



# **Solving the Collaboration Equation for an Interdisciplinary Health Education Facility**

# Presenters

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Case Western Reserve University



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Senior Associate  
DLR Group | Westlake Reed Leskosky



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Vice President  
Turner Construction Company



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Senior Project Manager  
Donley's



## Building the Future of Health Education.

Commitment • Collaboration • Communication • Quality



# Health Education Campus



# Learning Objectives

1. **Develop** strategic partnerships, alliances, and relationships at multiple levels throughout all phases of a project.
2. **Engage** users and stakeholders in visioning, planning, and the decision-making processes.
3. **Initiate** foundational collaborative practices across all disciplines.
4. **Utilize** metrics to **evaluate** your project and **challenge** your team to continuously improve collaboration, performance, and quality.



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# Solving the Collaboration Equation: 2 + 2 + 2 + 4 = 1 TEAM



**Foster + Partners**



Case Western  
Reserve University  
School of Medicine

Cleveland Clinic  
Lerner College of  
Medicine

Case Western  
Reserve University  
Francis Payne  
Bolton School of  
Nursing

Case Western  
Reserve University  
School of Dental  
Medicine



At the core of Case Western Reserve University and Cleveland Clinic's Health Education Campus is one motto:

***Health care is a team sport.***

# The Team Can See You Now

Why Visit One Doctor When Some Offices Offer a Medical Entourage? Physician Shortage Drives Trend



Patients Are Looked After by a Team of Medical Professionals  
At Union Square Family Health Center in Somerville, Mass.



## Doctor

Kirsten Meisinger, supervises the medical team. She also diagnoses patients, performs procedures and prescribes medications.

## Social Worker

Paula Coutinho assists patients with needs like transportation and financial assistance. She also connects patients to behavioral health services for depression.

## Physician Assistant

Juliane Liberus handles routine consultations, manages lab results and helps patients with chronic diseases. She is the point person when the doctor isn't available.

## Pharmacist

Joseph Falinski advises patients on how to take drugs correctly and possible side effects and interactions. He can adjust dosages and help manage conditions like chronic pain.

## Medical Assistant

Fabiola Marcelin takes patients' vital signs and prepares them to see the doctor. A trained phlebotomist, she does blood work and tracks follow-up appointments.

## Registered Nurse

Amberly Killmer performs triage and directs some routine patient visits like prenatal counseling. She helps patients adopt healthier lifestyles.

## CWRU & CCF IPE definition:

“Interprofessional education is a global effort designed to prepare future professionals for the new collaborative future of health care. In it, students not only learn the kinds of expertise their colleagues from other disciplines can offer, but also how to work together more effectively.”

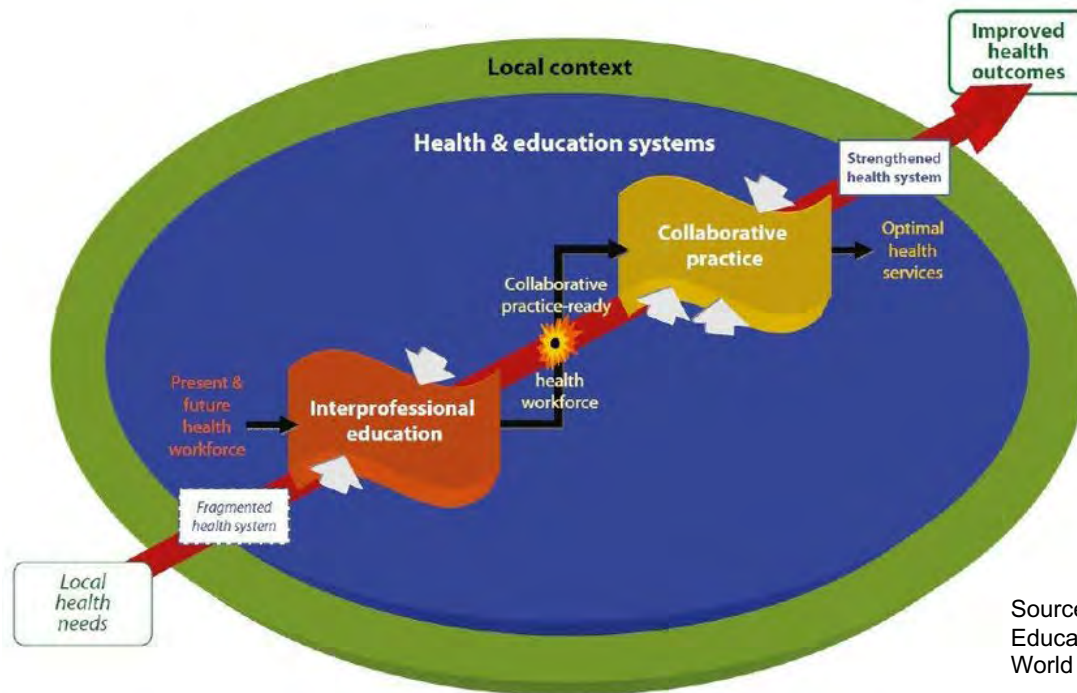


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Source: Framework for Action on Interprofessional Education & Collaborative Practice  
World Health Organization 2010

- Prepares “collaborative practice-ready” health team
- Collaborative practices strengthen and improve patient outcomes
- Provides more fulfillment to those providing the care
- Mitigation of the global health care crisis

