



March – 2024

Creating Project Certainty

FULCRO*f*
creating project certainty

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WWW.FULCRO.CO.UK



Fulcro **CREATE PROJECT CERTAINTY** by integrating talented **PEOPLE, PROCESS** and **TECHNOLOGY**.

We are:

- Innovative in nature
- Collaborative in spirit
- Accommodating in the extreme
- Creative to the core
- Practical in our knowledge and application

Our mantra is **People + Process + Technology**.

We strongly believe the right **People** adopting the correct **Processes** while utilising appropriate **Technology** delivers;

“FASTER – BETTER – FOR LESS”



WHAT WE DO

“Creating Project Certainty”

We create nD digital blueprint of the design that all stakeholders refer and contribute, this enables;



Enhanced Profit



Risk Reduced



Added Value

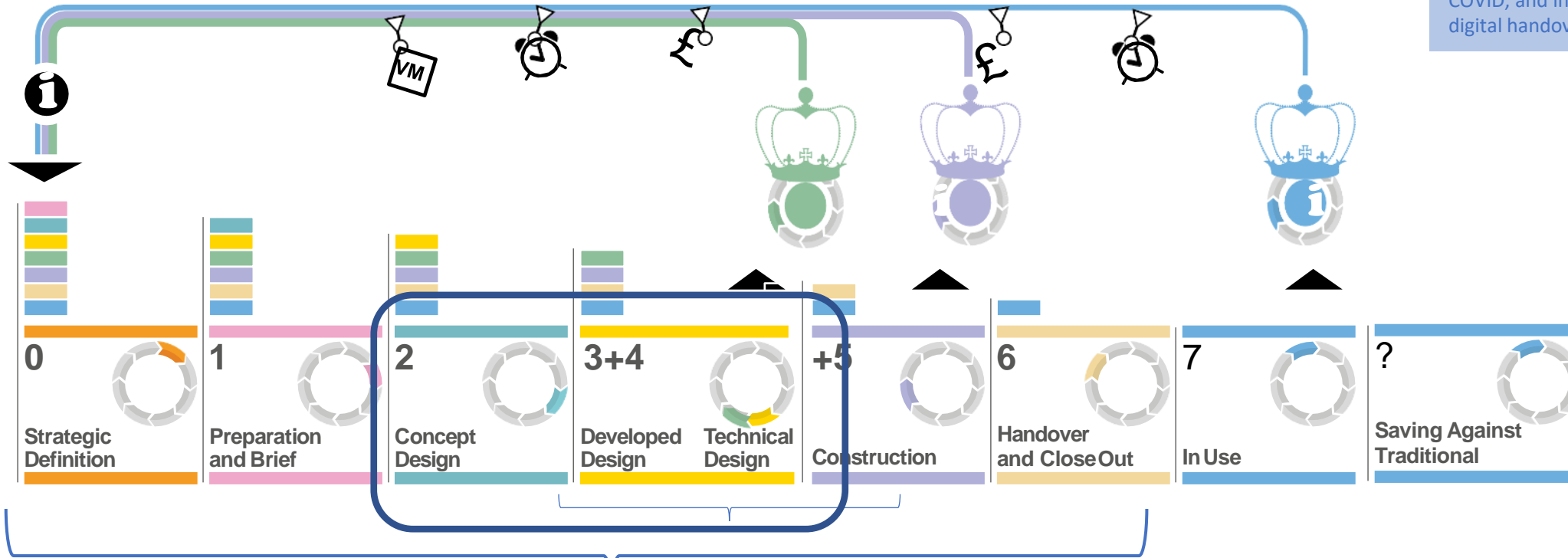


Higher Quality



The Fulcro Way

[+11% saving against capital expenditure]
 Advance II Project, Dudley College, delivered during COVID, and included a full digital handover.



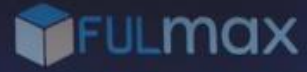
Concurrent Design via Digital Prototyping
 -Faster
 -Improved Quality
 -Added Value


 Fulcro Enables Project Certainty

4.2%
 Average Saving against forecast cost plan



#creatingprojectcertainty



www.fulmax.co.uk



[+11% saving against capital expenditure]
 Advance II Project, **Dudley College**, delivered during COVID, and included a full digital handover.

24
 week installation of basement services reduced to
8 WEEKS

Fulcro Stats:

NHS

125+ Clients and growing
 330 Projects and growing
 670,000 project hours and increasing

On average Fulcro can enable a **4.2%** cost saving against capital expenditure targets.

