

TRADELINE FORUM C

FACILITY SOLUTIONS FOR THE NEW
MEDICAL EDUCATION MODELS

AND THE

RENOVATE,
REPURPOSE OR
BUILD **DECISION**



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TODD DRAKE, AIA, LEED AP

Principal
BALLINGER



2 INSTITUTIONS



1 CHOSE TO RENOVATE
1 CHOSE TO BUILD

Top Medical School in State

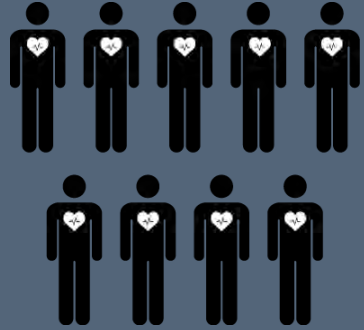
Top 20 Ranking for Public Research University

How are they similar?

	M	UF
MEDICAL CLASS SIZE	170 +/-	165 +/-
CURRICULUM	Six Domains	HowWeLearn
CONSTRUCTION COST	\$31.3 M*	\$33.7 M
PROJECT SIZE	101,900 gsf*	94,300 gsf
\$ per SQFT	\$307 SF	\$358 SF

* Includes deferred maintenance + infrastructure work

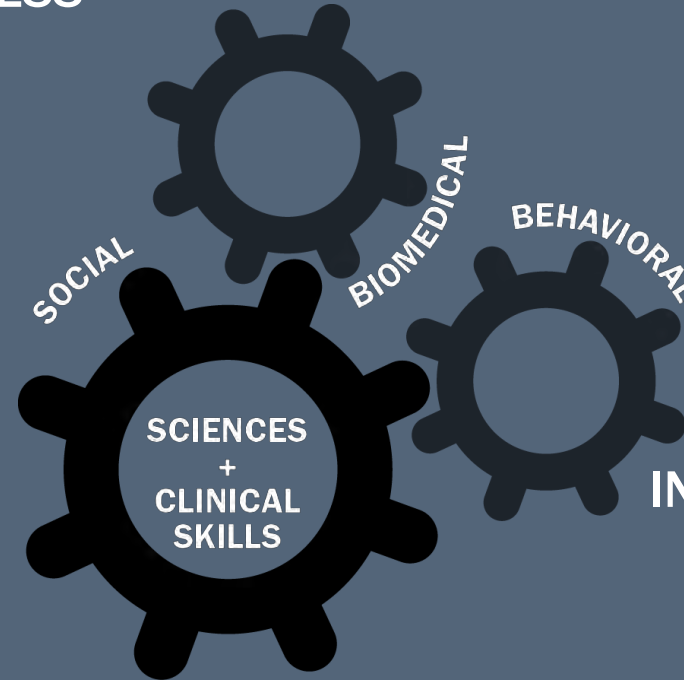
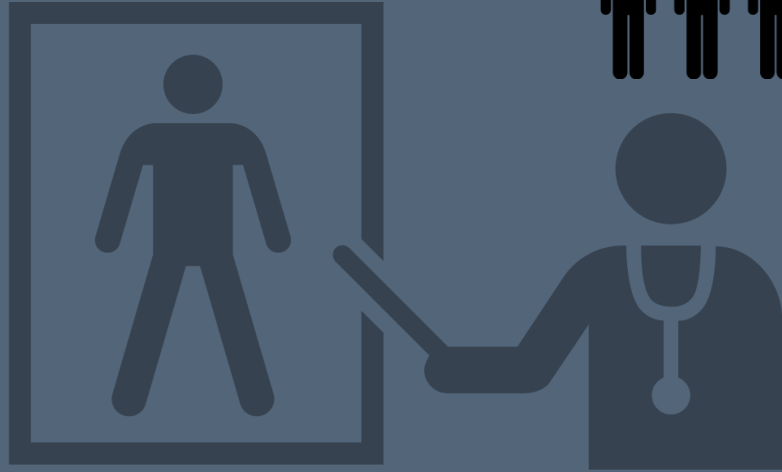
COMMON THEMES



WELLNESS



COLLABORATION
+ TEAM WORK



INTEGRATION



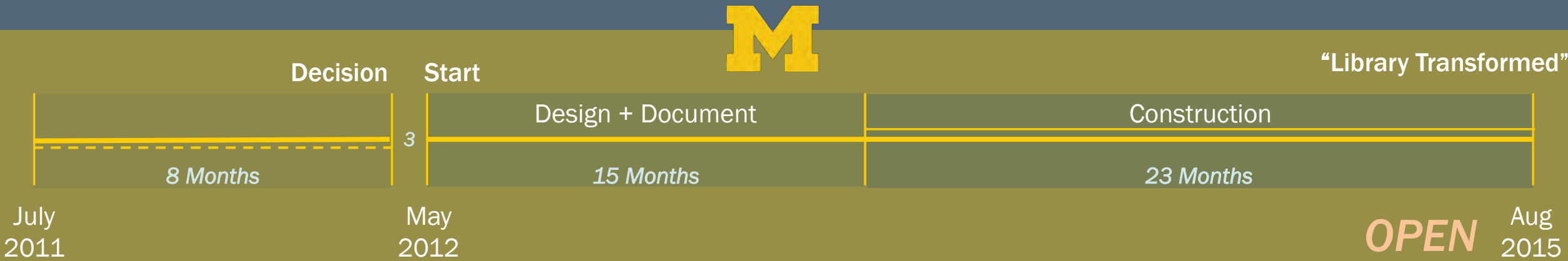
EMPHASIZE CRITICAL
THINKING SKILLS



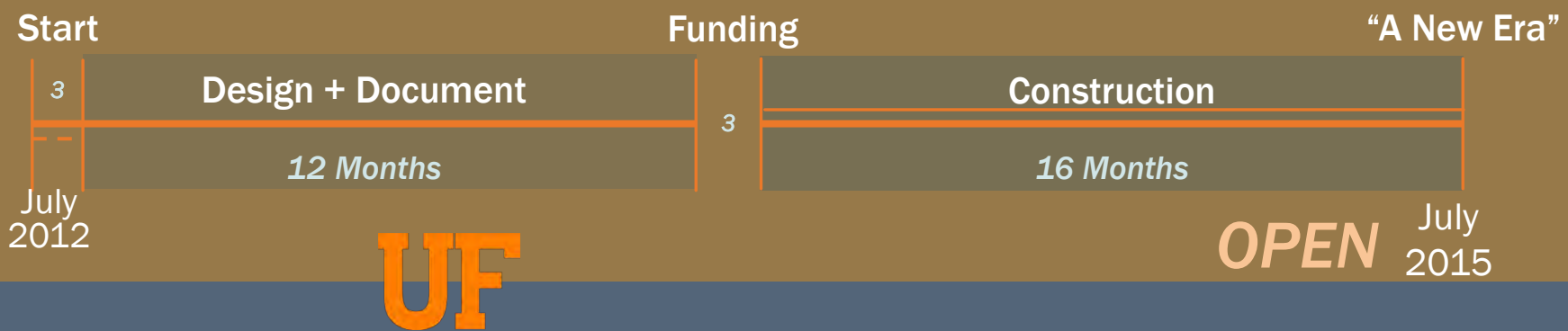
PROMOTE
INQUIRY



Parallel Tracks



14 Month Head Start





M

UF



Health Sciences Library

HMEB - 2.9 Acre Site

DELIVERY MODEL

GC - Design / Bid / Build

CM working Parallel to GMP

FORMATION PROCESS

18 Month Formation + IPE Exploration

3 Month Program Verification

CORE CURRICULUM PROGRAM NEED

New Library, Student Wellness
+ Small Group Learning

Simulation, Student Wellness +
Medical Class Team Learning

Program Comparison



A. Alfred Taubman Health Sciences Library

Class Size: 170 78,000 nsf / 101,900 gsf

		Area	Seats	MD1+2 = 340+
	CLASSROOMS	9,200 nsf	672	2.0
	CLINICAL SKILLS	14,050 nsf	60	.25
	SIMULATION	N/A	—	—
	LOUNGE STUDY	10,150 nsf	501	1.5
	COMPUTING	12,400 nsf	156	.5
	ADMIN ADVISING	10,400 nsf	142	.5
	LIBRARY	12,900 nsf	200	.5
TOTALS		69,100 NSF	1,731	5.0 / HSL



George T. Harrell Medical Education Building

Class Size: 134 60,200 nsf / 94,300 gsf

		Area	Seats	MD+PA = 348+
	CLASSROOMS	16,600 nsf	729	2.5
	CLINICAL SKILLS	9,200 nsf	64	.25
	SIMULATION	9,500 nsf	48	.25
	LOUNGE STUDY	10,300 nsf	303	1.0
	COMPUTING	N/A	—	---
	ADMIN ADVISING	12,800 nsf	80	.25
	LIBRARY	N/A	—	---
TOTALS		58,400 NSF	1,224	4.0 / HSL