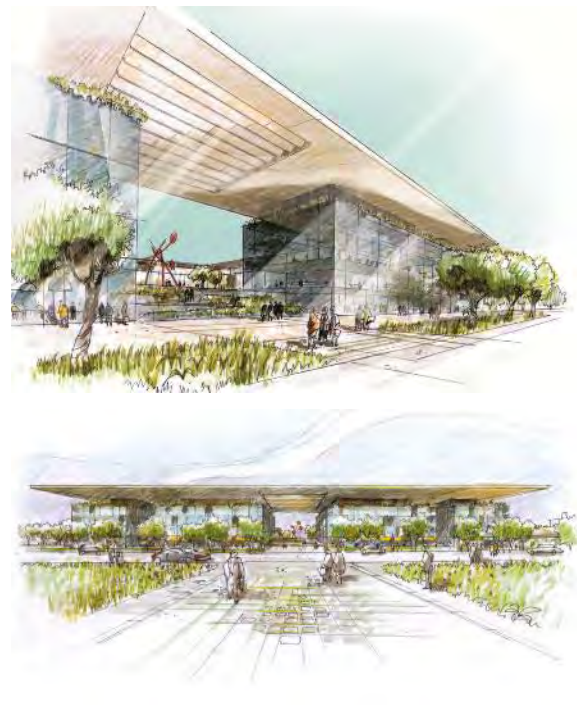
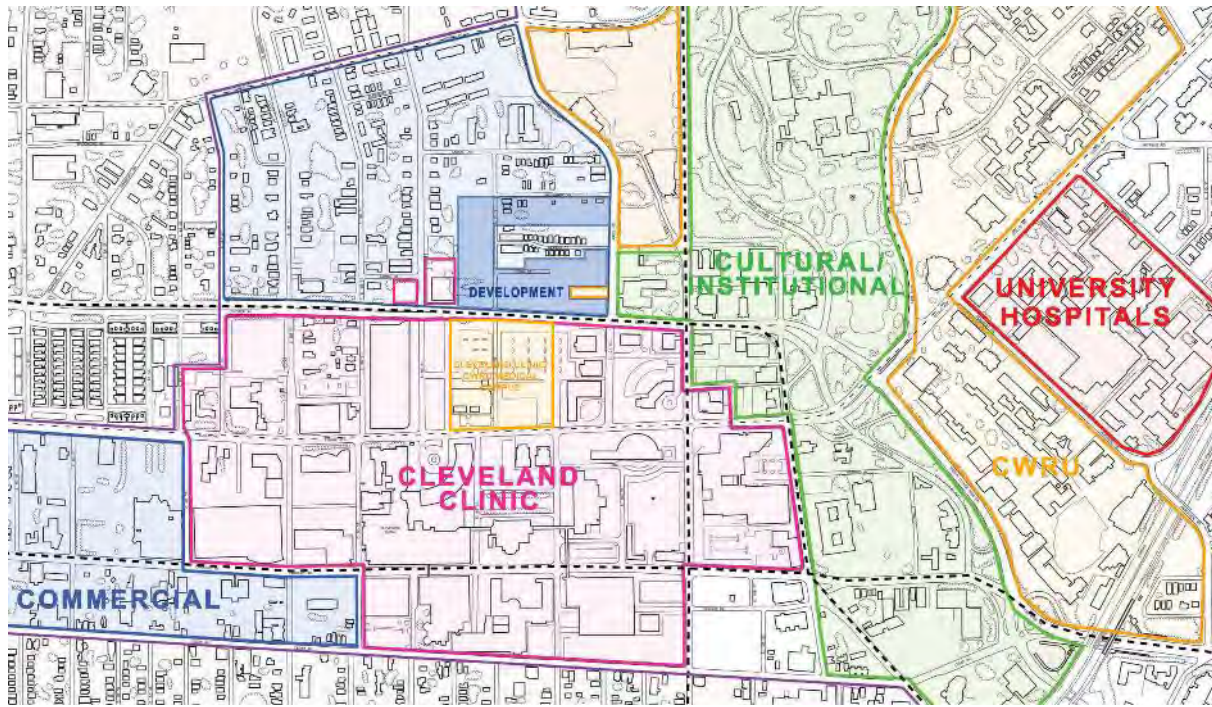
## Why IPE?



Founded and operated by CWRU students to serve the health needs of the Greater Cleveland community, free of charge.



**Integration/Activation in the Urban Fiber**



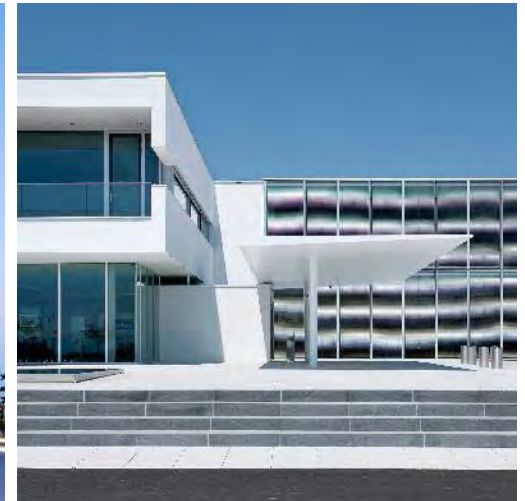
# Integration/Activation of the Urban Fiber

# Architect Selection

**Foster + Partners**

 DLR Group

Westlake  
Reed  
Leskosky



# Programming



Consolidated Program vs. Actual Summary : Reduced Scheme (with SD Comparison)