Against **£3.7 Billion**, the "Fulcro Way" has the potential to help save the NHS over **£155 Million**.



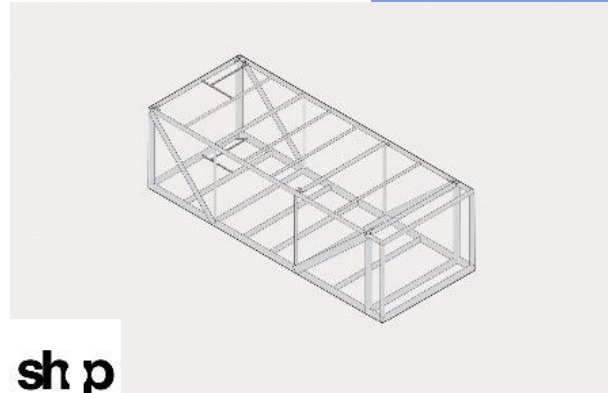
B2 – 461 Dean Street
[Brooklyn, New York]



B2 – 461 Dean Street [Brooklyn, New York]

- ⦿ 322' Tall / 32 Floors
- ⦿ 346,000 Gross SF
- ⦿ 363 Rental Units
- ⦿ 4,000 Gross SF Ground Floor Retail
- ⦿ LEED Silver Certification
- ⦿ 100% Occupied – Operated by Graystar Real Estate Partners
- ⦿ 4.5 CAP / No Discount to Market

Amenities: Lobby, 24-hour doorman, fitness center, lounge, game room, yoga/dance studio,