Program Comparison



University of Michigan

MED Class: 170 learners
101,900 GSF



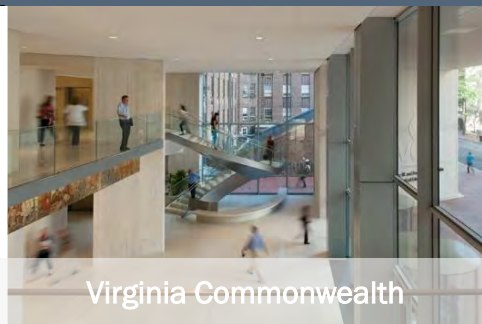
University of Florida

MED Class: 165 PA Class: 60
94,300 GSF



Johns Hopkins University

MED Class: 110 learners
100,000 GSF



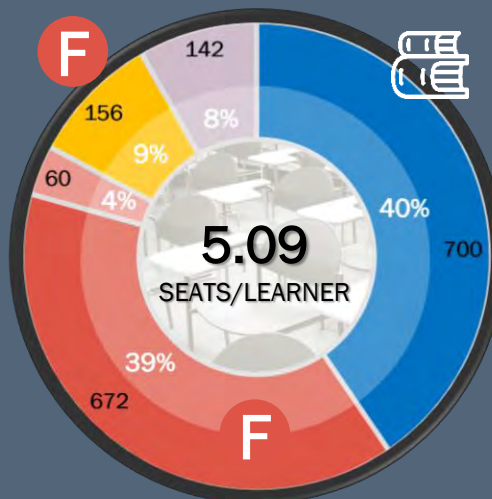
Virginia Commonwealth

MED Class: 250 learners
204,500 GSF



Temple University

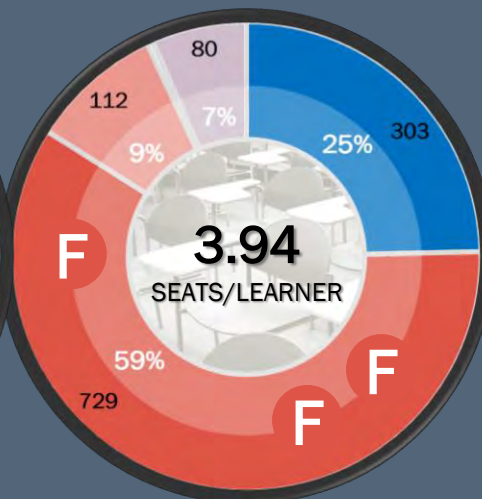
Med Class: 250 learners
450,000 GSF



1,730 SEATS
340 LEARNERS



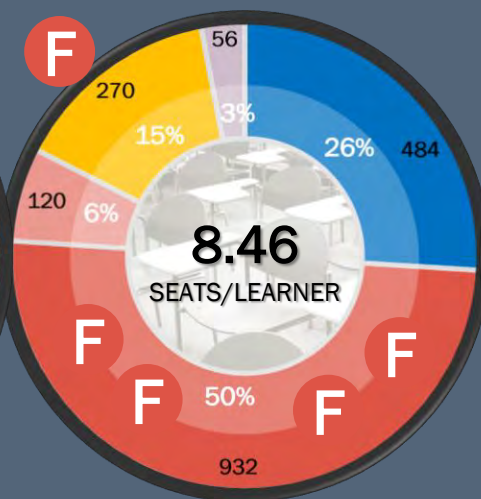
INFORMAL



1,229 SEATS
310 LEARNERS



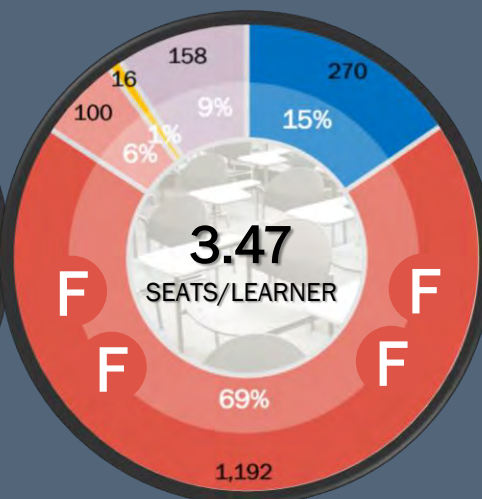
FORMAL



1,862 SEATS
220 LEARNERS



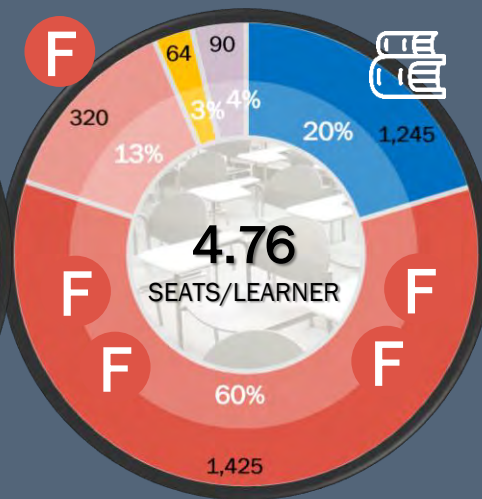
SPECIALIZED



1,736 SEATS
500 LEARNERS



COMPUTING

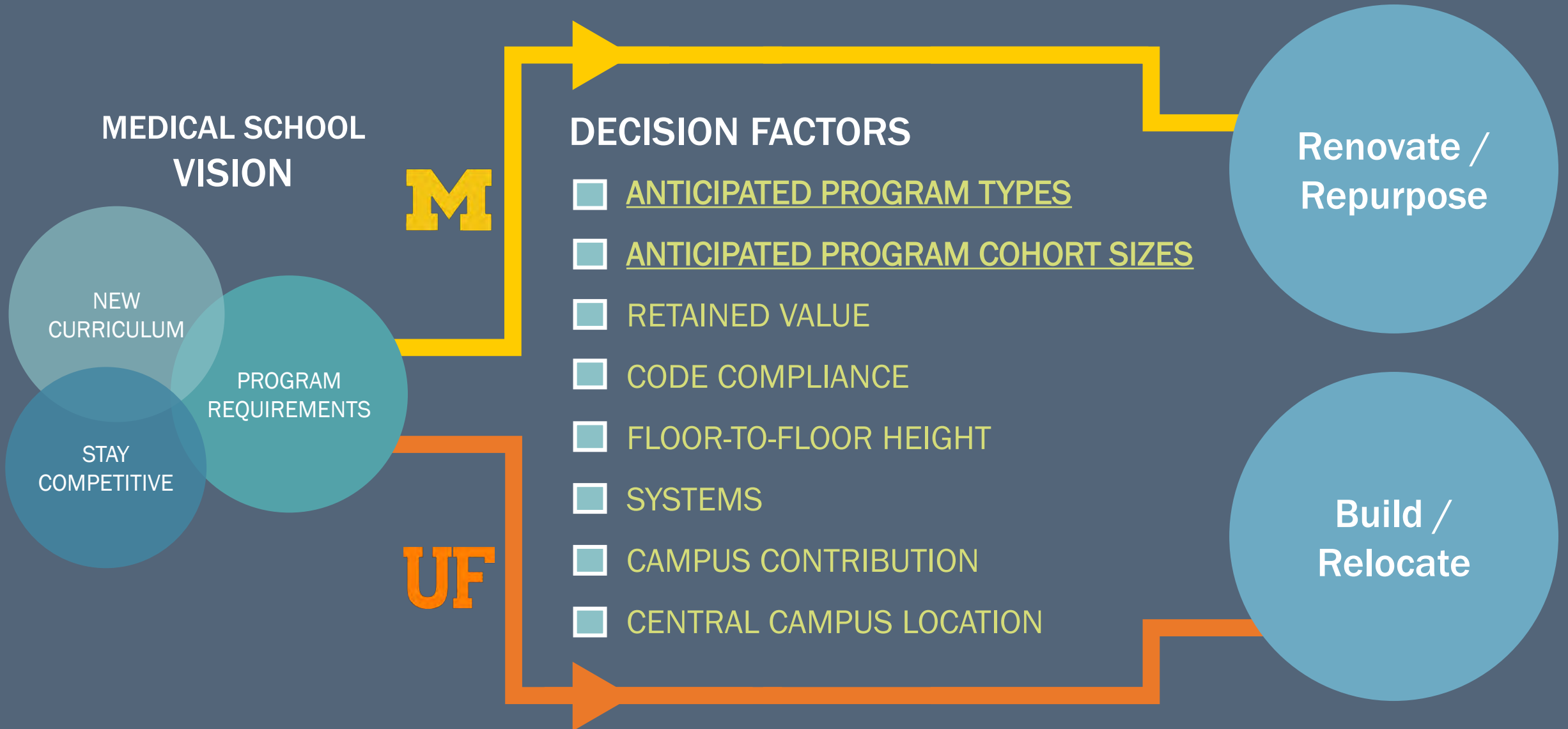


2,383 SEATS
500 LEARNERS



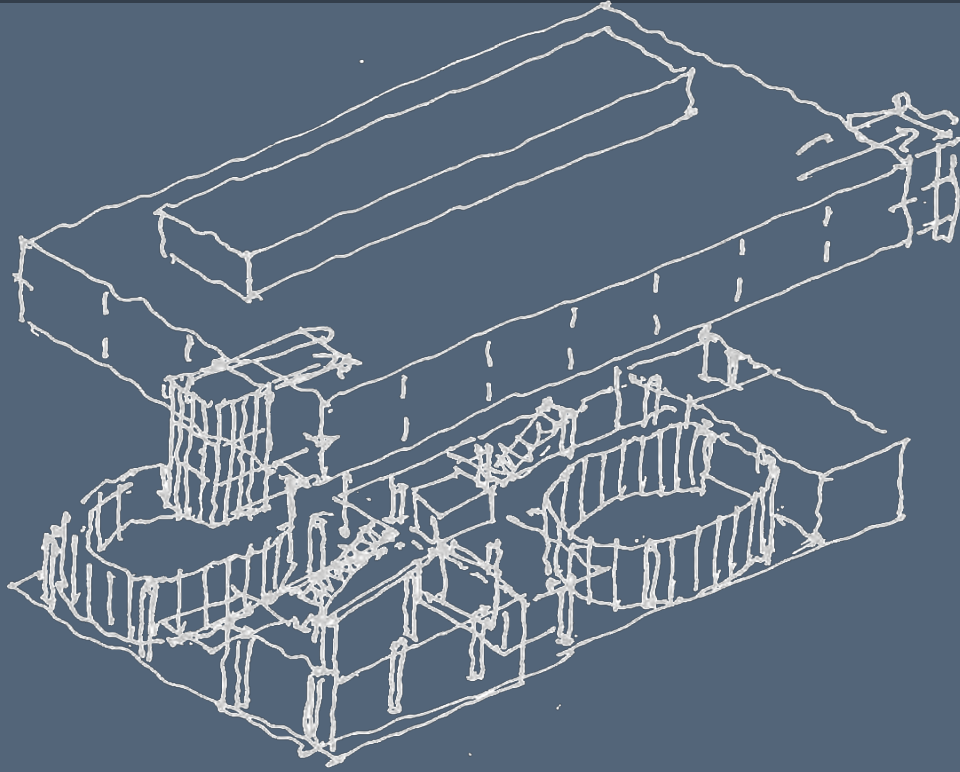
ADVISING

Decision Framework *'Repurpose or Build'*

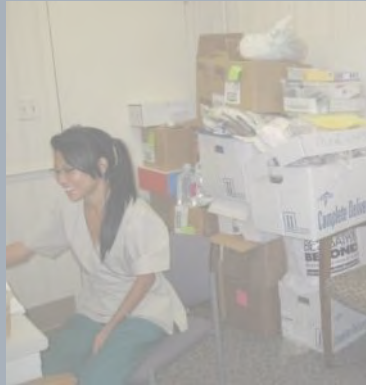
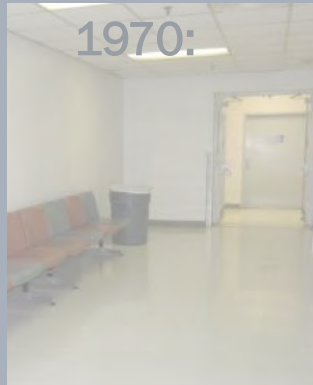