1 September 2014



## CASE WESTERN RESERVE UNIVERSITY - SCHOOL OF DENTAL MEDICINE 2.1 SIMULATION & PRE-CLINICAL

ID	SPACE	ORIGINAL PROPOSED CLINICAL PROGRAM		08.22.2014 PROPOSED CLINICAL PROGRAM		REMARKS		
		QTY	ASF/SPACE	TOTAL ASF	QTY		ASF/SPACE	TOTAL ASF
<b>2.1</b>	<b>SIMULATION &amp; PRE-CLINICAL</b>							
<b>2.1.1</b>	<b>TEACHING LABS</b>							
2.1.1.1	Comp. Care Wet Lab	2	160	320	2	160	320	Comprehensive Care Research
2.1.1.2	Comp. Care Dry Lab	1	160	160	1	160	160	
2.1.1.3	Plaster Wet Lab (16p)	1	800	800	1	800	800	
2.1.1.4	Dental Simulation Lab (8p)	1	800	800	1	800	800	8 Simulator Stations @ 100SF
2.1.1.5	Pre-Clinical Sim Lab (82p)	1	4,300	4,300	1	4,300	4,300	
2.1.1.6	Pre-Clinical Wet/Dirty Lab (42p)	1	2,100	2,100	1	2,100	2,100	Taught in 2 Sections
2.1.1.7	CAD/CAM Lab (8p)	1	200	200	1	200	200	
2.1.1.8	EFDA Teaching Lab (20p)	1	1,000	1,000	1	1,000	1,000	
				9,680			9,680	
<b>2.1.2</b>	<b>LAB SUPPORT</b>							
2.1.2.1	Comp. Care X-ray	1	80	80	1	80	80	Wants/floor-mounted Computer (Assume for Radiology Simulation)
2.1.2.2	Grading Box Room	1	200	200	1	200	200	
2.1.2.3	Storage	2	100	200	1	100	100	Reduce spaces, may be combined with 3.2.4
2.1.2.4	Supply Storage Room	1	100	100	1	100	100	
2.1.2.5	EFDA Storage Room	1	100	100	1	100	100	
2.1.2.6	Student Equipment Lockers	2	400	800	2	400	800	160 Lockers @ 3'w x 2'h x 2'd
				1,480			1,380	
<b>2.1.3</b>	<b>Classrooms</b>							
2.1.3.1	Flat Floor Lecture Hall (100s)	1	2,100	2,100	1	2,100	2,100	100p Divisible Classroom
2.1.3.2	Tiered Lecture Hall (90p)	2	2,250	4,500	2	2,250	4,500	Case Method Layout
2.1.3.3	Medium Group Rooms (24p)	5	600	3,000	5	600	3,000	Divisible into 12p Small Group Rooms
				9,600			9,600	

	Program NSF	Reduced Scheme NSF	Scheme Design NSF
<b>1. Medical Education</b>			
1.1 Virtual Anatomy Space	7,142	8,044	8,455
1.2 Classrooms	27,720	26,326	25,330
1.3 Miscellaneous Academic Space	750	0	719
1.4 CWRU SOM Administrative Space	10,447	8,441	8,833
1.5 OCLCM Administrative Space	5,898	5,047	5,067
1.6 Shared Administrative Space	8,720	9,333	8,896
<b>Total Medical Education</b>	<b>60,677</b>	<b>57,191</b>	<b>56,900</b>
<b>2. School of Dental Medicine</b>			
2.1 Simulation and Preclinical	22,320	22,014	23,298
2.2 Pre-doctoral Clinical Space	25,498	25,456	26,155
2.3 Graduate Education and Clinical Space	27,185	24,287	24,409
2.4 Faculty Practice	2,398	2,600	2,735
2.5 Administration	6,613	4,943	6,735
2.6 Community Dentistry	2,014	1,528	1,774
<b>Total School of Dental Medicine</b>	<b>86,028</b>	<b>81,628</b>	<b>85,106</b>
<b>3. School of Nursing</b>			
3.1 Academic Space	10,780	10,231	11,031
3.2 Learning Resource Center	4,675	4,992	4,780
3.3 Research	1,940	1,580	1,692
3.4 Administrative Space	21,712	21,166	21,269
<b>Total School of Nursing</b>	<b>39,107</b>	<b>37,969</b>	<b>38,772</b>
<b>4. Shared Space</b>			
4.1 Simulation and Clinical Skills Space	14,423	14,269	16,529
4.2 Classrooms	1,450	591	688
4.3 Student Space	40,790	26,537	30,415
4.4 Shared Audiovisual & Information Technology	3,028	2,443	2,549
4.5 Building Support	13,575	9,045	7,759
<b>Total Student Space</b>	<b>73,266</b>	<b>51,885</b>	<b>57,940</b>
<b>Total NSF</b>	<b>289,078</b>	<b>228,673</b>	<b>238,718</b>

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# Space Utilization Studies

Classroom Utilization 50p Case Method Classroom #1																				
Fall, week 1					Fall, week 2					Fall, week 3					Fall, week 4					
Mon 10/1	Tues 10/2	Wed 10/3	Thur 10/4	Fri 10/5	Mon 10/8	Tues 10/9	Wed 10/10	Thur 10/11	Fri 10/12	Mon 10/15	Tues 10/16	Wed 10/17	Thurs 10/18	Fri 10/19	Mon 10/22	Tues 10/23	Wed 10/24	Thur 10/25	Fri 10/26	Mon 10/29
8:00 AM	FM Seminars Call of the Profession (32p)					FM Seminars Call of the Profession (32p)	Basic Science of Energy Metabolism (32p)		Histologic Organization of the Heart (32p)		FM Seminars Call of the Profession (32p)	Blood Pressure and Valve Function		Basic EP Lab: Ion Channels (32p)		FM Seminars Call of the Profession (32p)			Histologic Org of the	
8:30 AM																				
9:00 AM																				
9:30 AM																				
10:00 AM	Multi-System Immune Mediated Disease	Targeted Therapies in Rheumatic Diseases		MSG: Applying	Moved from Medium Group Room	Pathology of Vascular and Autoregulation	Functional Anatomy of Stroke (32p)		Brain Trauma (32p)		FM Seminars Devising Health Communities	Inflammation and Demyelination (32p)		Neurobiological and Psychological Aspects of the	FM Seminars Devising Health Communities	GP1 LAB3: Hip & Knee/GP2	GP2 LAB4: Ankle & Foot / GP2		Basic Autonomic Nervous System	Functional Anatomy of the Visual System
10:30 AM																				
11:00 AM																				
11:30 AM																				
12:00 PM																				
12:30 PM																				
1:00 PM																				
1:30 PM																				
2:00 PM																				
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3:00 PM																				
3:30 PM																				
4:00 PM																				
4:30 PM																				
5:00 PM																				
5:30 PM																				
Friday																				
Total hrs used	4	6.5		5	2	4		4	6.5	15	4	6.5		4.5	6	7	1	3	5.5	2
hrs available	45				16.5	45				45	45			45	45	45			45	12
utilization rate				34.4%					36.7%					33.3%					50.0%	