sh p

 FullStack
Modular

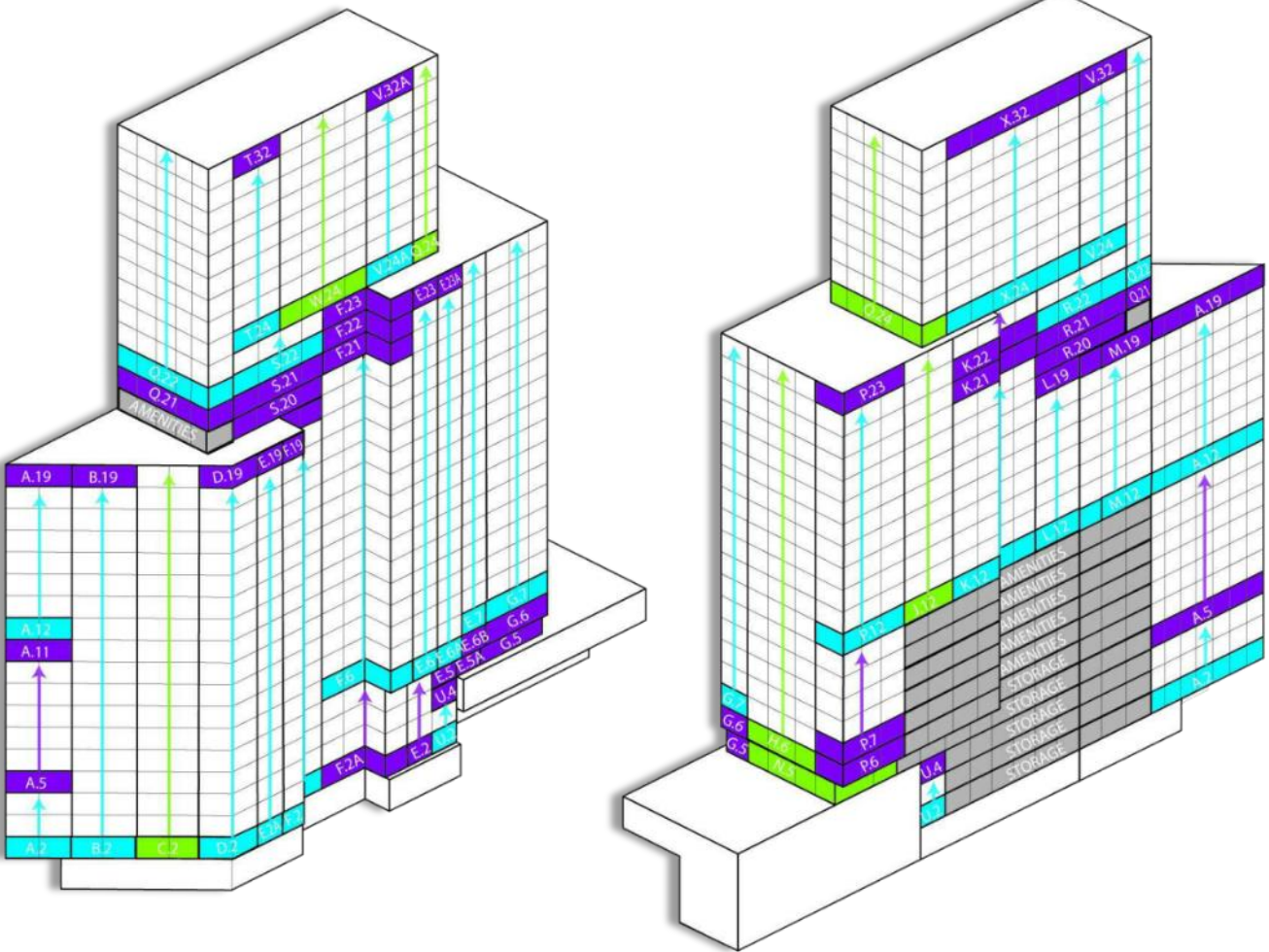
ARUP

 FULCRO
creating project certainty

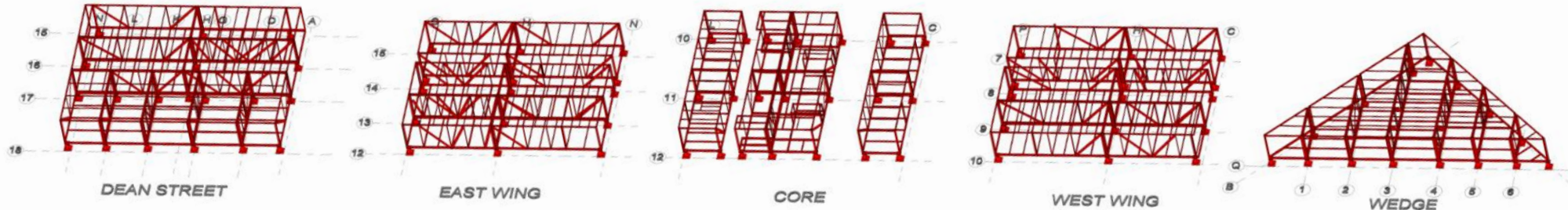


Volumetric Design – Modules (mods)

- 363 – Rentable Units
- 93 – Units Types
- 930 – Steel Chassis
- 419 – Bathroom Pods



Volumetric Design – Modules (mods)



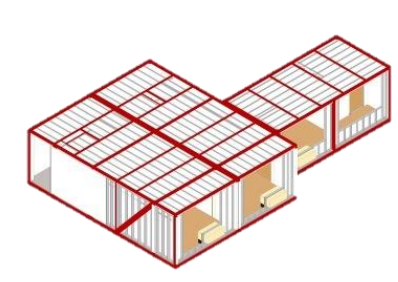
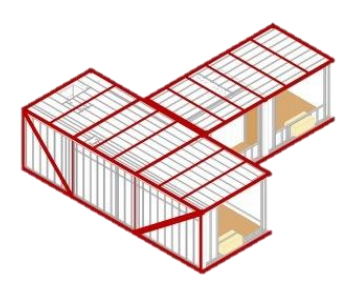
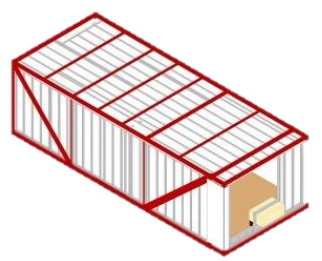
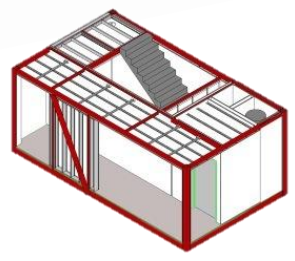
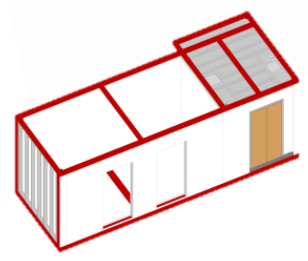
ELEVATOR
MODULE