Harrell Medical Education Building

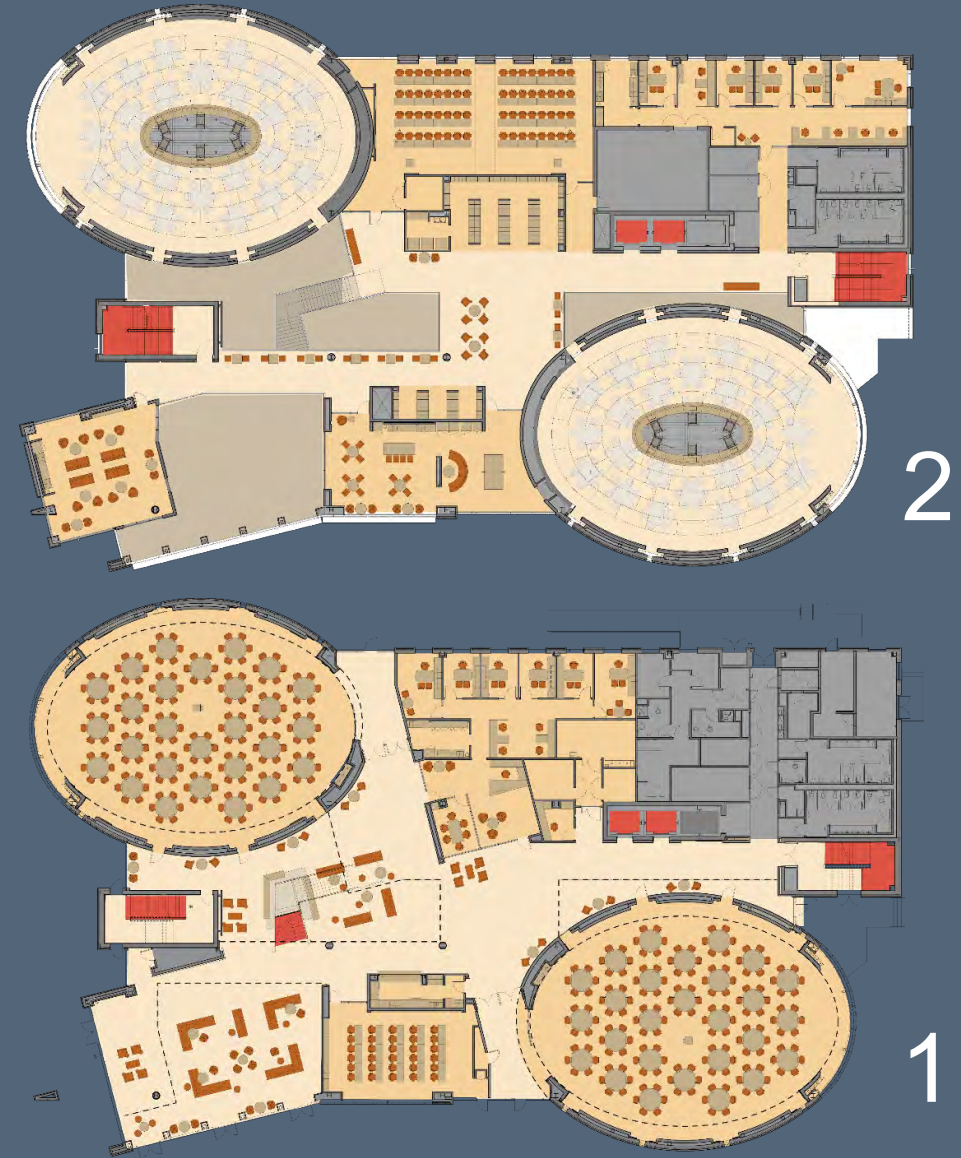
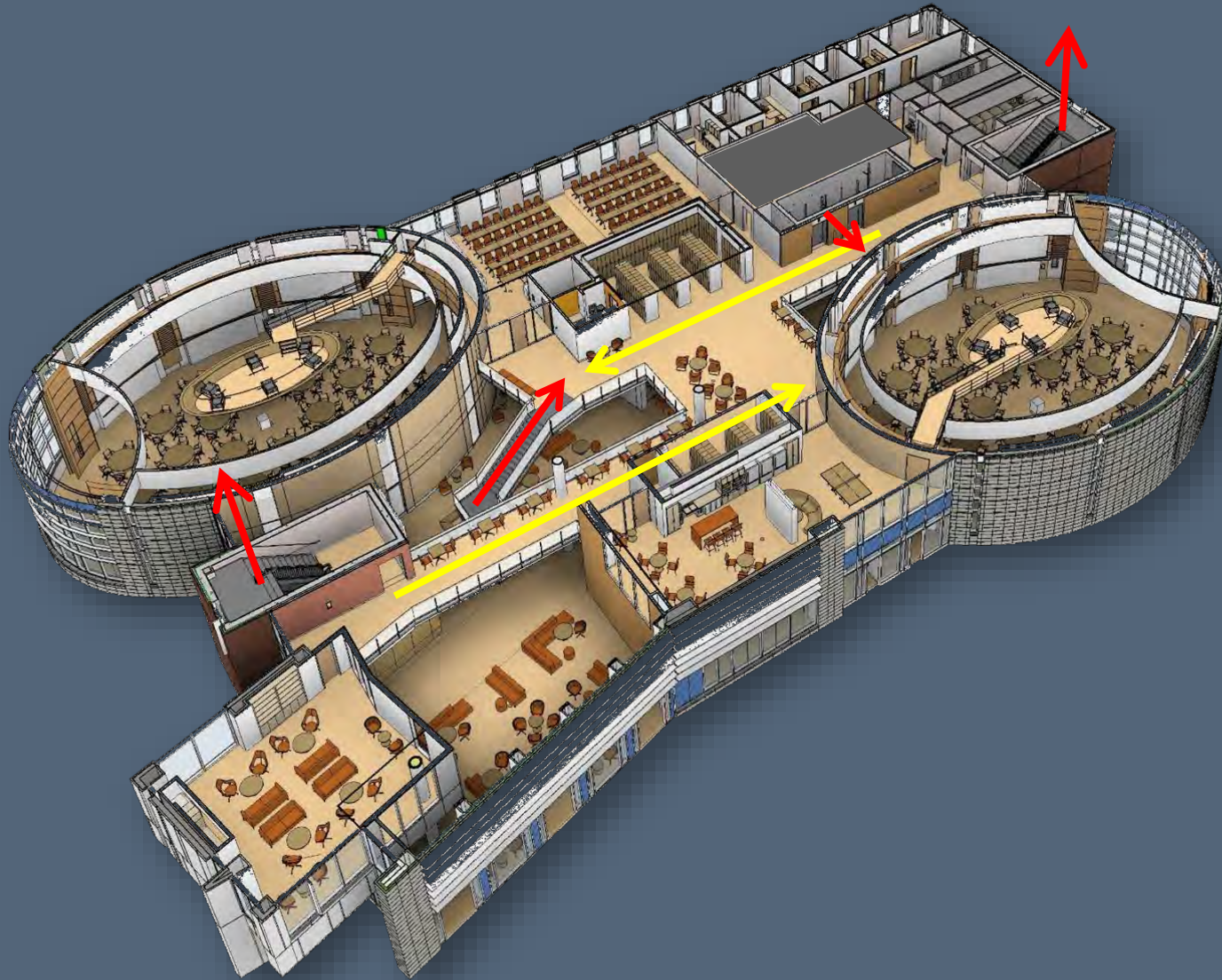
UF



1970:



Social Interaction Planning



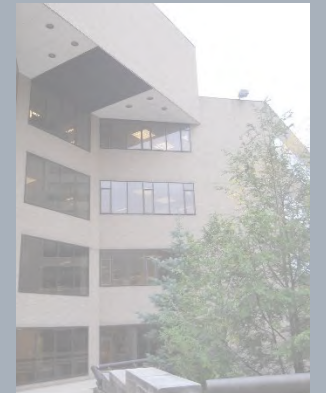
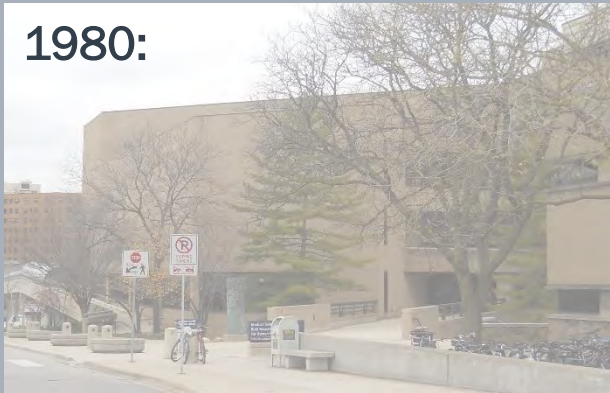
Social Interaction Planning



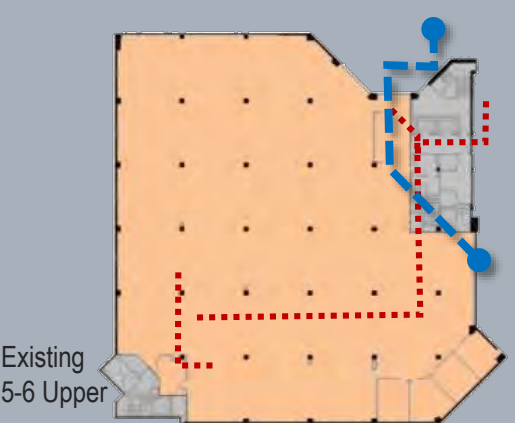
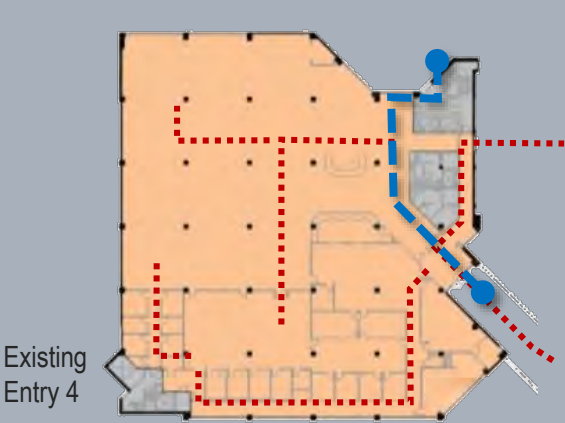
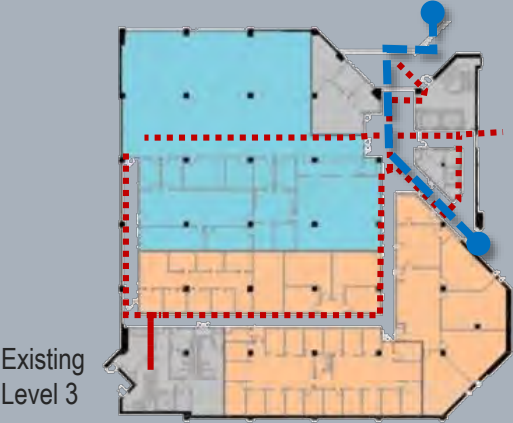
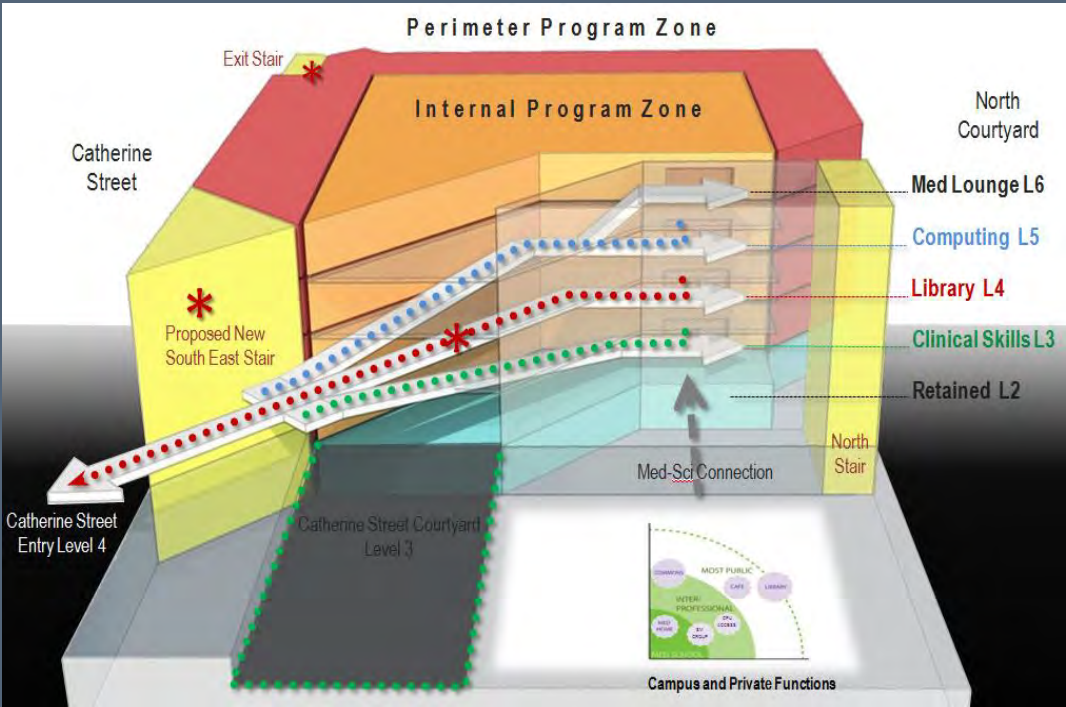
Taubman Health Sciences Library



