” – CLINICAL MODULES

REGIONAL SCALE



CLINICAL PROGRAMS



ADAPTING THE LEGO®



Chester FSED



Simpsonville FSED & MOB
(Prototype)



Kings Mills Hospital

Legend

- Triage
- Indiv. Of Size
- Meds
- Clean Supply
- Prov. Touchdown
- EMS Work
- Walk In Entry

The background is a solid purple color with a grid of embossed LEGO logos. The logos are arranged in two rows of four, with the central text overlaid on the middle of the grid.

CASE STUDIES/PROOF OF CONCEPT

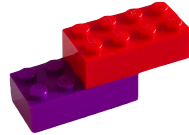
CASE STUDIES

NEIGHBORHOOD
Chester VA



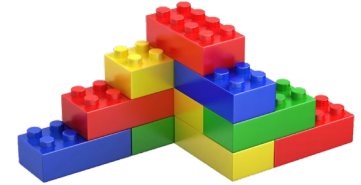
23,000 SF

COMMUNITY
Simpsonville SC



53,000 SF

REGIONAL
Cincinnati OH



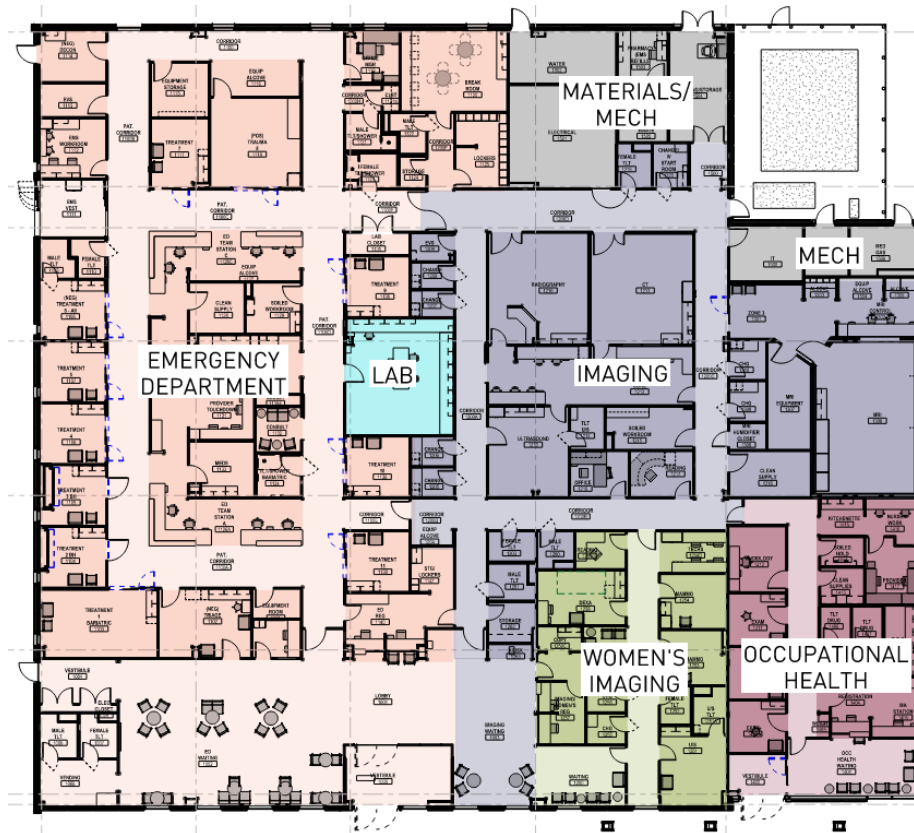
183,000 SF

CHESTER EMERGENCY CENTER



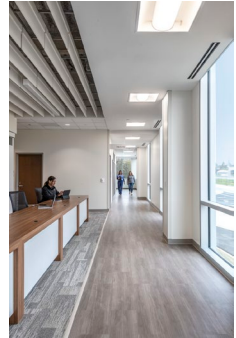
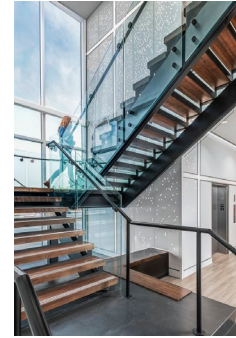
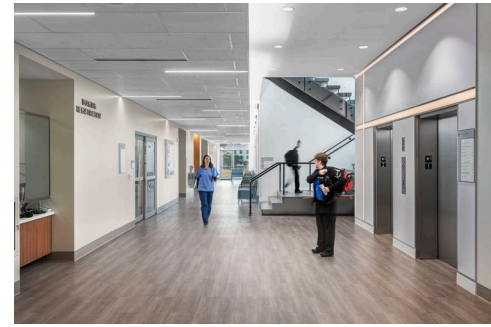
NEIGHBORHOOD SCALE:

CHESTER FSED
CHESTER, VA

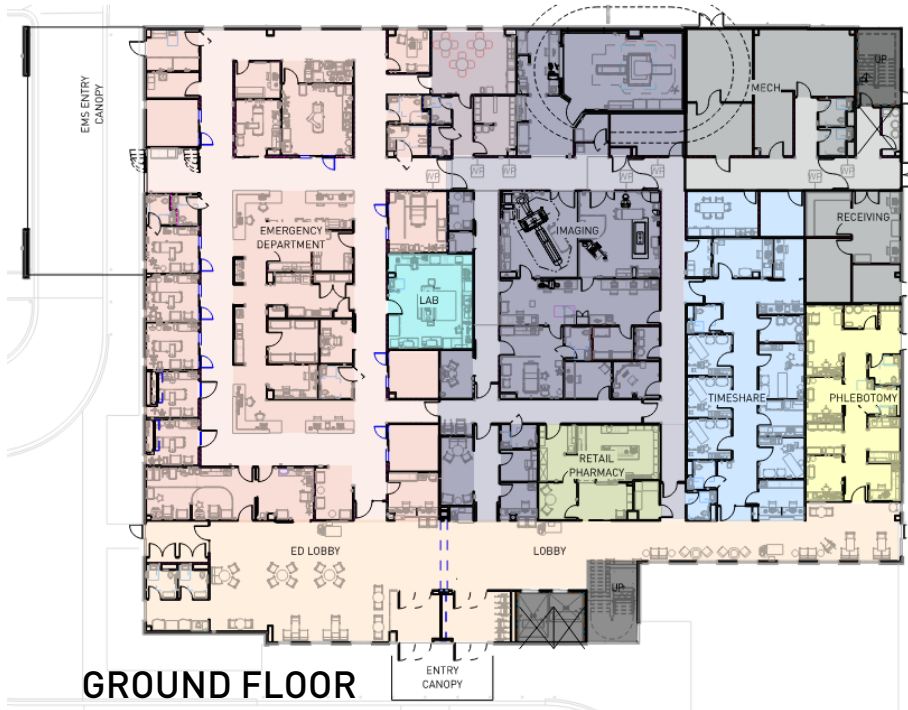


23,000 SF

SIMPSONVILLE MEDICAL CENTER



COMMUNITY SCALE: SIMPSONVILLE MEDICAL CENTER SIMPSONVILLE, SC



53,000 SF

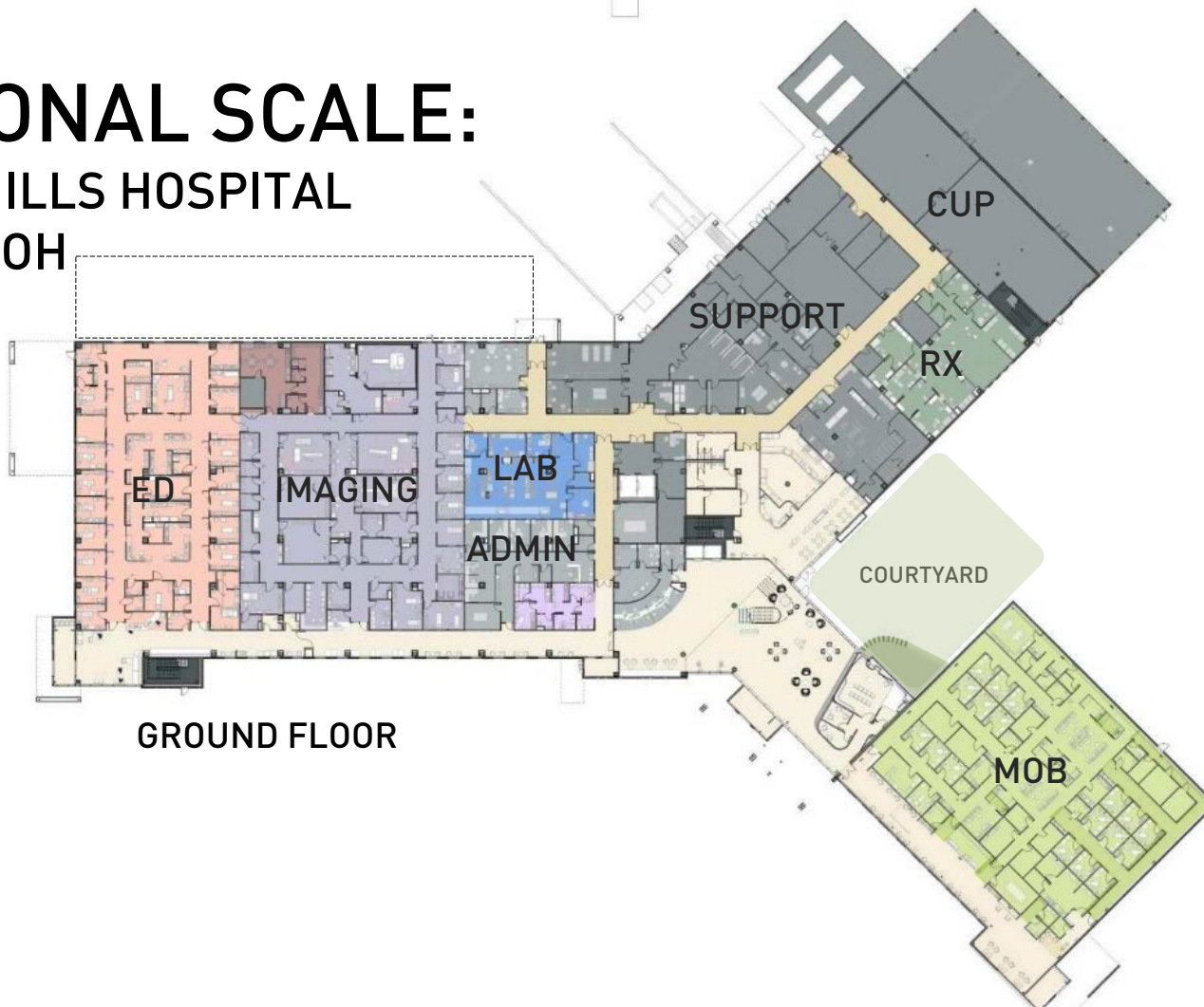
KINGS MILLS HOSPITAL



REGIONAL SCALE:

KINGS MILLS HOSPITAL

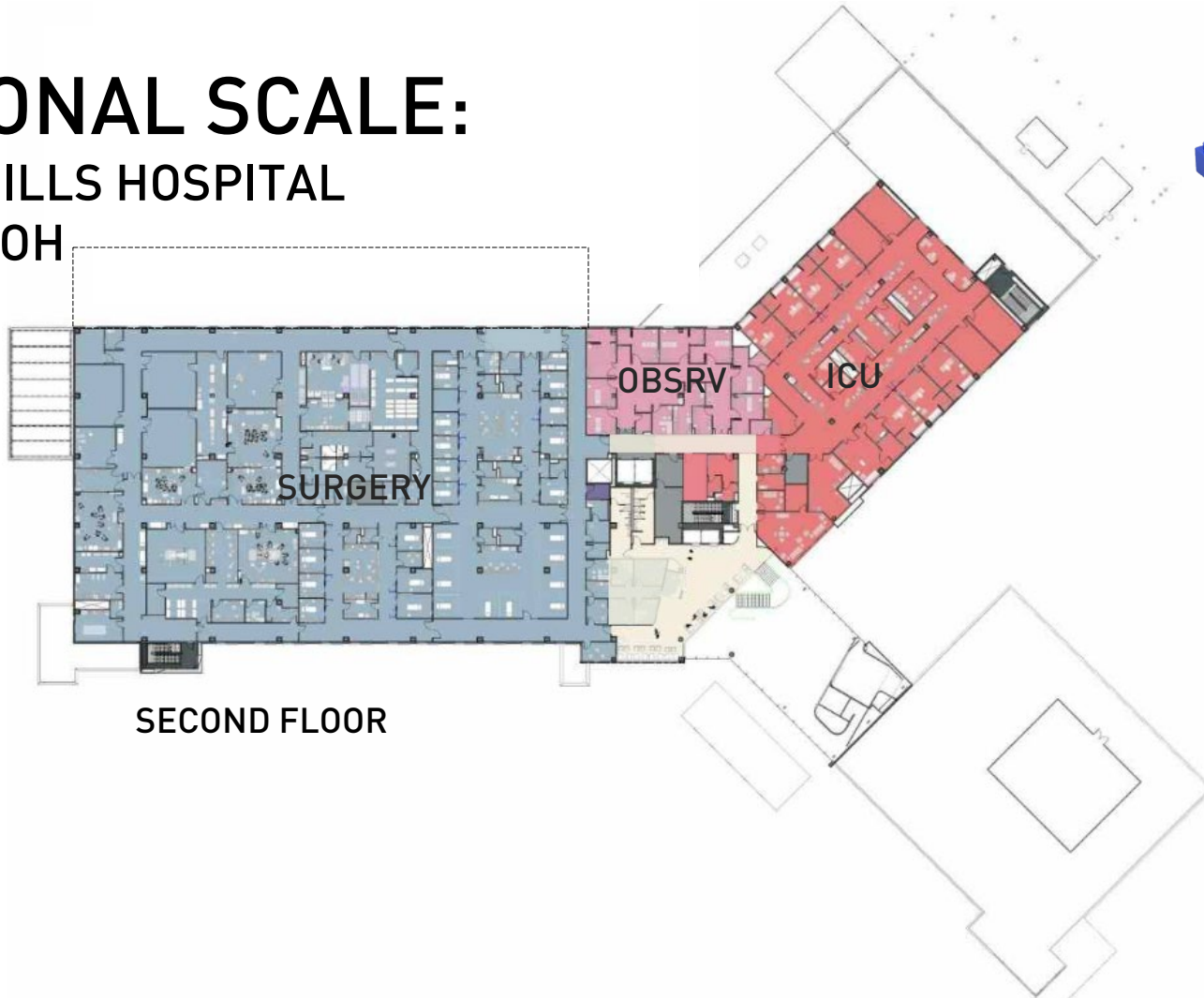
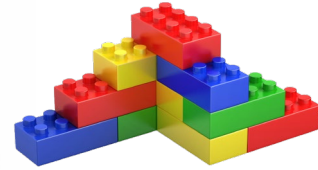
MASON, OH



GROUND FLOOR

183,000 SF

REGIONAL SCALE: KINGS MILLS HOSPITAL MASON, OH



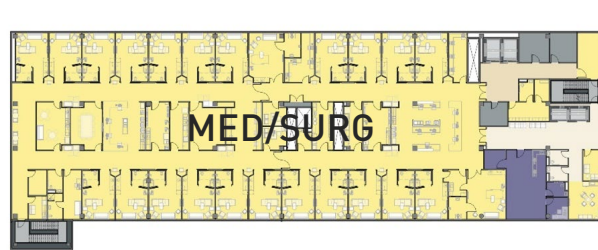
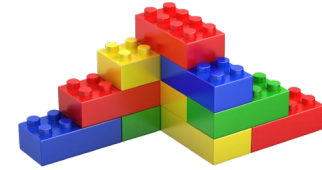
SECOND FLOOR

183,000 SF

REGIONAL SCALE:

KINGS MILLS HOSPITAL

MASON, OH

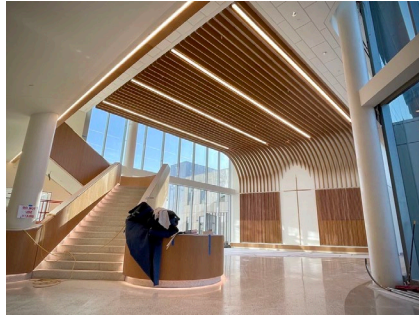
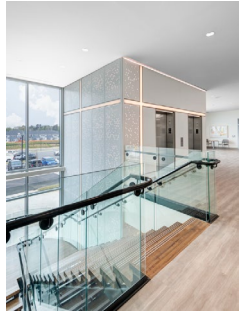


THIRD & FOURTH FLOORS





LESSONS LEARNED





Q&A

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