STAIR
MODULE

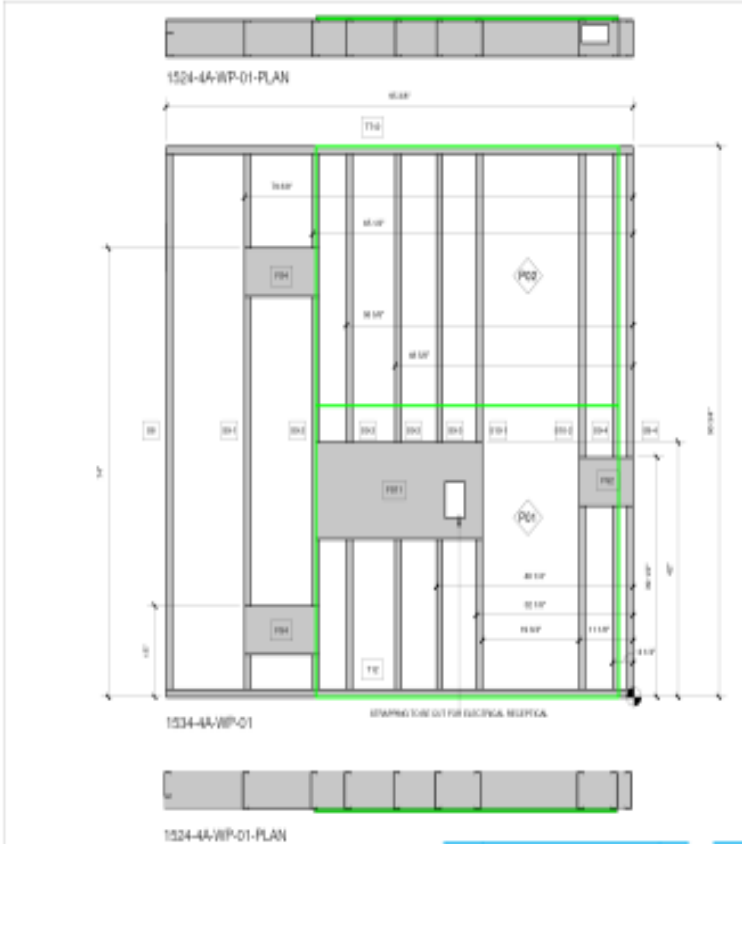
STUDIO
MODULE

1 BEDROOM
MODULES

2 BEDROOM
MODULES



Volumetric Design – Modules (mods)