Spring, week 1					Spring, week 2					Spring, week 3					Spring, week 4			
Mon, Feb 4	Tues, Feb 5	Wed, Feb 6	Thur, Feb 7	Fri, Feb 8	Mon, Feb 11	Tues, Feb 12	Wed, Feb 13	Thur, Feb 14	Fri, Feb 15	Mon, Feb 18	Tues, Feb 19	Wed, Feb 20	Thur, Feb 21	Fri, Feb 22	Mon, Feb 25	Tues, Feb 26	Wed, Feb 27	Thur, Feb 28
8:00 AM	FM Seminars Call to Ethical Practice (32p)			MSG: Suicide Risk Assessment	Anticoagulation Risk Management: Peripheral Arterial	Lat Physiology of Water Hemostasis (32p)				FM Seminars Call to Ethical Practice (32p)	Mechanism of			MSG: Action Potential (17)	FM Seminars Call to Ethical Practice (32p)	Basic Kinematics (32p)		
8:30 AM																		
9:00 AM																		
9:30 AM																		
10:00 AM	Pathology/Immunology of Inflammation and Infections (32p)	FM Seminars Health Systems (32p)	Molecular Basis of Heroin/Neurobiology of Lung Cancer	Clinical Aspects of Lung Infections (32p)	FM Seminars Health Systems (32p)	Pathology: Coronary and Peripheral Artherosclerosis	FM Seminars Health Systems (32p)	TBL: Absorption/Distribution/Metabolism (32p)	Pharmacokinetics (32p)	Clinical Care Medicine (32p)	Exchange week/Optional workshop (32p)	Acid Base (32p)		MSG: Cardiac Pulmonary Integration (32p)	FM Seminars Call to Ethical Practice (32p)	Basic Kinematics (32p)		
10:30 AM																		
11:00 AM																		
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5:30 PM																		
6:00 PM																		
6:30 PM																		
Friday																		
Total hrs used	2	4	4.5	5.5	2	4	4	2	4.5	2	4	4.5	8.5	8.5	1	4		
hrs available	45				16.5	45	45			45	45			45	45	36		
utilization rate				35.6%					36.7%					42.2%				

Average 34.2%



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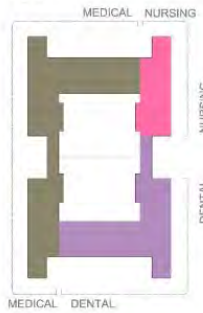
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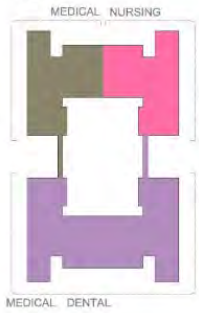
# Design Thinking with Solutions In Mind



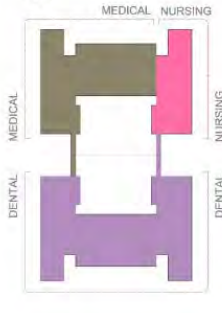
Level  
01



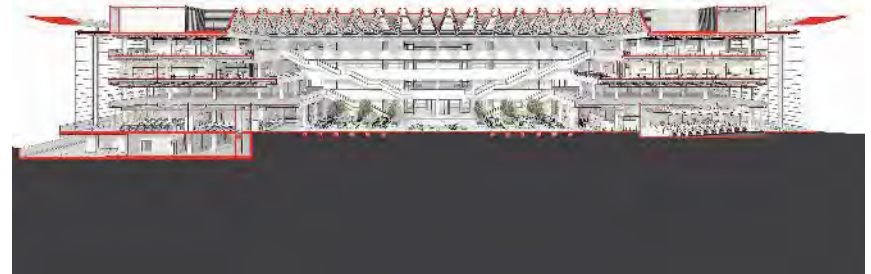
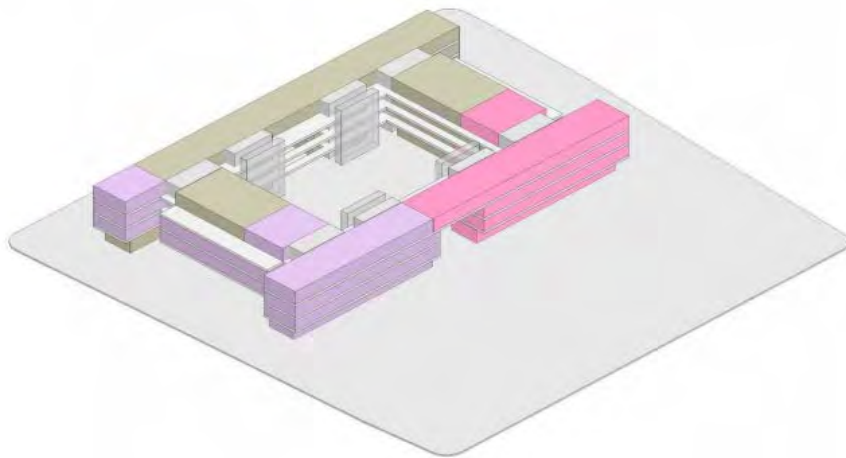
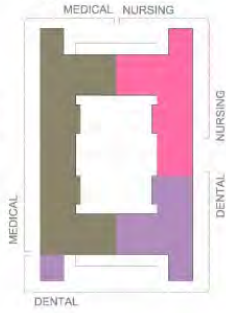
Level  
02



