



GREYFORM

MARKET
LEADER



**BUILDING
FOR
BETTER**

**PROFESSIONALISM
COMMITMENT
PASSION**



PROFESSIONALISM, COMMITMENT, PASSION



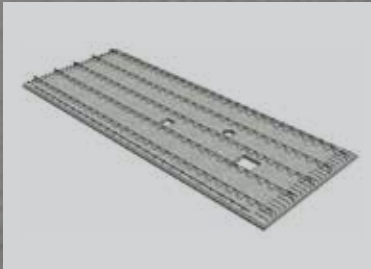


We are a group of passionate and committed professionals with extensive experience in various relevant fields as Main Contractors, Architects, Structural and M&E Engineers.

In combination, our rounded knowledge makes for an intuitive understanding of our clients' needs, giving rise to optimal solutions.

PRECISION

DIGITAL MODELING, AUTOMATION





Our digital modeling capabilities enhance product visualisation, allowing for concise planning and detailing to mitigate manufacturing and assembly clashes. Conceived through to a finalised product, this digital information drives the automated manufacturing process.

Automation also means minimal human intervention across the fabricating process, resulting in higher accuracy and consistent product quality.

PROCESS

DIGITAL PROCESS, ON-TIME DELIVERY



1 Pallet shuttering >

2 Mesh fabrication >

3 Concrete batching plant >

4 Concrete placement >

5 Heated curing >



Using digital process, we have better overview on every project milestone, from drawing through to obtaining approval, to production and delivery. This results in improved service and ensures on-time delivery for our clients as part of BCA's push towards Integrated Digital Delivery.



6 Demoulding >

7 Fitting out >

8 Racking storage >

9 Delivery >

10 Fully-fitted prefabricated units

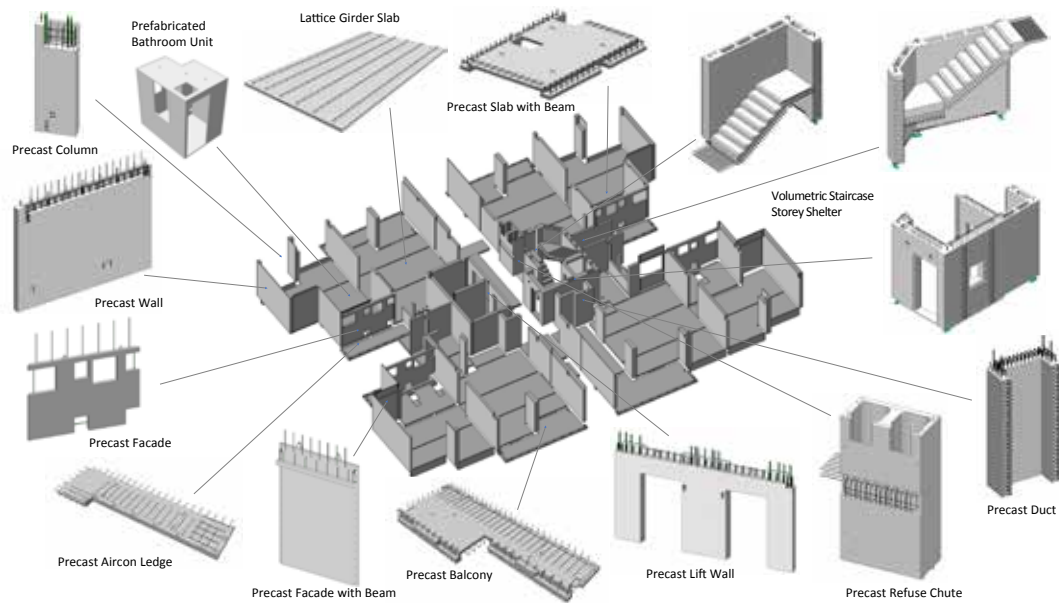


MANUFACTURE OFF-SITE, ASSEMBLE ON-SITE

DfMA (Design for Manufacturing and Assembly) - A design approach that focuses on efficient manufacturing in factory and ease of assembling in construction site.