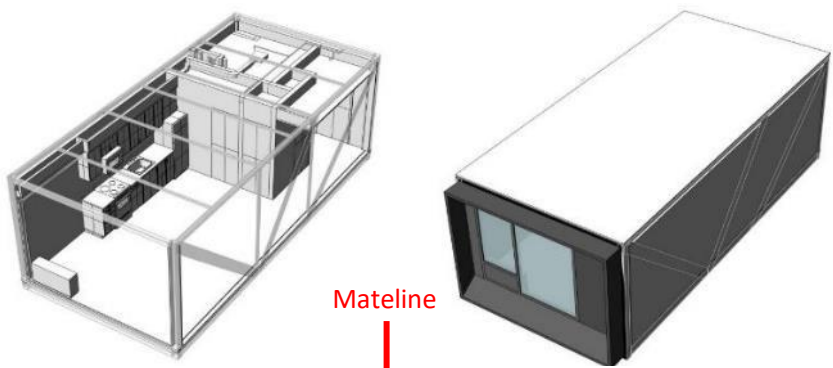


BILL OF MATERIALS - 4A-WP-01

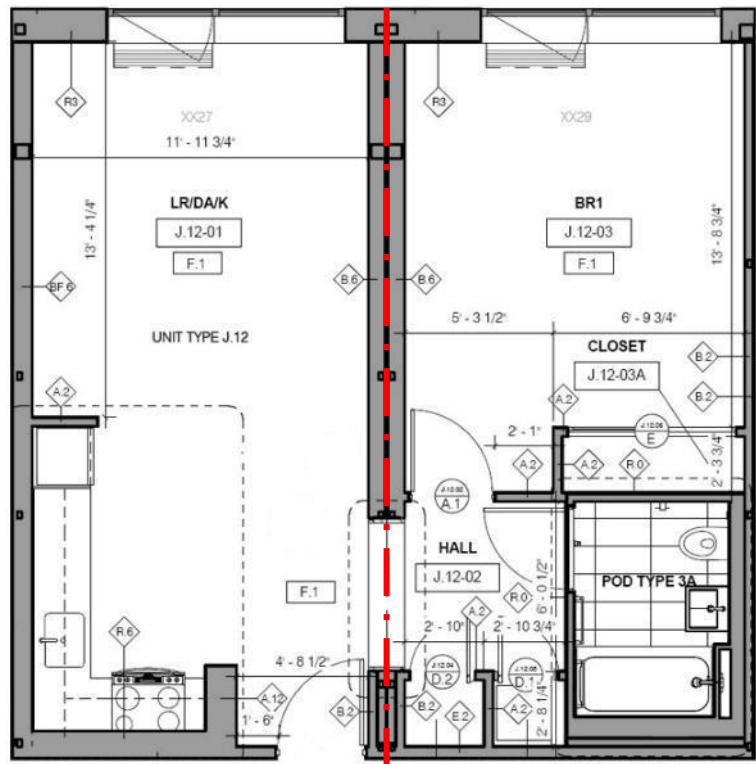
Mark	Type	Description	Length	Count
S0	400S125-30	Stud - 4" - 20 Gauge	90 5/8"	1
S9-1	600S125-30	Stud - 6" - 20 Gauge	90 5/8"	1
S9-2	600S125-30	Stud - 6" - 20 Gauge	90 5/8"	2
S9-3	600S125-30	Stud - 6" - 20 Gauge	90 5/8"	1
S9-4	600S125-30	Stud - 6" - 20 Gauge	90 5/8"	2
S10-1	600S125-54	Stud - 6" - 18 Gauge	90 5/8"	1
S10-2	600S125-54	Stud - 6" - 18 Gauge	90 5/8"	1
T12	600T125-30	Track - 6" - 20 Gauge	90 3/8"	1
TT12	600T125-30	Track - 6" - 20 Gauge	90 3/8"	1
F52	306FS-43	Flat Strap - 8" Wide - 18 Gauge	11"	1
F54	306FS-43	Flat Strap - 8" Wide - 18 Gauge	15 1/8"	2
F811	1600FS-43-2	Flat Strap - 16" Wide - 18 Gauge	34 3/8"	1

Mark	Material	Length	Height
P01	5/8" 4 x 8' CeraArmor Plus	61 7/8"	48"
P02	5/8" 4 x 8' CeraArmor Plus	61 7/8"	42 3/4"