Level  
03



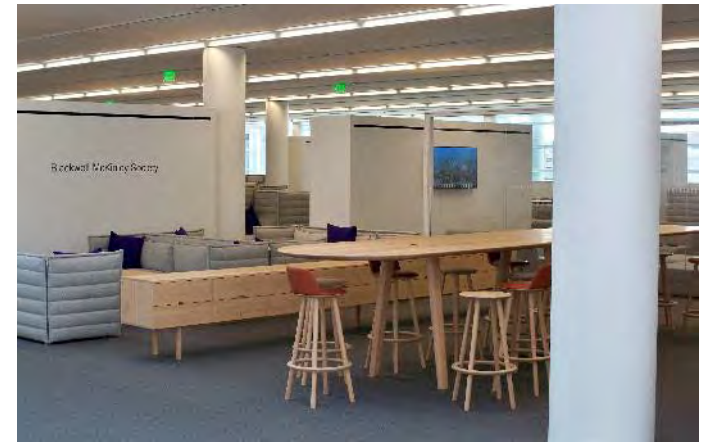
Level  
04



# Original Four Building Concept



# Design Thinking with Solutions In Mind



# Design Thinking with Solutions In Mind



# Technology



[Hololens](#)



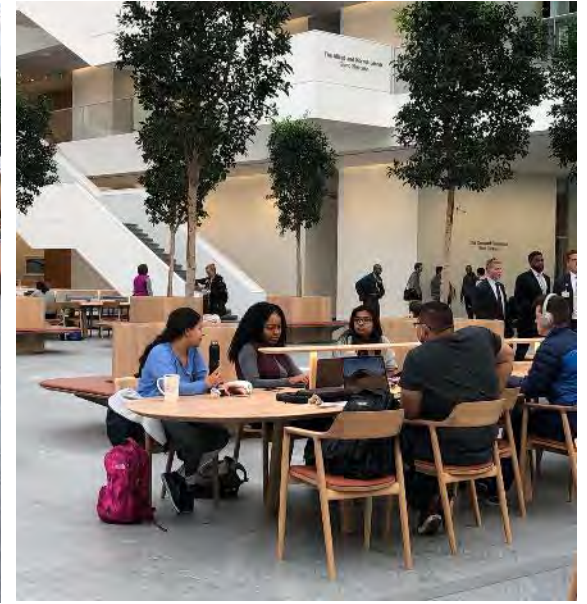
## HoloLens

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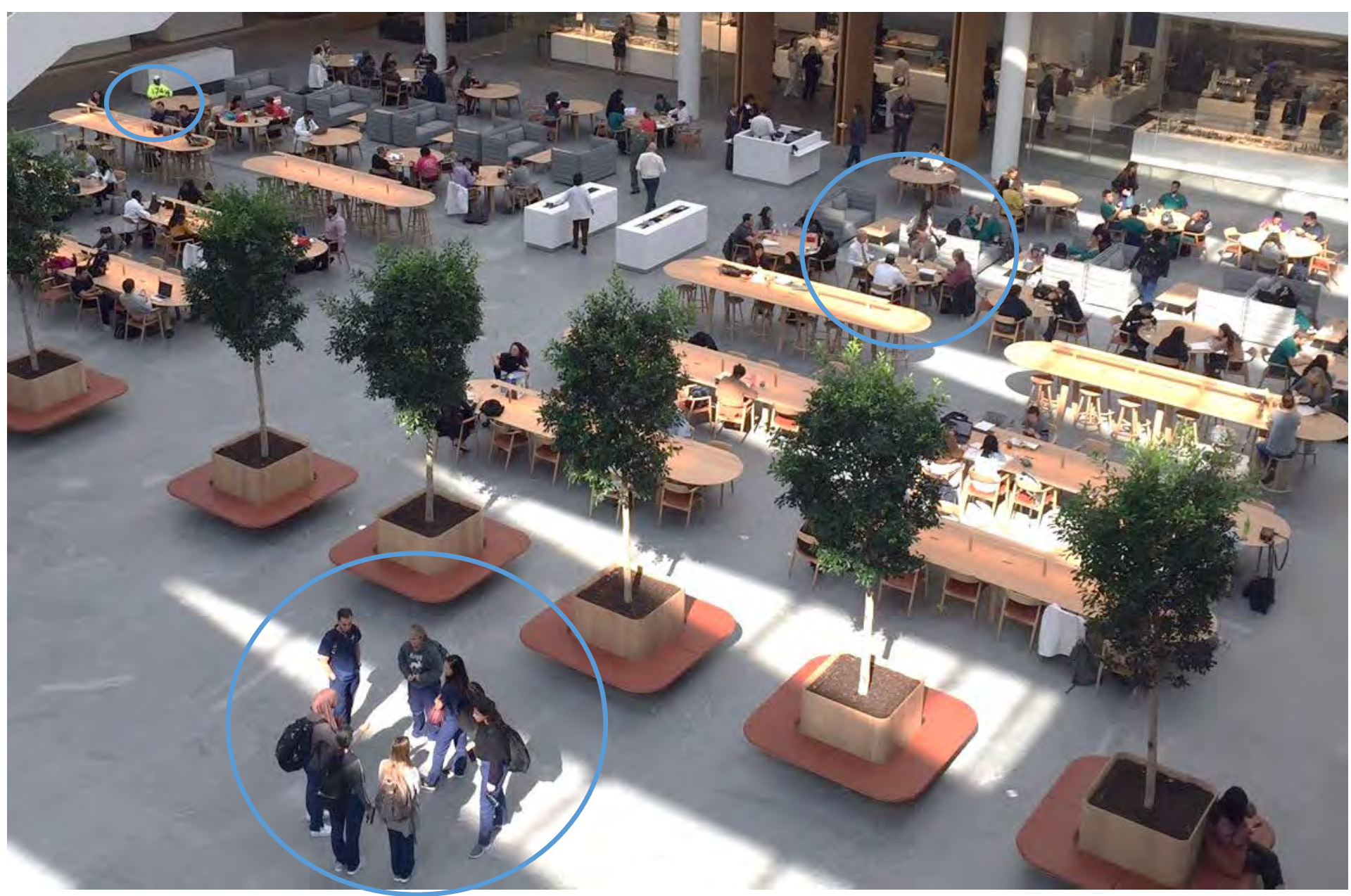
# Intersections



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**Immersive Collaborative Outcome**

# Learning Objectives

- ✓ **Develop** strategic partnerships, alliances, and relationships at multiple levels throughout all phases of a project.
- ✓ **Engage** users and stakeholders in visioning, planning, and the decision-making processes.
- 3. Initiate** foundational collaborative practices across all disciplines.
- 4. Utilize** metrics to **evaluate** your project and **challenge** your team to continuously improve collaboration, performance, and quality.