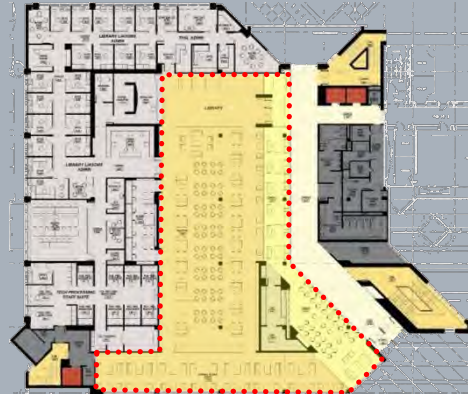
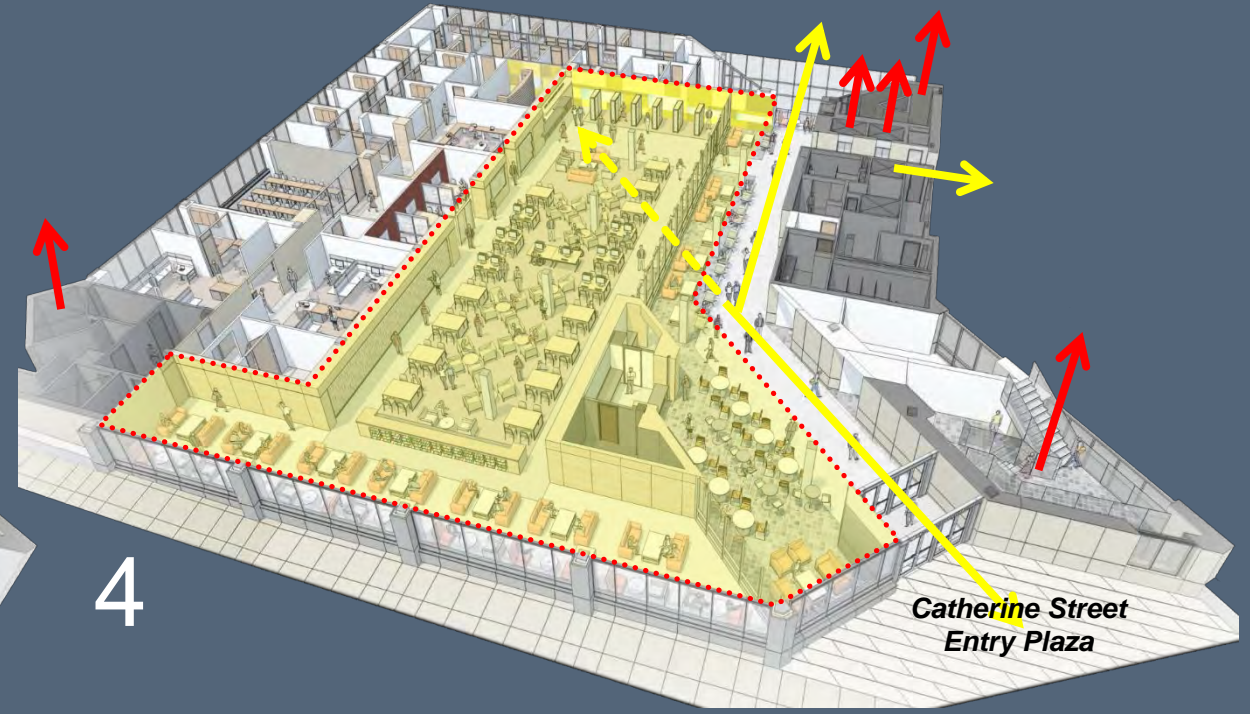
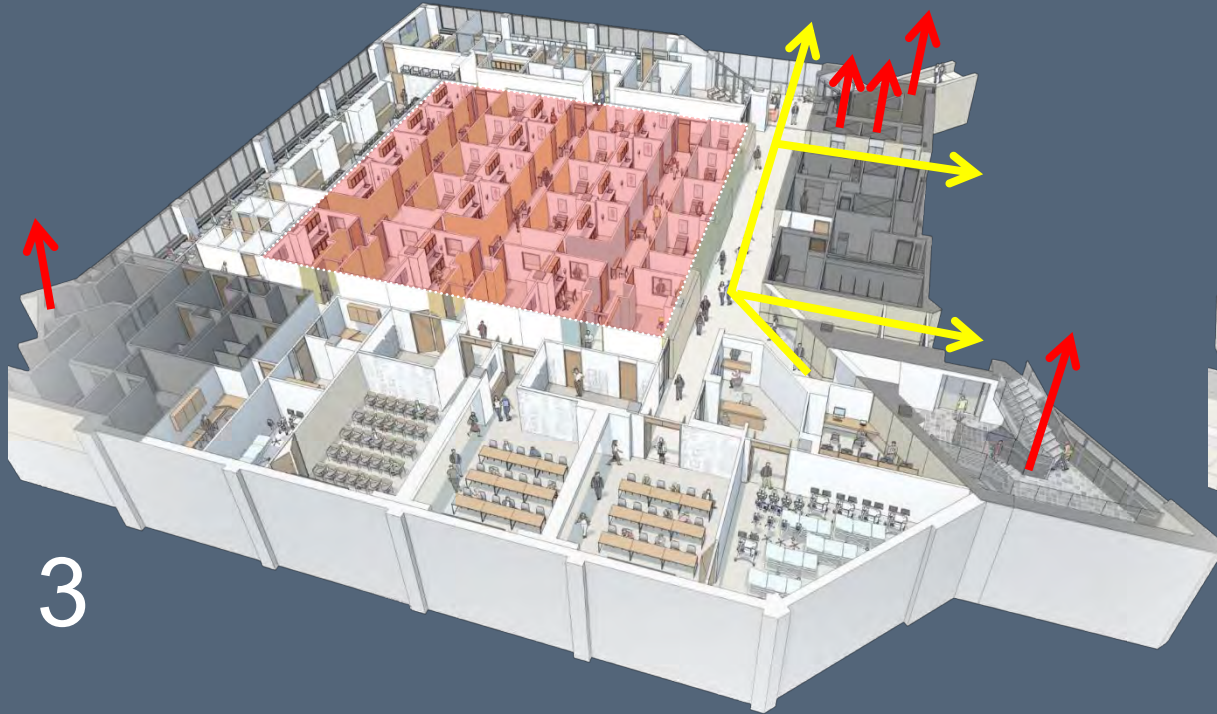
1980:



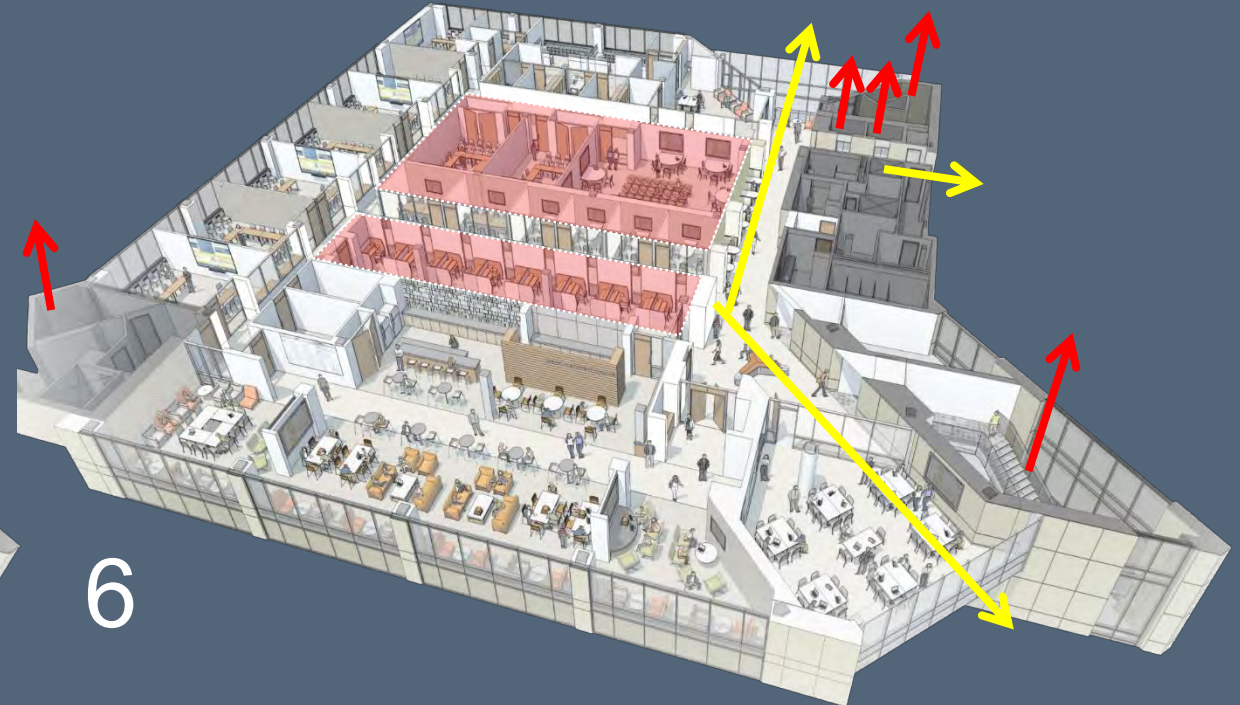
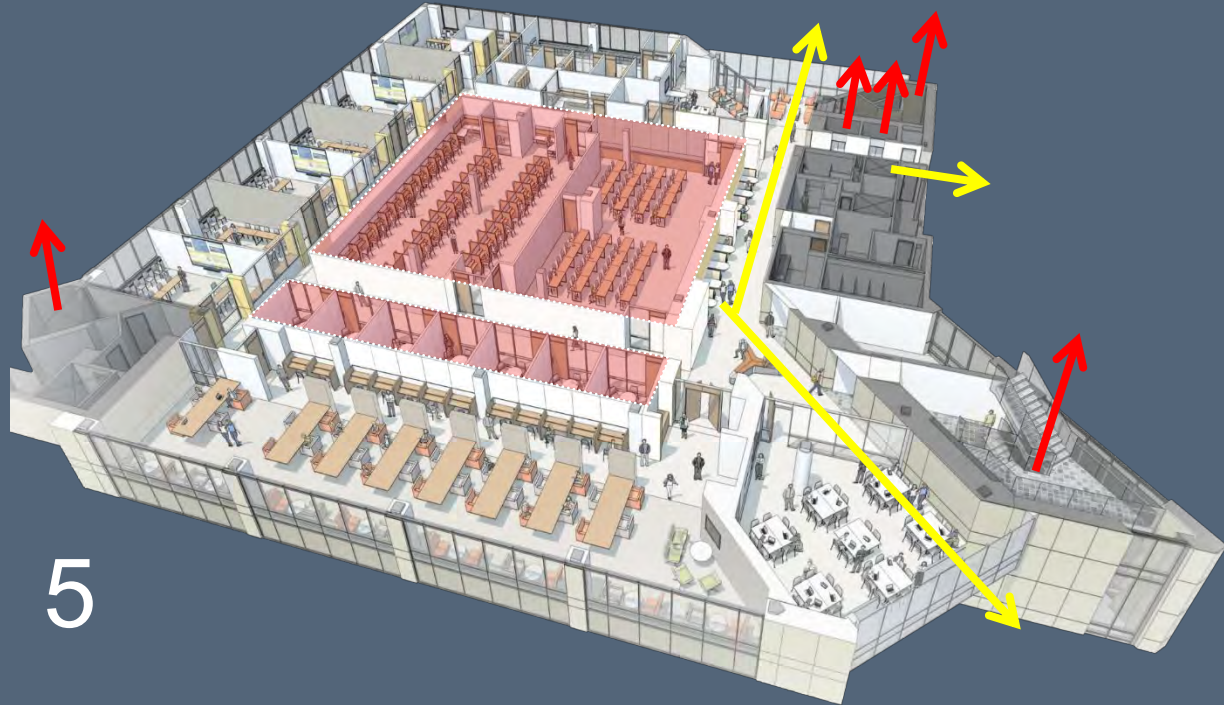
Social Interaction Planning



Social Interaction Planning



Social Interaction Planning



4



5



6

Key Drivers

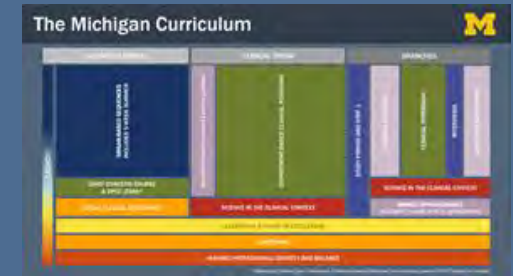
Accreditation - Liaison Committee on Medical Education (LCME)

- Previous concerns expressed about relaxation space / lounge
- Self-study raised concerns about study space



New curriculum – “cart before the horse”

- Transformation of curriculum being *envisioned* (although very preliminary at the time) – *key aspects*: more **small groups**, more **inter-professional learning**, **IT-facilitated**, increased role of **simulation**, emphasis on **community and wellness**



Benchmarking

- Increasing comments from applicants about higher quality learning spaces at peer schools



DUKE



JOHNS HOPKINS



FLORIDA

Taubman Health Sciences Library's History of Collaboration



History

- Site of the Second University Hospital
- Relationship with named donor – learning space
- Library “Culture”
 - Strong focus on learning, rather than books
 - History of innovation in digital learning objects (Google, Hathi Trust)
 - Consolidation of Health Professional School Libraries: TML -> THSL



Collaboration with the medical school

- Clinical informatics education – UME and GME
- Enhanced clinical care – practice guidelines, E.H.R. integration
- Information Mobility

Analysis: Win/Win – Space, Curriculum AND Library Transformation



Key Question – Renovate or Build, and How?



Decision for Renovation vs. Build

- Staged discussions between medical school, library and provost
- Increased scale of the envisioned space

Enabler – Funding source

- Funding Source – Medical School, Provost – to help influence the collaborative nature of the building

The HOW

- Staged renovation vs. “Go. Full Go. Move out.”
- Implications
 - Financial
 - Time
 - “Living in a building being renovated”
 - Availability of **functional swing space**

Workgroups Process



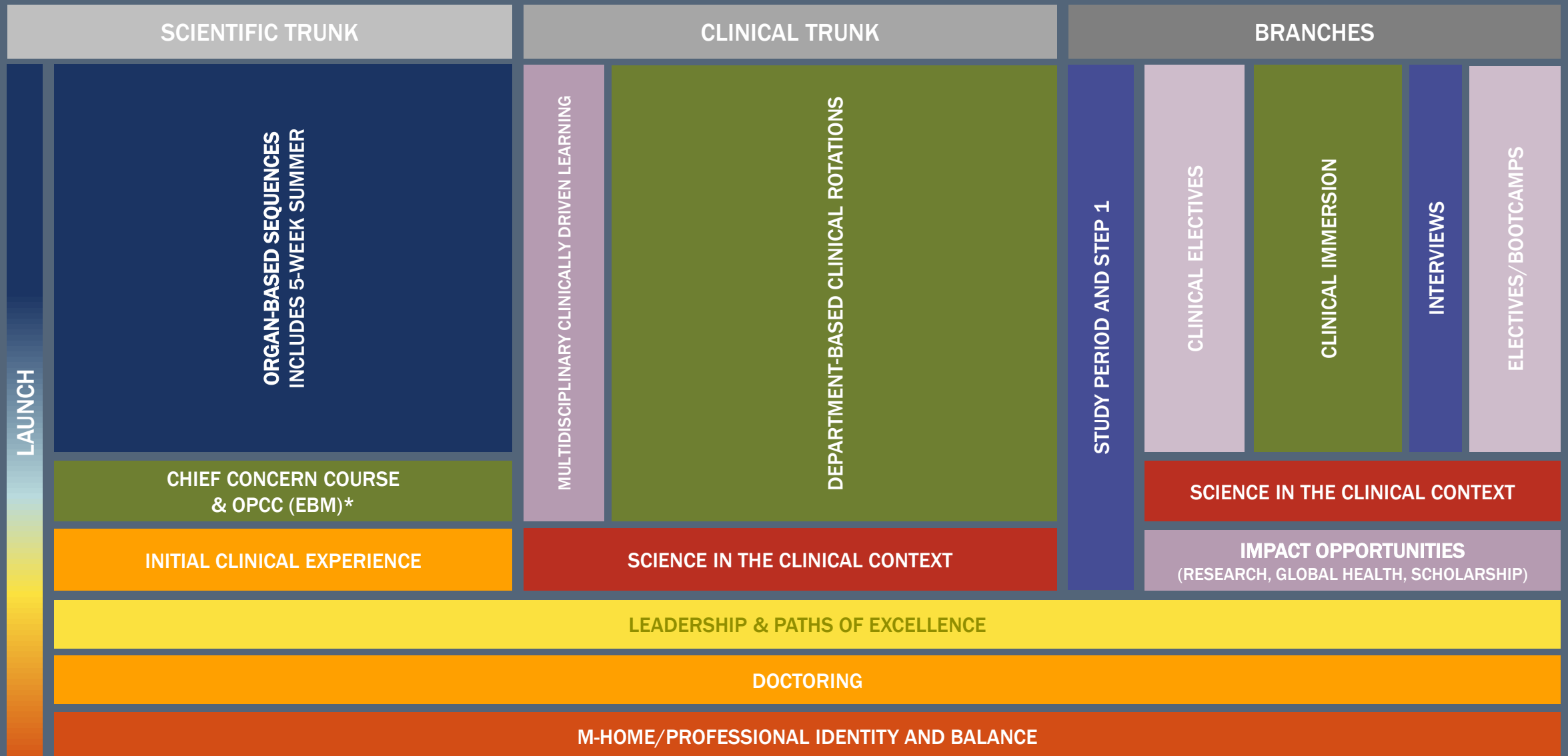
Choices – organize workgroups by FLOOR (6th, 5th, etc...), by LEARNER (medical student, graduate student, inter-professional student), or by DOMAIN

- Small group learning
- IT-mediated learning
- Clinical Skills, Inter-professional learning
- Wellness and recreation
- Library
- Administrative space