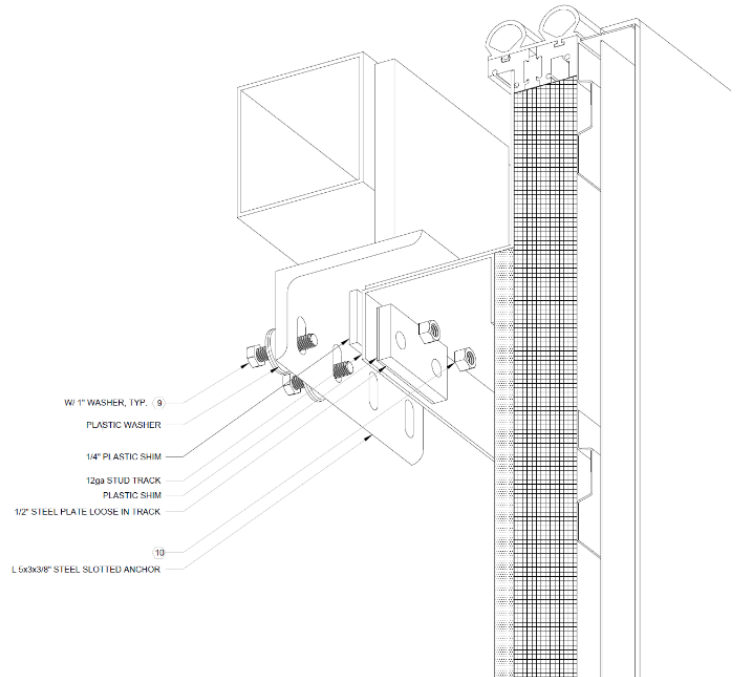


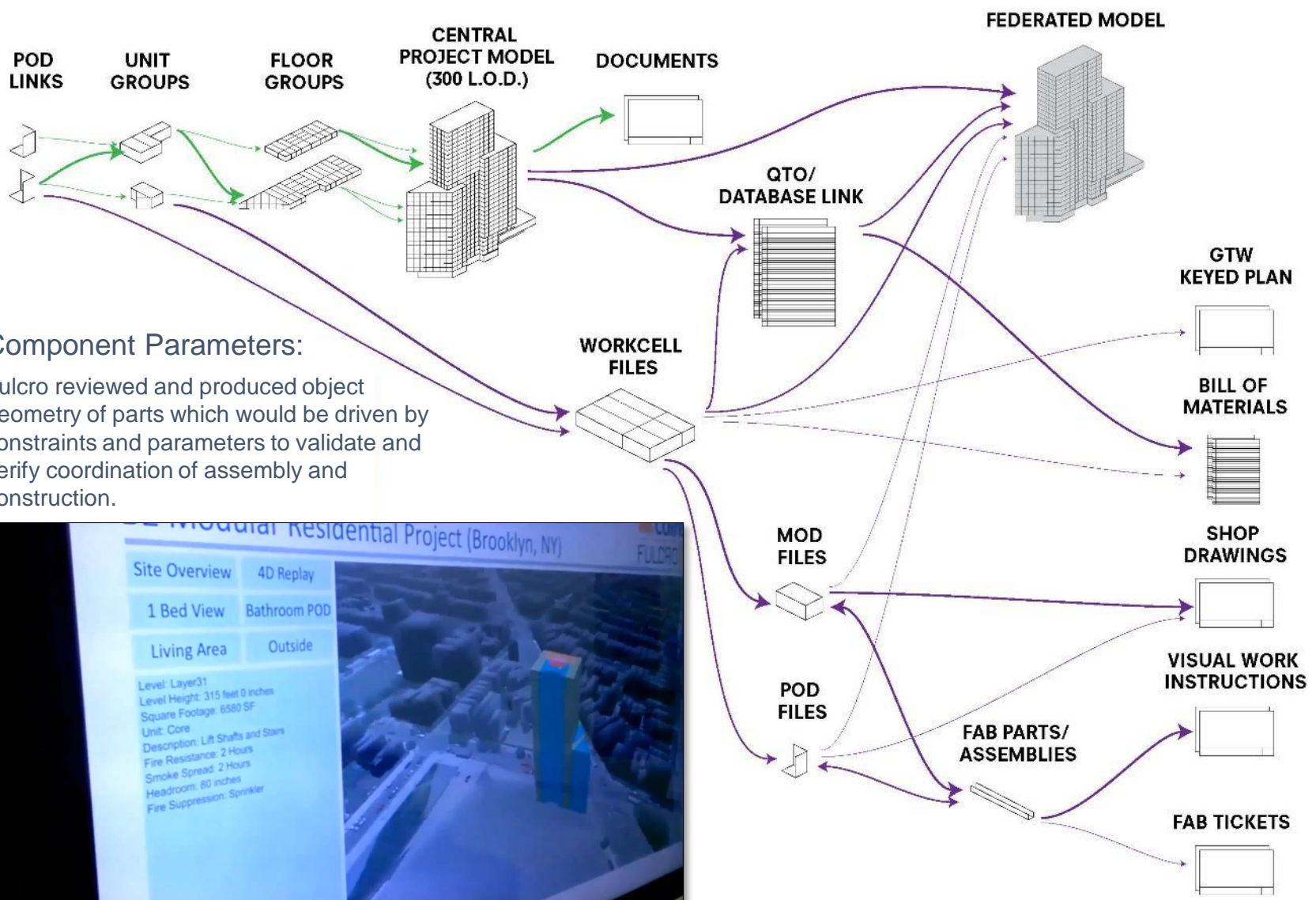


Mateline

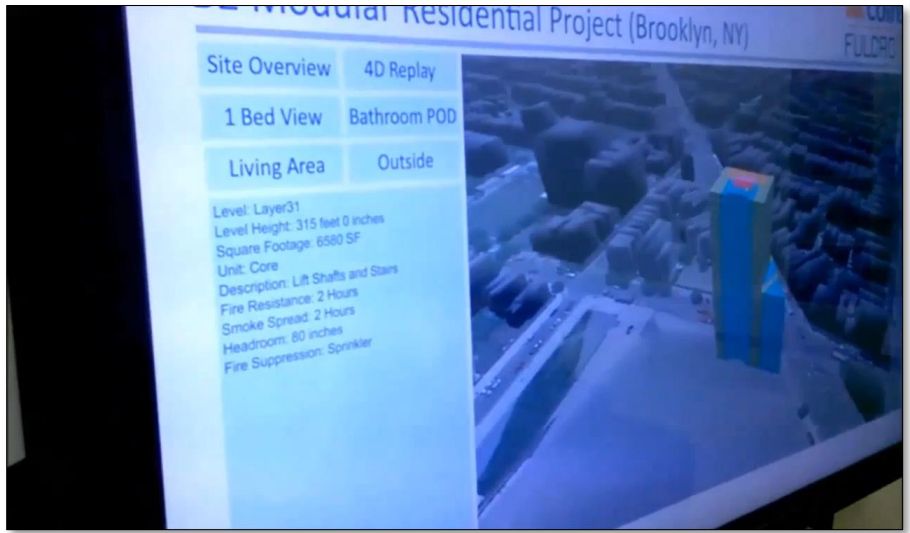


Typical 1 Bedroom Unit





Component Parameters:
 Fulcro reviewed and produced object geometry of parts which would be driven by constraints and parameters to validate and verify coordination of assembly and construction.