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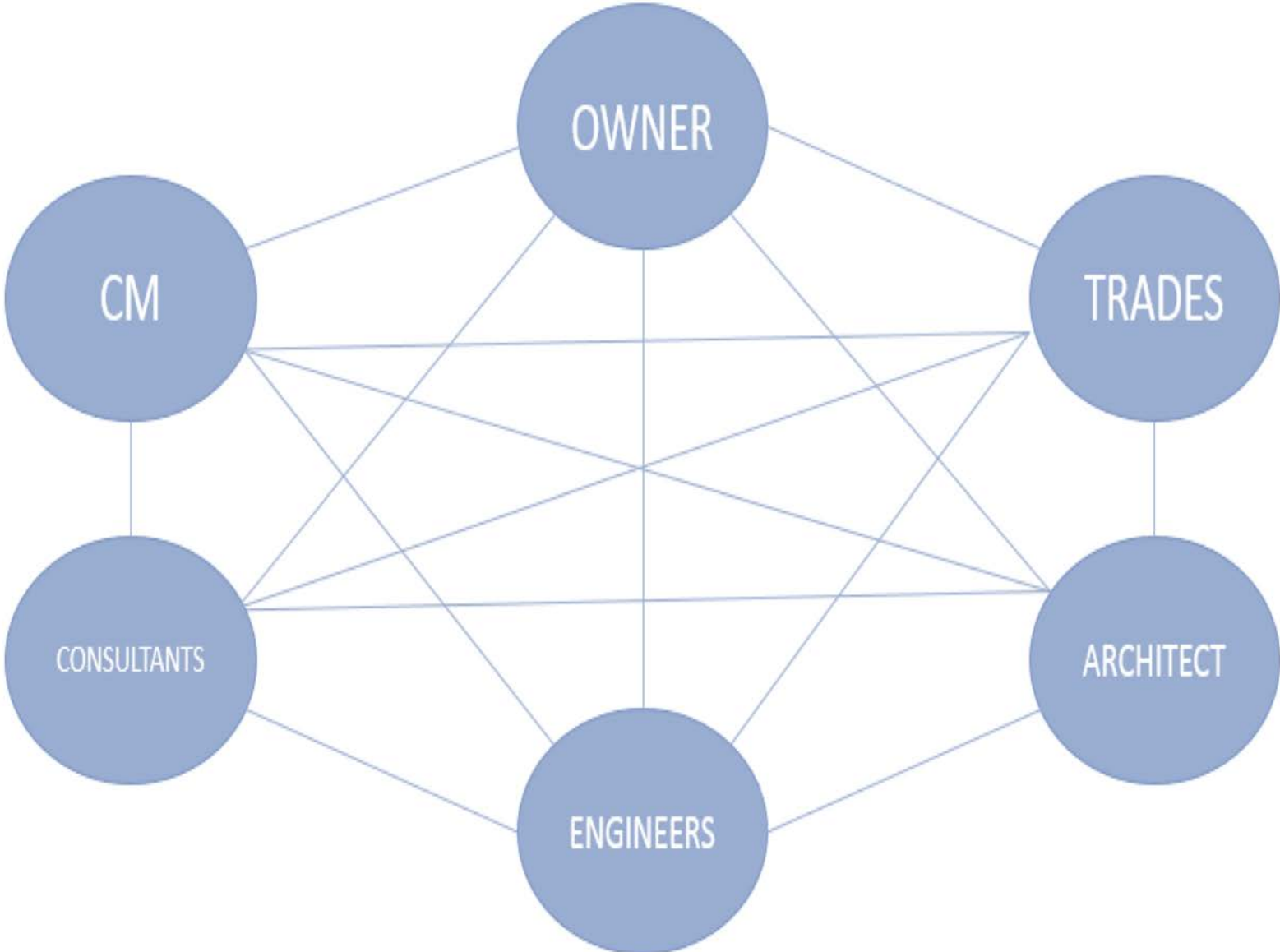