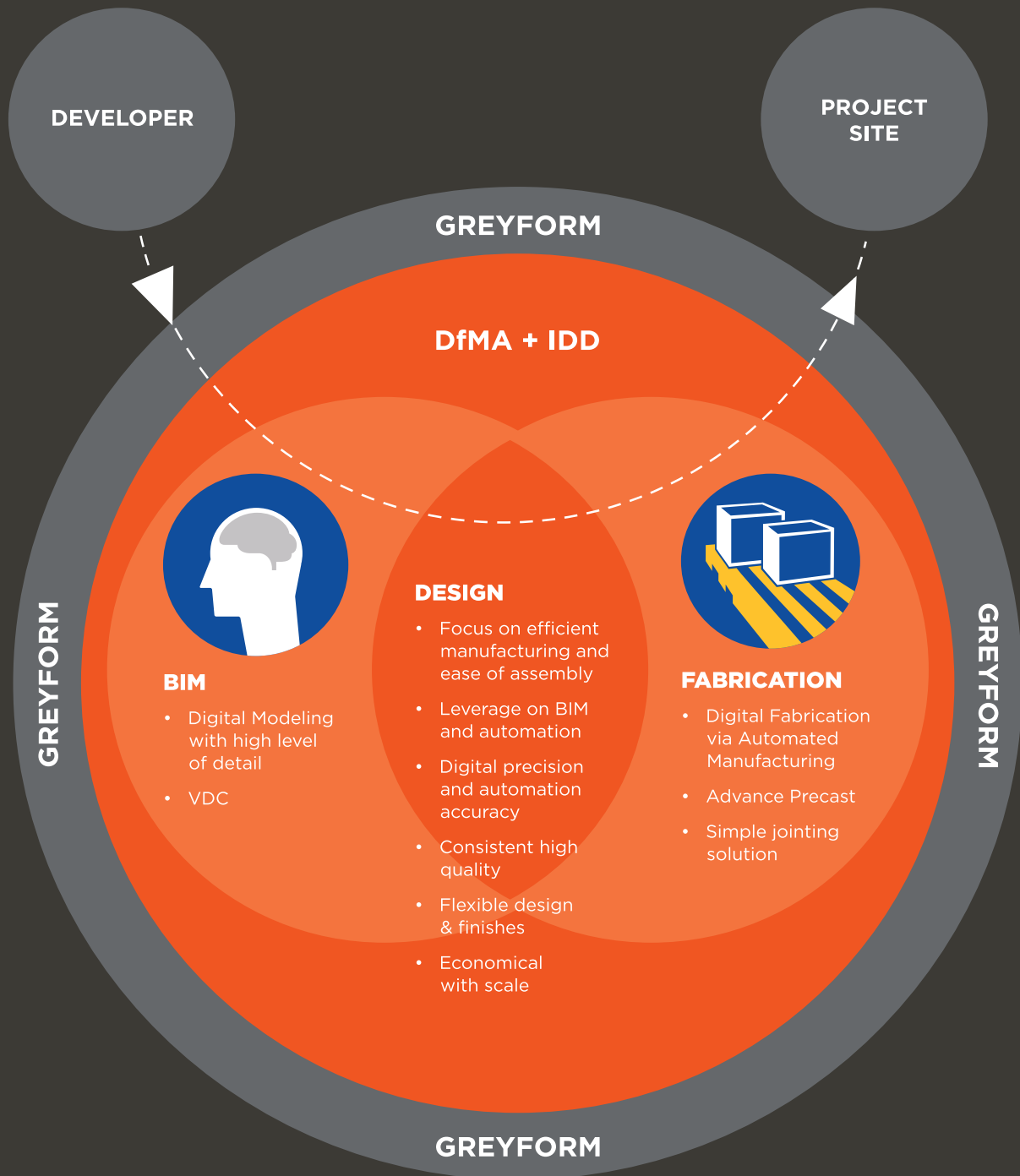
Its outcome is a prefabricated building solution that promises safety, quality, fast and labor efficient construction.

The DfMA design team focuses on easing the construction and manufacturing process at the point of design, so that our clients benefit from the full advantage of precast and prefabrication processes, realising cost and time savings.