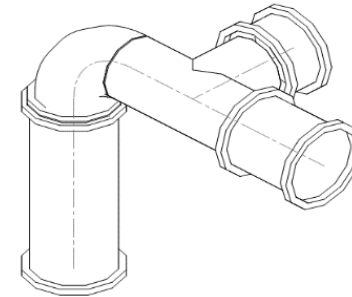
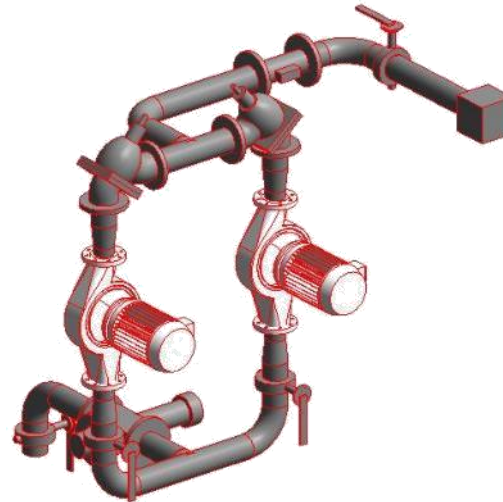
Parametric Modelling

Variations of different design options defined and agreed. Placed into a selection matrix.

Design options created in the digital model and validated.

Selected spool drawings created ready for selection.

	Circuit type	Flow Range	Pressure Drop	Pump	Pipe Diameter	Design Option
Circuit 1	CT	2 L/s - 3.55 L/s	150 Pa/m - 200 Pa/m	Arm Strong 4380 (80 - 250)	65	C1-OPP-001
	CT	3.5 L/s - 5 L/s	200 Pa/m - 250 Pa/m	Arm Strong 4380 (80 - 250)	80	C1-OPP-002
	CT	5 L/s - 7.5 L/s	250 Pa/m - 310 Pa/m	Arm Strong 4380 (80 - 250)	100	C1-OPP-003
	CT	7.5 L/s - 9 L/s	310 Pa/m - 420 Pa/m	Arm Strong 4380 (100 - 290)	125	C1-OPP-004
Circuit 2	CT	2 L/s - 3.55 L/s	150 Pa/m - 200 Pa/m	Arm Strong 4380 (80 - 250)	65	C2-OPP-001
	CT	3.5 L/s - 5 L/s	200 Pa/m - 250 Pa/m	Arm Strong 4380 (80 - 250)	80	C2-OPP-002
	CT	5 L/s - 7.5 L/s	250 Pa/m - 310 Pa/m	Arm Strong 4380 (80 - 250)	100	C2-OPP-003
	CT	7.5 L/s - 9 L/s	310 Pa/m - 420 Pa/m	Arm Strong 4380 (100 - 290)	125	C2-OPP-004
	VT	2 L/s - 3.55 L/s	150 Pa/m - 200 Pa/m	Arm Strong 4380 (80 - 250)	65	C2-OPP-005
	VT	3.5 L/s - 5 L/s	200 Pa/m - 250 Pa/m	Arm Strong 4380 (80 - 250)	80	C2-OPP-006
	VT	5 L/s - 7.5 L/s	250 Pa/m - 310 Pa/m	Arm Strong 4380 (80 - 250)	100	C2-OPP-007
	VT	7.5 L/s - 9 L/s	310 Pa/m - 420 Pa/m	Arm Strong 4380 (100 - 290)	125	C2-OPP-008
Circuit 3	VT	2 L/s - 3.55 L/s	150 Pa/m - 200 Pa/m	Arm Strong 4380 (80 - 250)	65	C3-OPP-001
	VT	3.5 L/s - 5 L/s	200 Pa/m - 250 Pa/m	Arm Strong 4380 (80 - 250)	80	C3-OPP-002
	VT	5 L/s - 7.5 L/s	250 Pa/m - 310 Pa/m	Arm Strong 4380 (80 - 250)	100	C3-OPP-003
	VT	7.5 L/s - 9 L/s	310 Pa/m - 420 Pa/m	Arm Strong 4380 (100 - 290)	125	C3-OPP-004
Circuit 4	VT	2 L/s - 3.55 L/s	150 Pa/m - 200 Pa/m	Arm Strong 4380 (80 - 250)	65	C4-OPP-001
	VT	3.5 L/s - 5 L/s	200 Pa/m - 250 Pa/m	Arm Strong 4380 (80 - 250)	80	C4-OPP-002
	VT	5 L/s - 7.5 L/s	250 Pa/m - 310 Pa/m	Arm Strong 4380 (80 - 250)	100	C4-OPP-003
	VT	7.5 L/s - 9 L/s	310 Pa/m - 420 Pa/m	Arm Strong 4380 (100 - 290)	125	C4-OPP-004