# Construction



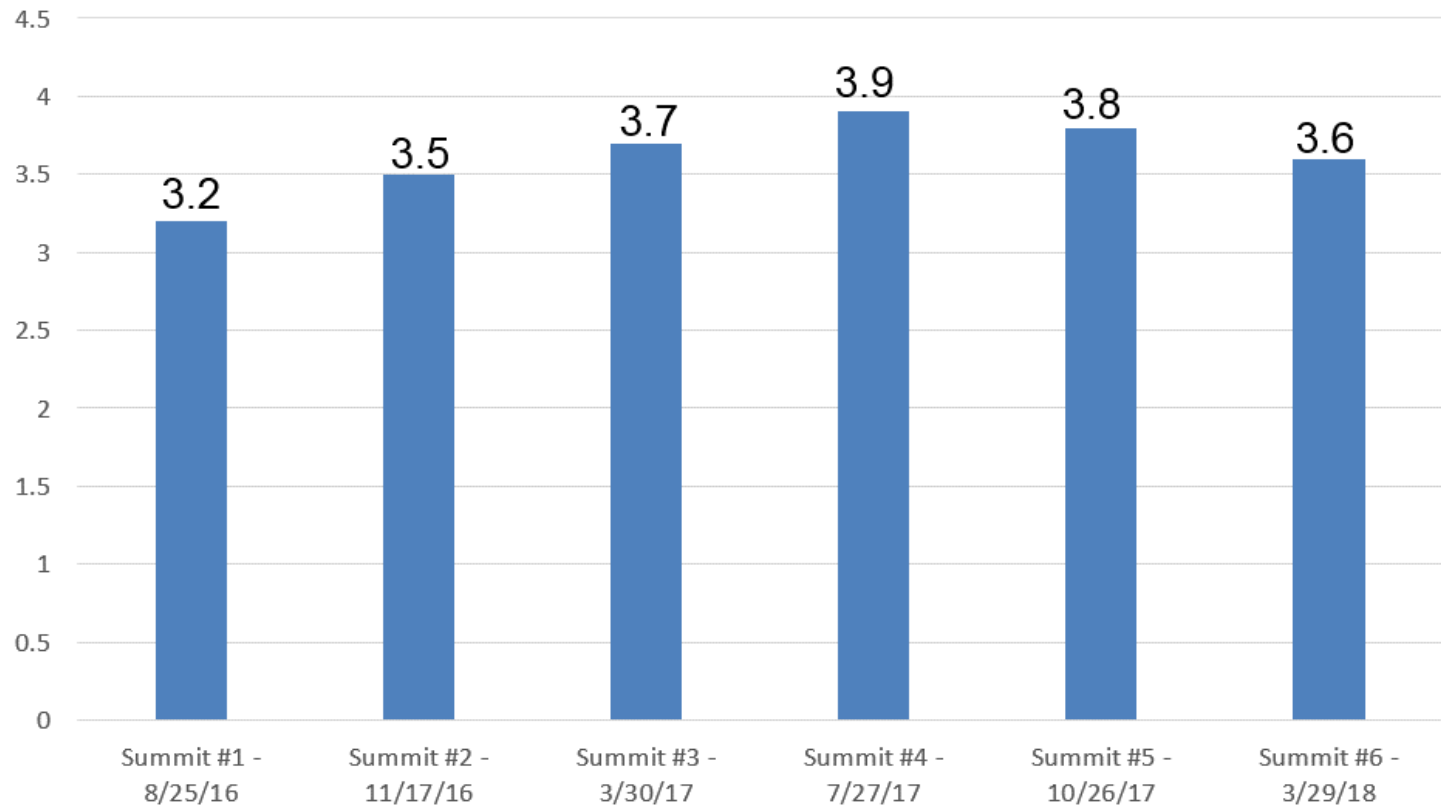
 **Donley's - Turner**

# Project Culture





# Comparison of Team Surveys



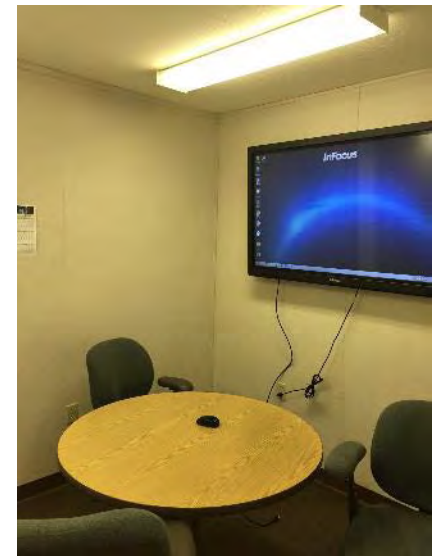
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# Co-Location