Broad Constituencies

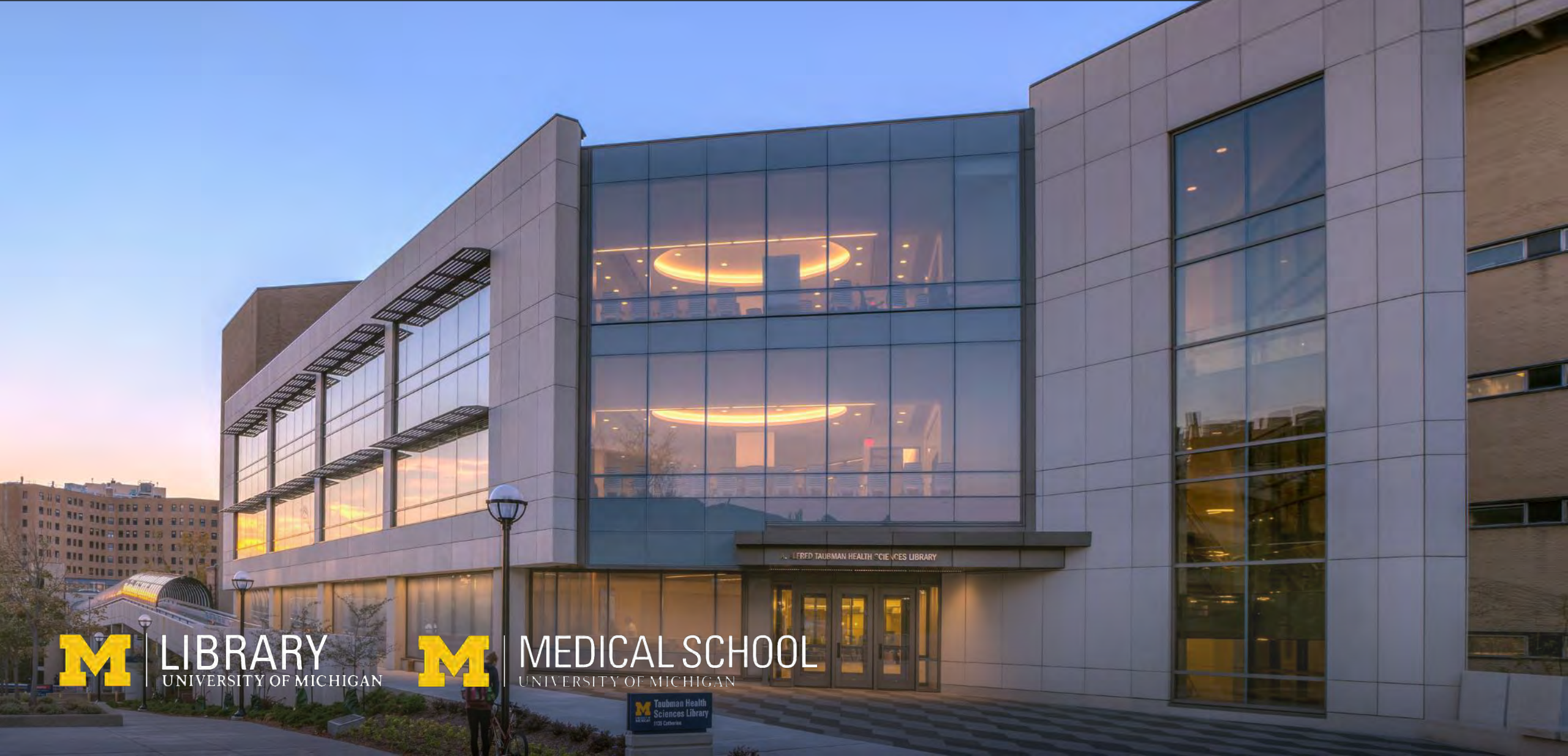
- Faculty, staff, and students
- Representation from the medical school, library, provost's office, health professional schools

The Michigan Curriculum



*Optimizing Patient Care Curriculum (Evidence-Based Medicine) For Incoming class of 20%. Subject to change.

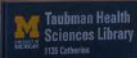
A. Alfred Taubman Health Sciences Library



LIBRARY
UNIVERSITY OF MICHIGAN



MEDICAL SCHOOL
UNIVERSITY OF MICHIGAN



How did we plan for the space?



Benchmarking Peers

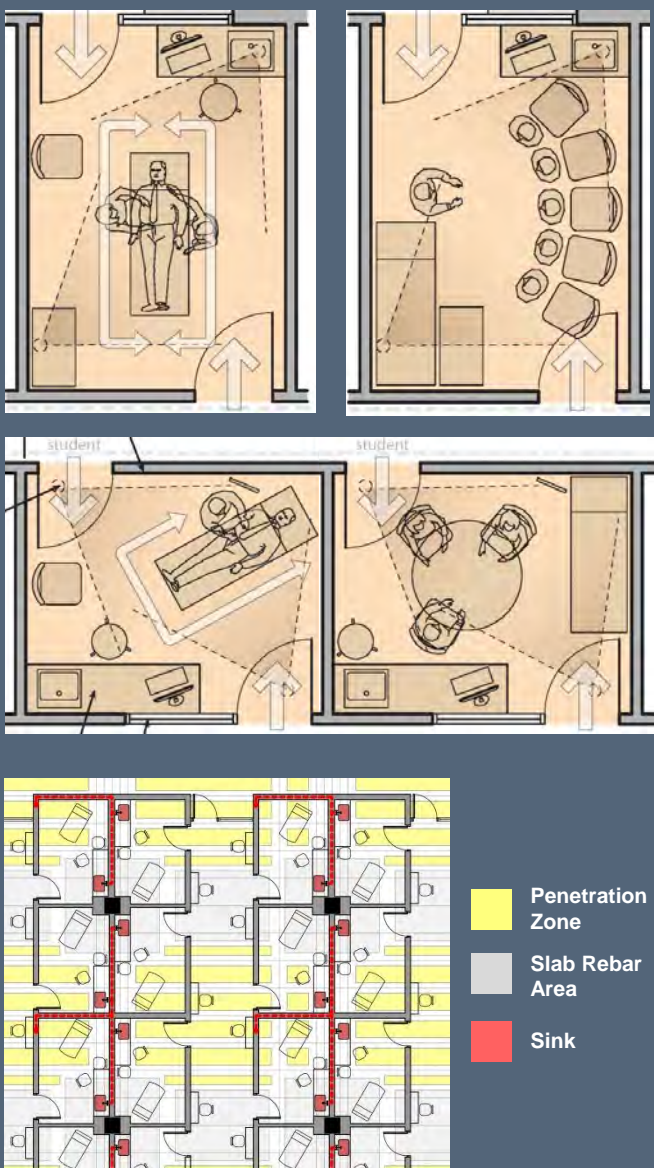


	COLLABORATIVE LEARNING	CLINICAL SKILLS & SIMULATION	COMPUTATIONAL & TESTING	STUDENT LOUNGE / STUDY	DEVELOPMENT ADVISING	HEALTH SCIENCE LIBRARY	BIG TAKEAWAY
HARVARD UNIVERSITY	24-25 Small Group Rooms; Experimenting Now with New Small Group Model	Dispersed in Hospitals, 5 Room Simulation at School	Computer Labs Needed for Testing Not at One Time	Big Atrium Commons Trying to Change Visited Others	Early Adopter of Academic Society 1987 Model Here to Stay	Nearby, But Not in Building; Not Used Much	1987 Building Difficult to Change: Not Flexible
JOHNS HOPKINS UNIVERSITY	Lecture and Small Group Model	In Adjoining Building: Doubling After Two Years	Computational Center & Large Lecture for Testing	Lots of Venues for Food / Cooley Recreational Center Adjoining	Success with Colleges Big \$ Commitment	Becoming GME Center	Exchange Night Vision Goggles for Ray-Bans: New Building at 105K SF
PENN	Would Like the Business School Model of Lecture Hall	Remote Site @ Graduate Hospital 22,000 SF	40 Computers in 1 Room; Move to On-Line Testing	Not Mentioned as a focus	No Interest in Learning Communities; No to Advising Center	Dramatically Downsizing; Aiming for Information Commons	Effort of Planning Process Awaiting Funding
WASHINGTON UNIVERSITY	ReUse Lecture Halls / 300 Seats Predominance of Small Groups: 20	5th Floor Sim Lab and Clinical Skills; 13 Rooms + 4 OR's + Satellites at 2 Other Locations	Automating Lectures On-Line Use of "B" Line Technology	Atrium Formed by New/Old Buildings; No To Academic Societies	Student Affairs and Support Services Left Behind in Existing Building	Not Included in New Complex; Share With Other Health Professions	Addition/Reno. of Older Building Creates Commons: Big Success
UNIV. OF CALIF. SAN FRANCISCO	Just Completing Revamp to Flat Floor, Small Group Model Lecture Model Doomed	Very Successful 12 Room Model / Want to Double; Anatomy Learning Center	50 PCs located in a Tech Commons	Student Amenity Trumped by Other Priorities; Nooks & Crannies Only	Not Using This Model	Reworking Health Science Library: 1/3 + 1/3 + 1/3, Books, Reading & Support	Multi. Campus Model / Dispersed Components on 4 Sites
STANFORD UNIVERSITY	Old Lecture Hall Replaced with Flexible Classroom; Flat Floor for TBL, Multiple Screens	Ground Floor Sim Facility; 13 Standardized Patient Rooms, 2 Double as Mock Hospital Rooms	Computer Kiosks Throughout Building; Testing On-Line, Classroom Laptops or Ipods	Vibrant Cafe on Main Floor; Student Commons Top Floor for Med & Graduate Students	Student Services Not in Building	Kiosks with Resource Librarian; Evolved into Digital Library	Would Have Liked Student Services in Building; Strong Link Between Pedagogy and Design
DUKE UNIVERSITY	Large and Small Group Learning Modeled after Law Schools; Focus on Flexibility	12 Station Clinical Skills Lab; 2 OR's / 1 ICU, Low to High Fidelity; Infrastructure to Support	Testing On-Line, No Dedicated Space; Material Accessed on Curricular Management System	Student Lounge with Rooftop Terrace; Dean's Group but No Societies or Learning Communities	Each Advisory Dean has Office with Living Room and Large Gathering Space	2 Floors Break Through to HS Library; Library Stays in Existing Building but Integrated	Focus on Flexibility and Inter-Professional Learning Spaces
COLUMBIA UNIVERSITY	Renovation of Library 2 Floors: Classrooms, Computer Simulation, Career Counseling	Upgrade Lecture; Trying Interprofessional; Downplay Wet Labs; 10 Room Sim	On Line Testing; Distance Learning; Experiment Upstate	Underground World; Food as Community Event / Study	Counseling Not Included; Left Out A Lot of Admin Space	Downsizing Dramatically	Multi-Phase Renovation and Addition: 150 KSF
UNIV. OF CALIF. LOS ANGELES	Low Slope Lecture with Collaboration + Learning Studio for Entire Class	18 Room Clinical Skills with Simulation in Hospital	On Line Computing 100 People Testing Capacity at a Time	Minimal Provision; Gym on Campus; Kitchenettes Only	Learning Community for 3rd / 4th Year; Pathways for M1 + M2	Elsewhere on Campus; Remote Access Model	Awaiting Big Donor for New Building: 250K SF Planned