Transport

Once Mods are complete, they are wrapped in waterproofing membrane and loaded on flatbed trailers for transport. Transport is often done at night so that Mods are ready for stacking at the start of the workday.

Stacking

Mods are stacked by a crane and rigging crew and attached using FullStack's proprietary mechanical connection system. Vertical MEP risers are also connected. Facade elements are self-sealing and require no scaffolding for exterior work.

Mateline

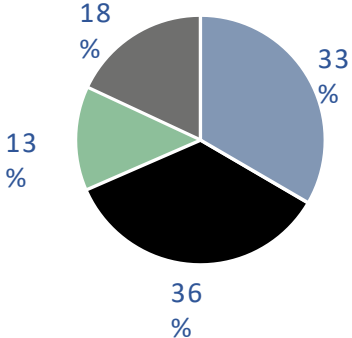
Once assembled, final interior fit-out is completed using kits manufactured and created in our factory, including mateline finishing and all horizontal electrical and sprinkler runs.



OUR INDUSTRY’S CHALLENGES

Context:

Project performance relevant to our sector: *by Chartered Institute of Buildings*



Projects as a whole:

- Completed on time or early
- 0-3 months late
- 3-6 months late
- More than 6 months late

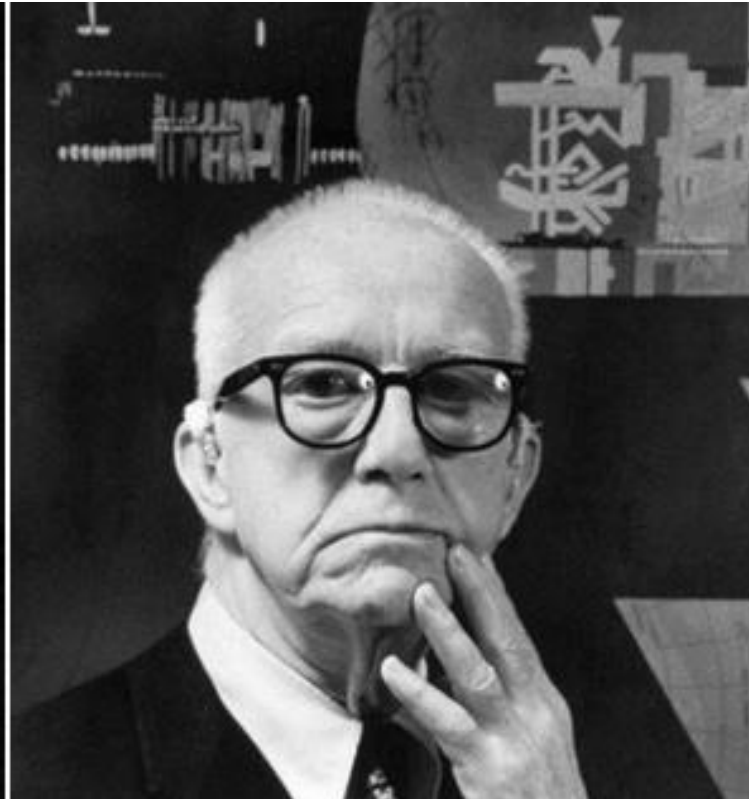


Over 50% of projects are late & over budget.



Attributed to:

- Low Productivity
- Low Predictability
- Team Fragmentation
- Leadership Fragmentation
- Low Margins, Financial Fragility
- A Dysfunctional Training Funding + Delivery Model
- Workforce Size + Demographics
- Lack of Collaboration + Improvement in Culture
- Lack of R&D + Investment in Innovation
- Poor Industry Image



You never change things by fighting
the existing reality. To change
something, build a new model that
makes the existing model obsolete.

— *R. Buckminster Fuller* —



MODULAR
MATTERS

KEY MESSAGE

- Concurrent vs Linear
 - Digital Blueprint
- Component Modelling
 - “Show Me”



Enhanced Profit



Risk Reduced



Added Value



Higher Quality