In line with Greyform's sustainability initiatives, Greyform is able to offer in-house batched green concrete mixes certified to Singapore Green Building Council (SGBC)'s 3 (Excellent) and 4 (Leader) ticks' rating.

We emphasize on Accuracy, Consistency and Predictability by integrating the flow of digitalised building model data into our manufacturing execution system, turning ideas into solutions



BENEFITS OF DfMA

- Faster construction using less manpower
- Improved Safety and Quality
- Economical solution with scale

LATTICE GIRDER SLAB LGS



Customisable Length & Width	Available in a typical size of 6m (L) x 2.4m (W) with customisable options catering to varied design needs.
Span	A maximum length of 10m available for thicker structural slab thicknesses up to 400mm.
Precast Slab Thickness	Available in 70mm & 90mm. Slimmer slabs allow for more lightweight and efficient precasting, and facilitates installation of services within the slabs.
Lattice Girder Height	Available in varied lattice girder heights, ranging from 70mm to 350mm, to achieve desired overall slab thickness.
Composite Slab	Introduction of plastic (polystyrene) formers to create voids within the finished slab, to reduce dead weight for deeper slabs and thus increasing allowable span due to higher structural efficiency of slab section.

Automated production allows versatile sizing

- Larger format and longer span than conventional half slab
- Ease of handling as no lifting frame is required
- Less propping required. Prop-less construction is also possible with suitable slab thickness



Modeling



Installation

LATTICE GIRDER DOUBLE WALL LGDW



Length	A minimum of 2.4m up to a maximum of 5.6m per piece. Longer walls, L-shape walls or T-shape walls are achieved by joining 2 or more pieces on site using the wall cavity.
Height	Full compliance to BCA's Buildability COP, with customisable options subjected to transportation limits.
Precast Wall Thickness	Available in 70mm & 90mm. These thicknesses work in combination with various lattice girder configurations, to resist the required concrete pressure of various wall heights.
Lattice Girder Height	Available in varied lattice girder heights to achieve desired overall wall thickness. Girder height ranges from 70mm to 350mm.
Overall Thickness	Minimum of 200mm wall thickness, customisable at 25mm increments up to a maximum thickness of 400mm.

Automated production allows versatile sizing

- Lighter than conventional fully cast wall
- Off-form finish on both sides of wall, reducing finishing works
- Easy installation due to the flexibility offered by the centre cavity
- Easy concealment of M&E conduits within the wall



Double-wall

2.4M WIDE HOLLOW CORE SLAB HCS

Hollow Core Slab products typically are 1200mm wide. In addition, Greyform is also able to provide 2400mm wide units to fulfill our clients' desire for faster construction and lesser joints.



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Width	Greyform can produce 2.4m wide HCS which are double the width of regular 1.2m HCS, thereby halving installation time on site.
Length	Produced on a long production line that supports customisable cut-to-length HCS to fit design requirements, subject to a maximum length of 13m.
Depths	Available in 4 depths (265mm, 320mm, 360mm & 400mm) catering for different load requirements. Generally deeper slab sections will allow for longer spans.

Double the
width of
normal HCS,
half the time
to install

- Efficient structural design achieved through pre-stressing and hollow section
- Longer span attainable as compared to conventional reinforced concrete (RC) slab
- Lighter overall structure weight



Loaded on truck

The HCS Fabrication Process



1. Wire stressing
2. Concreting
3. Curing
4. Sawing
5. Lifting
6. Site installation

BATH SYSTEM PBUs

PLUG & PLAY INSTALLATION

By



- Versatile in their construction hence adaptable for varied designs even with low standardisation and repetition
- Lightweight, with no need for heavy cranes on site
- Fully-fitted units make for a Plug & Play solution



DESCRIPTION	LIGHTWEIGHT CONCRETE	SUPERLIGHT
Wall thickness	50mm	75mm
Ceiling thickness	60mm	65mm
Concrete floor thickness	Minimum 60mm	Minimum 50mm
Density	1600 kg/m ³	1100 kg/m ³
Fire rating	F30	F60
Acoustic Insulation	Db - 36W [^]	Db 50 ^{^^}

[^] without external panelling

^{^^} including panel and external insulation executed on site

The PBU CANNOT be used as a load bearing element. At the job-site, the bathroom unit is placed on PVC Shim Plate for leveling adjustment and acoustic insulation. Any direct contact points between the PBU and building structure should be carefully avoided.