Library, Lounge, and Learning Spaces



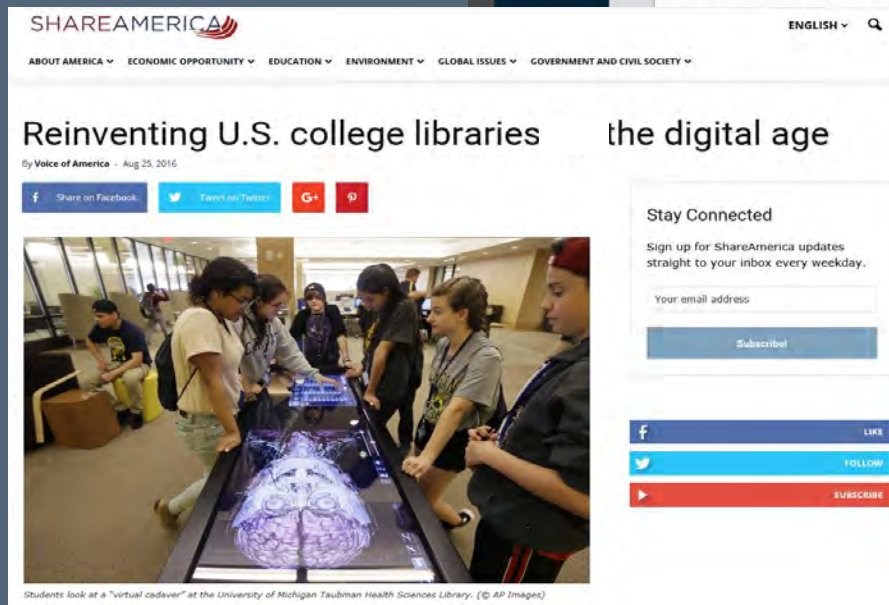
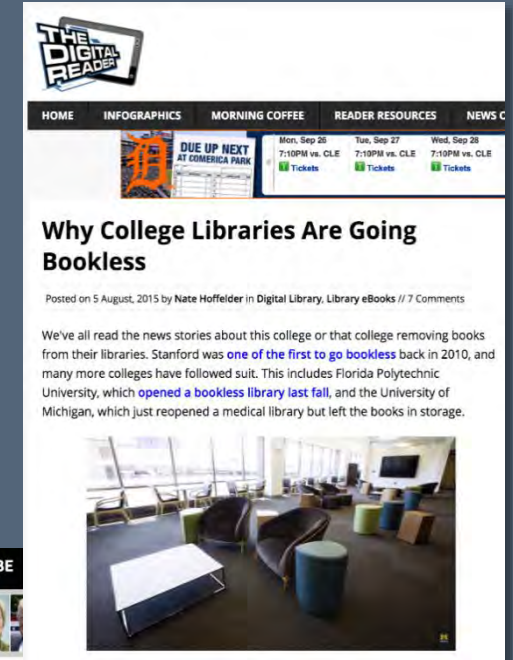
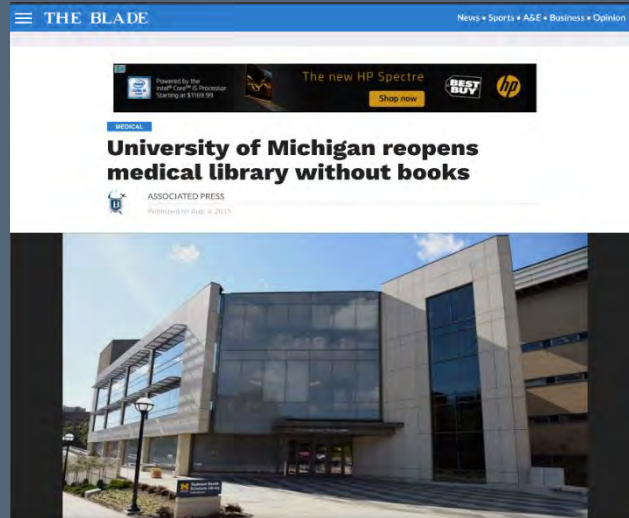
Adaptable + Scalable Planning



Modular Spaces to Fit Learning Needs



The Buzz: A Library Without Books



+1 Year Post-Occupancy

- Add light, add food, add rooms = education hub
- White board walls are great ideas – can they handle the use?
- Computer clusters may be at end of lifespan
- Students will make a lounge into whatever they need it to be
- When you build great space, the word gets out

Harrell Medical Education Building



UF

College of Medicine
UNIVERSITY of FLORIDA

Curriculum Themes



- Patient centered
- Collaborative, team-based learning and patient care
- Communication and clinical skills
- Experiential learning and assessment
- Application: “Flipped Classroom”
- Scholarship



Learner Centered: “Form Follows Function”



- Large and Small Group Collaborative Learning Spaces (~45%)
- Clinical Skills and Simulation (~30%)
- Essential Student + Curriculum Support Services (15%)
 - Admissions Office
 - Offices of Medical Education Student Affairs & Counseling
 - Physician Assistants Program
 - Reception / Gathering Space

“Form Follows Function” (continued)



- Individual Study and Community Student Space (10%)
- Foster Interaction: “Learner Collisions”
- Flexibility & Leverage Instructional Technology
- Future Needs

Pre-2012

UF

Shands
Hospital

Dentistry

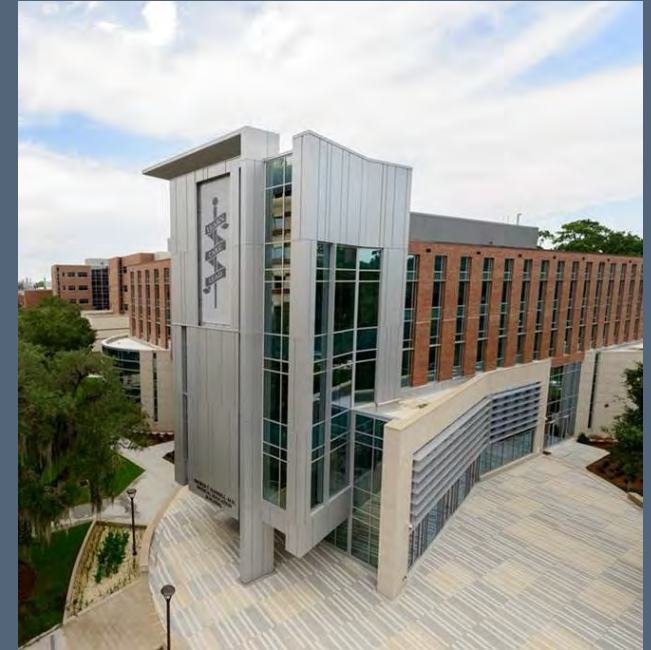
Medicine

Nursing
Pharmacy
Health
Professions

THE HMEB GATOR



Collaborative Learning



Collaborative Learning



Experiential Learning & Assessment



Facility Needs



Adaptable



Flexible Learning Spaces

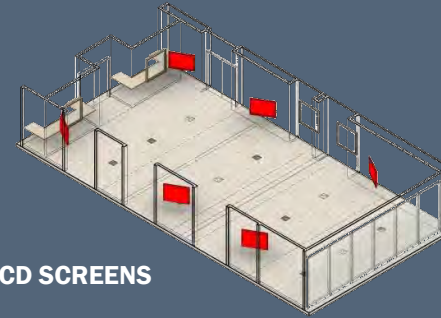
Planning: Experiential Theater



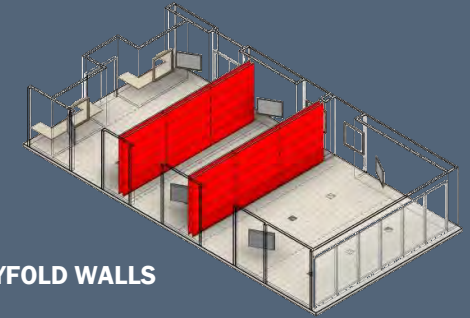
**FLOOR BOXES –
POWER / AIR**



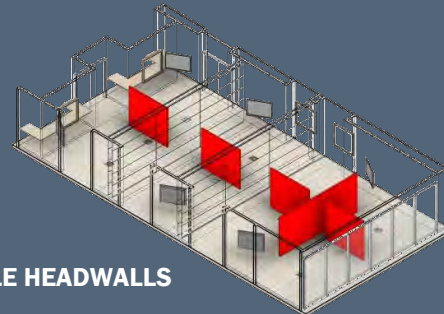
AV+LCD SCREENS



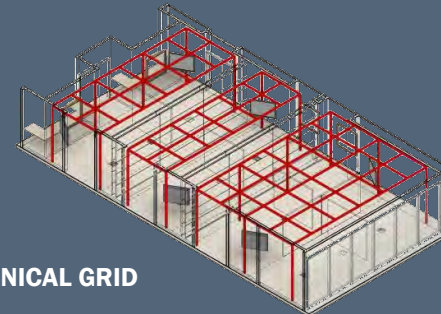
SKYFOLD WALLS



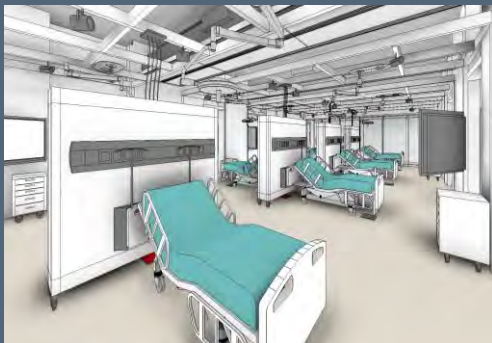
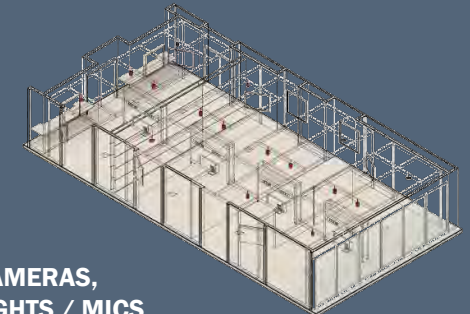
MOBILE HEADWALLS



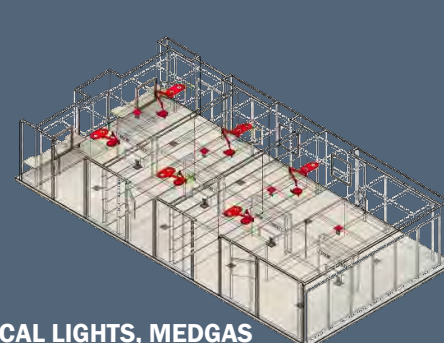
TECHNICAL GRID



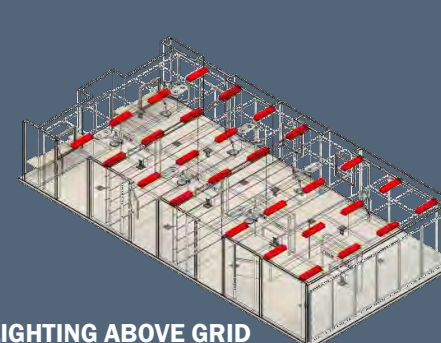
**CAMERAS,
LIGHTS / MICS**



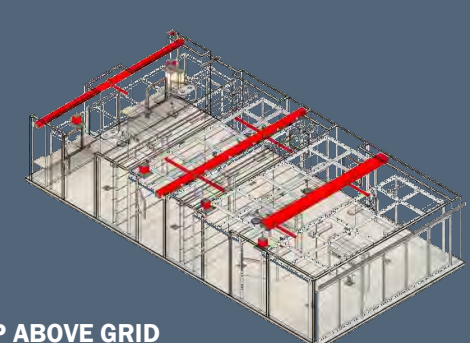
SURGICAL LIGHTS, MEDGAS



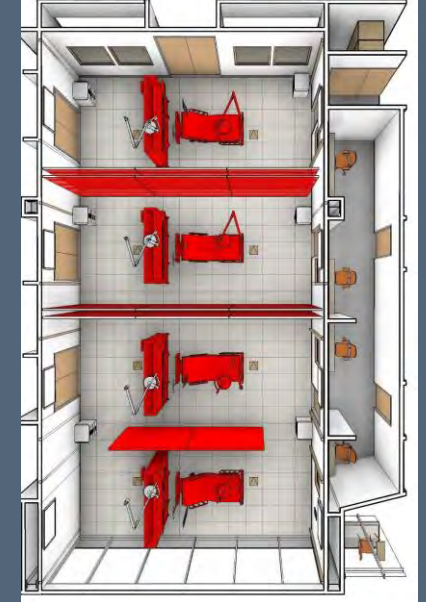
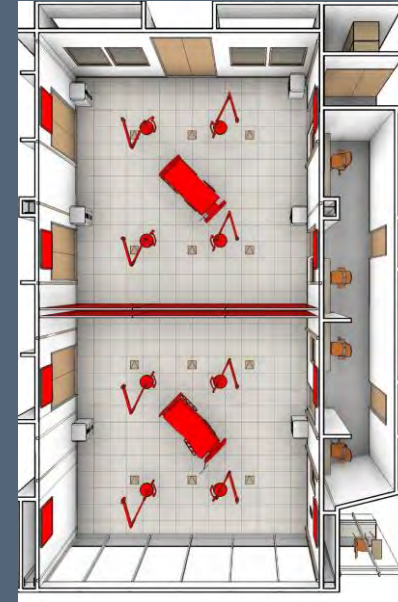
GEN LIGHTING ABOVE GRID