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# Design Assist

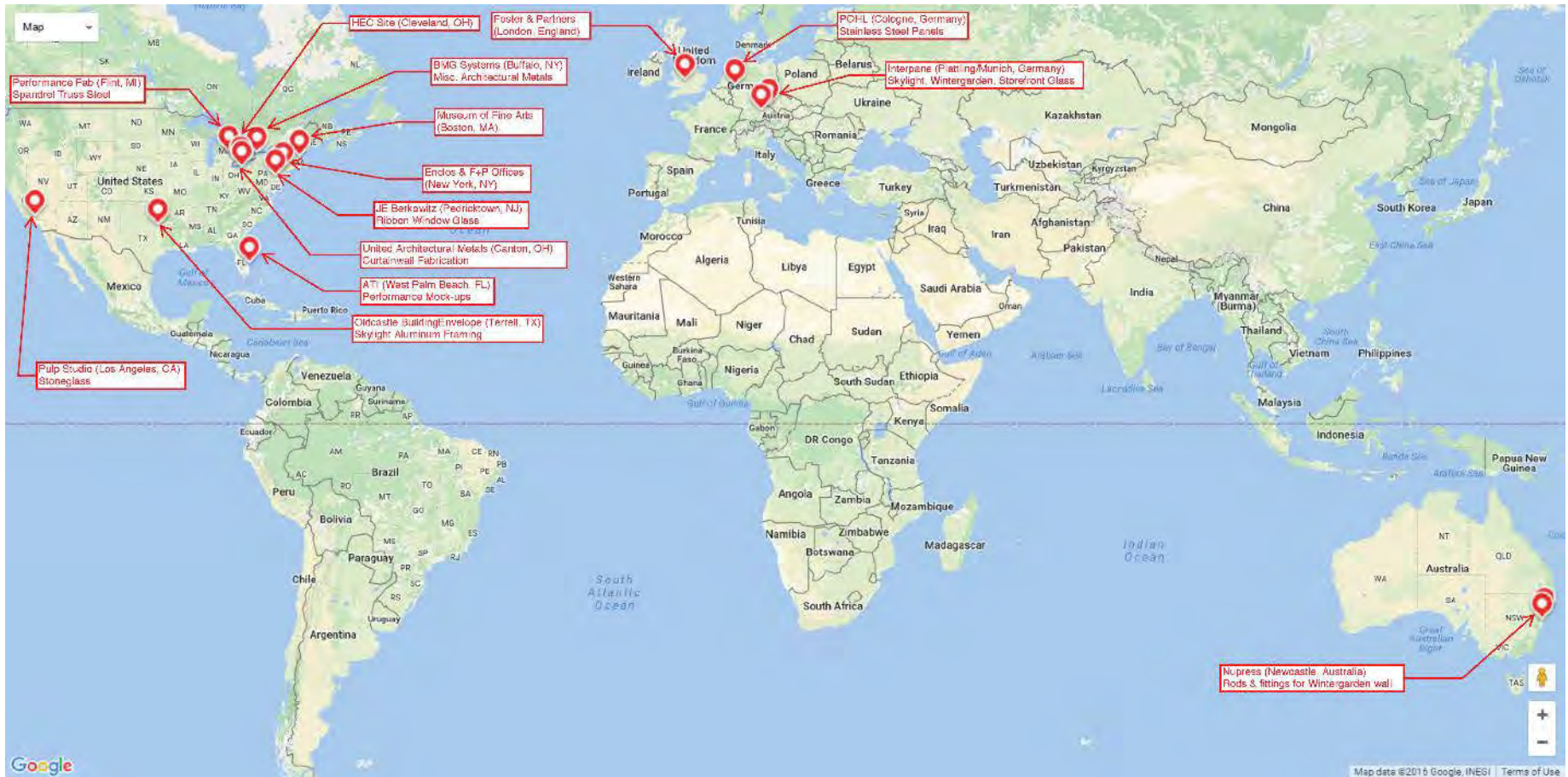


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# Quality



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# Quality



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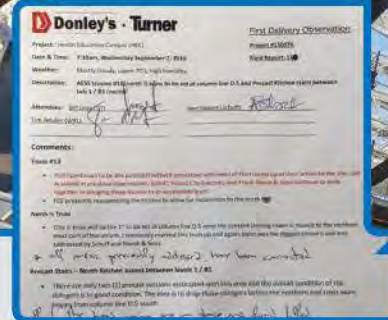
## QUALITY PLAN

Clarify expectations



Shop inspections

1st delivery inspections



1st work inspections

Work complete accepted



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# Constraint Log

- Concise Commitments
- Timely Commitments
- Team Constraint Log
- Two Constraint Logs
  - Design
  - Construction



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# High Priority Focus List

1. Is there a clear problem identified?
2. Do we have the correct attendees?
3. Do we have team engagement?
4. Is progress being made outside of this meeting?
5. Are weekly commitments accomplished?



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# Percent Plan Complete

1	2	3	4	5		PPC
					7/3/2018	60%
					7/10/2018	80%
					7/17/2018	40%
					7/24/2018	50%
					7/31/2018	43%
					8/7/2018	85%



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# Morning Huddle

- 7 Minute Safety Huddle – daily
- Stretch and Flex – daily



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# Lessons Learned: Daily Huddles – Last 15 minutes of the day



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# Community Benefits Success



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# Lessons to Take Home

- ✓ **Develop** strategic partnerships, alliances, and relationships at multiple levels throughout all phases of a project.
- ✓ **Engage** users and stakeholders in visioning, planning, and the decision-making processes.
- ✓ **Initiate** foundational collaborative practices across all disciplines.
- ✓ **Utilize** metrics to **evaluate** your project and **challenge** your team to continuously improve collaboration, performance, and quality.



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# Solving the Collaboration Equation for an Interdisciplinary Health Education Facility

# HEALTH EDUCATION CAMPUS

Cleveland, OH | 475,000 GSF

## SAFETY HIGHLIGHTS

Recordable Incidents This Month: 0  
Recordable Incident Rates: (Incidents per 100 Full-Time Employees)



Lost Time to Date: 4

Manhours to Date: 795,909

Safety Orientation Attendees to Date: 1,583

## SCHEDULE HIGHLIGHTS

Activities:

- 01. Feb Lecture Hall Stair Install Completed
- 02. Feb Domestic Booster Pump Start-Up
- 08. Feb Atrium Perimeter Walkway Concrete Poured
- 13. Feb L2 & L3 Fire Sprinkler System Hydrostatic Testing Completed
- 16. Feb South Penthouse Hydrostatic Testing Completed
- 26. Feb Atrium Floor Box Install Started



## TEAM MEMBER SPOTLIGHT



OFFICE



FIELD



**Sonya Gordon**  
Field Project Administrator



**Caitlin McGuckin**  
Ironworker Steward

*"Worrying does not take away tomorrow's troubles, it takes away today's peace."*

*"You can do anything once."*

FROM: Ohio  
BIRTHDAY: September 19  
COMPANY: Donley's  
YEARS IN INDUSTRY: 1  
FAVORITE MOVIE: John Wick (1 & 2)  
FAVORITE FOOD: Lasagna  
BEST THING ABOUT CLE: The Westside Market  
FUN FACT: She owns a compound miter saw and knows how to use it.

FROM: Arkansas  
BIRTHDAY: July 4  
COMPANY: Forest City  
YEARS IN INDUSTRY: 4  
FAVORITE MOVIE: The Sandlot  
FAVORITE FOOD: Pasta  
BEST THING ABOUT CLE: The Cavaliers  
FUN FACT: She likes to knit in her spare time.

## QUALITY HIGHLIGHTS

Number of Request for Information to Date: 923 of 6,600 statistically predicted  
Request for Information Outstanding: Down by a net of 19

Number of Submittals to Date: 1,143  
Submittals Outstanding: Down by a net of 12 (includes submittals for record)

First Work Updates: Penthouse Traffic Coating ..... Signed Off on 2/6/18  
Atrium Truss Louver ..... Signed Off on 2/13/18  
Level 2 Group Room Millwork ... Signed Off on 2/22/18

Coordination Efforts:

BIM Update ..... Projector Lift Clashes - Design Team Resolution in Progress

## BUDGET HIGHLIGHTS