Bathsystem's lightweight POD solution can be installed using both vertical and horizontal launch methods

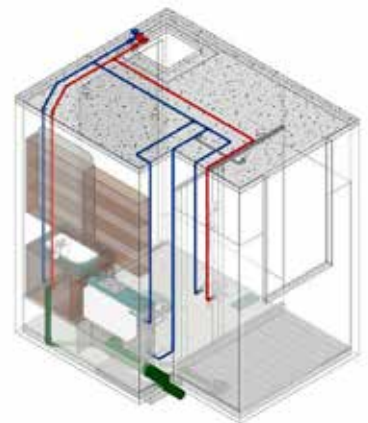
VERTICAL LAUNCH

Critical Path Method launches the PBU into final position vertically via crane before the structure floor is constructed above.

HORIZONTAL LAUNCH

Non-Critical Path Method launches the PBU by pushing horizontally through designated facade opening and along launch path, with placement into final position by jacks.

LIGHTWEIGHT BATH UNIT



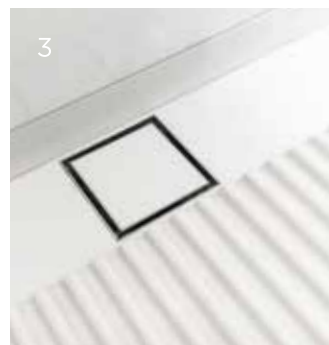
1. Fully-fitted bathroom with tub
2. Fully-fitted bathroom with shower
3. Various finishes possible
4. Lightweight concrete bath units
5. Bathroom diagram

BATH SYSTEM PBUs

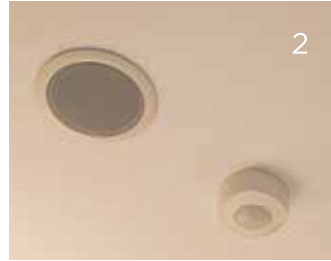
PLUG & PLAY INSTALLATION

1. Fully-fitted bathroom with integrated water closet
2. Seamless cabinetry
3. Shower drainer
4. Integrated plumbing

SUPERLIGHTWEIGHT BATH UNIT



COMMERCIAL / HEALTHCARE BATH UNIT



1. Fully-fitted toilet for the physically challenged
2. Integrated movement detector
3. Emergency call button
4. Sturdy drop-down handrails

KITCHEN SYSTEM PKUs

PLUG & PLAY
INSTALLATION



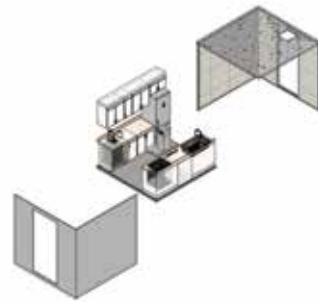


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PREFABRICATED KITCHEN UNIT



3



4

1. Fully-fitted kitchen unit
2. Quality cabinetry and finishings
3. Kitchen unit exterior
4. Kitchen diagram

A large yellow industrial crane is lifting a massive, white, rectangular object, possibly a large piece of machinery or a mold, from a concrete floor in a large industrial facility. The crane's arm extends diagonally across the frame. In the background, there are blue structural beams, various industrial equipment, and a high ceiling with exposed ductwork and lights. The overall scene is industrial and brightly lit.

VISION

TOWARDS EFFORTLESS CONSTRUCTION

MISSION

**TO ELEVATE CONSTRUCTION QUALITY,
SAFETY AND PRODUCTIVITY THROUGH
INNOVATIVE BUILDING SOLUTIONS**

CORE VALUES

**INNOVATIVE, COMMITTED,
PASSIONATE, HONEST**

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