MEP ABOVE GRID



Planning: Experiential Theater



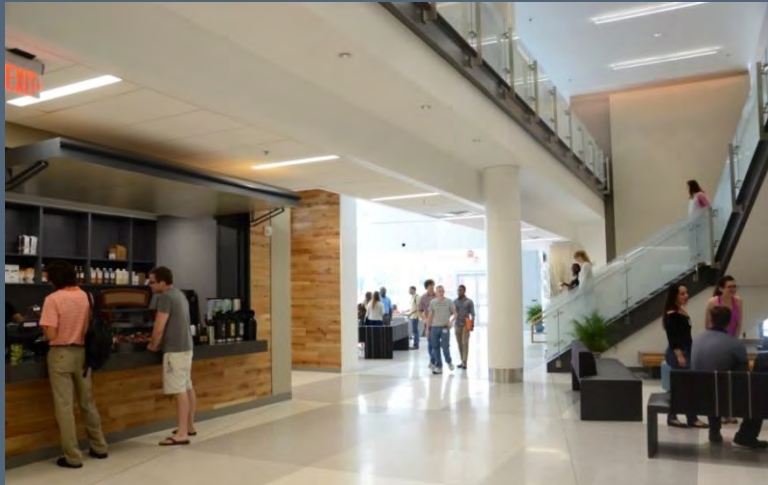
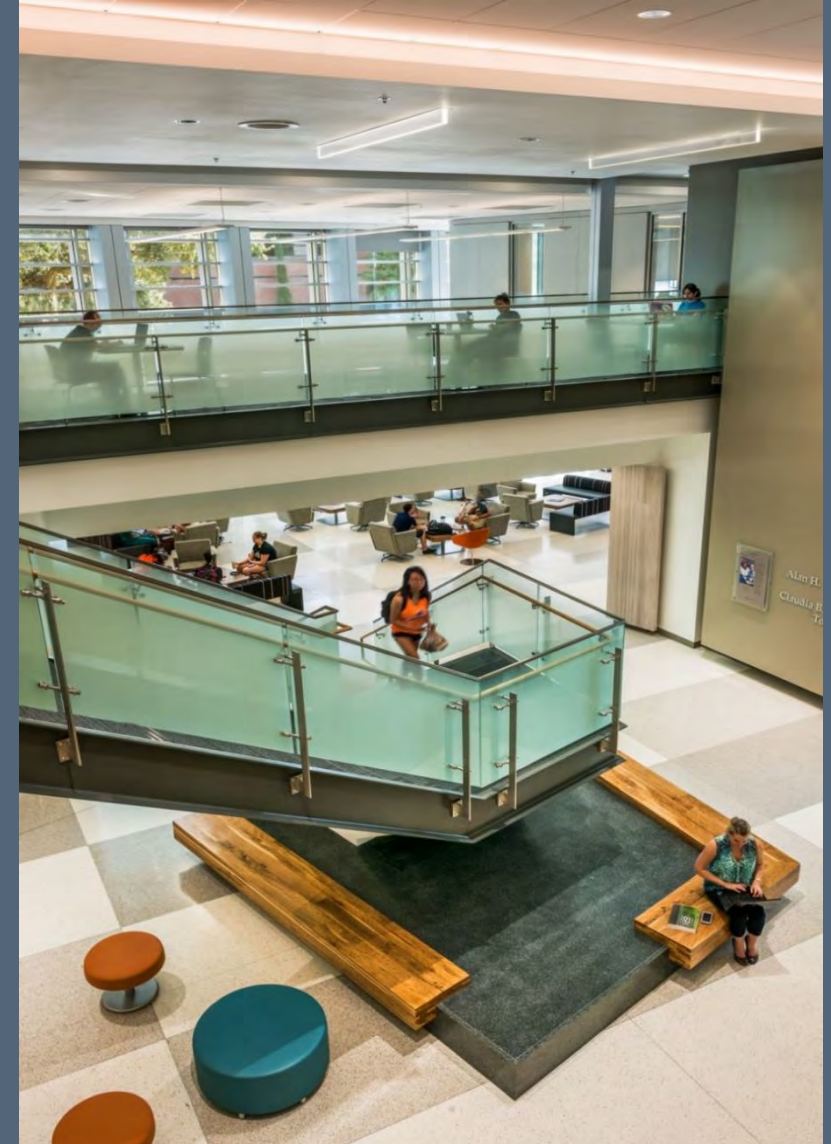
HEALTH [R+D] EDUCATION



Scalable: Experiential Theater



Social Collaboration



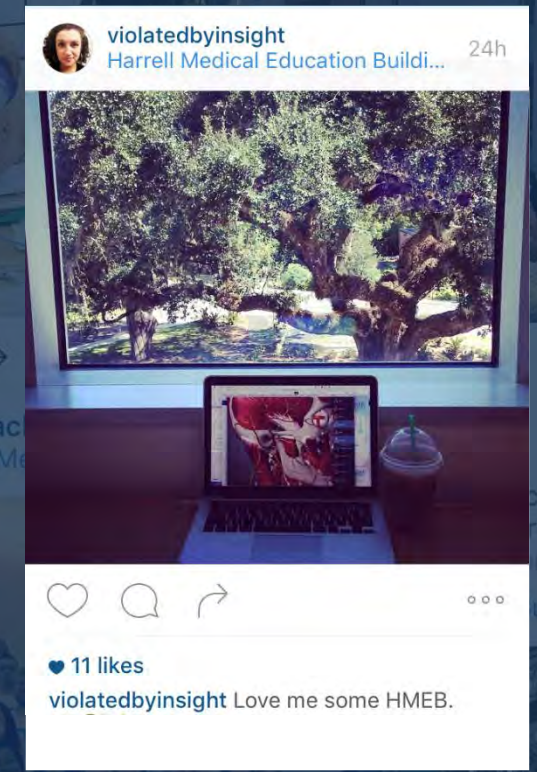
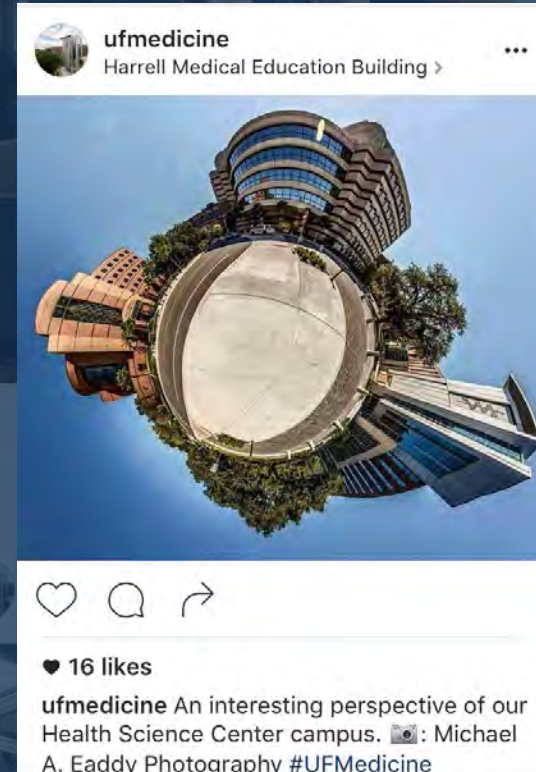
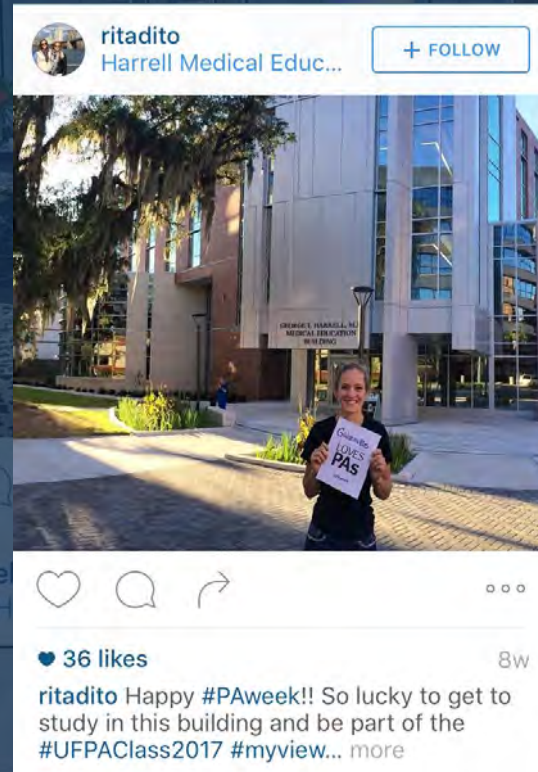
Funding Process



- **Total: \$44M**
- **Philanthropy (60%)**
 - Donors
 - UF Shands Hospital
- **UF Foundation Loan**
 - Tuition + Philanthropy
- **No State Funding**

The Buzz: Results + Outcomes

UF



- Admissions: HMEB reflects the College's commitment to education
- Student + Teaching Faculty involvement throughout the design

+1 Year Post-Occupancy

- Academic + Social “home” for students (cafe, open plan, daylight)
- Variety and Flexibility of learning spaces: Highly Valued
- High demand for simulation
- Faculty Adaptability + Development (learning studios and maximizing technology)
- High demand for events (admissions, receptions, poster presentations, etc.)
- Technology Support
- Balancing audio in the learning studios
- “Wink” walls
- “Birds and windows”

TRADELINE Three

1. Forecast a balanced space portfolio which aligns with future curriculum goals. Test formal + informal program types with the goal to evaluate re-purposing opportunities.
2. Engage in value determination of existing facilities for re-use. Assess which spaces are poorly utilized and not able to meet the goals of the future ... in some cases it may cost as much to renovate as to build new.
3. Identify the transformational goals of your initiative and no matter the container, apply these priorities to either solution pathway.

RENOVATE OR BUILD

Q&A



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