

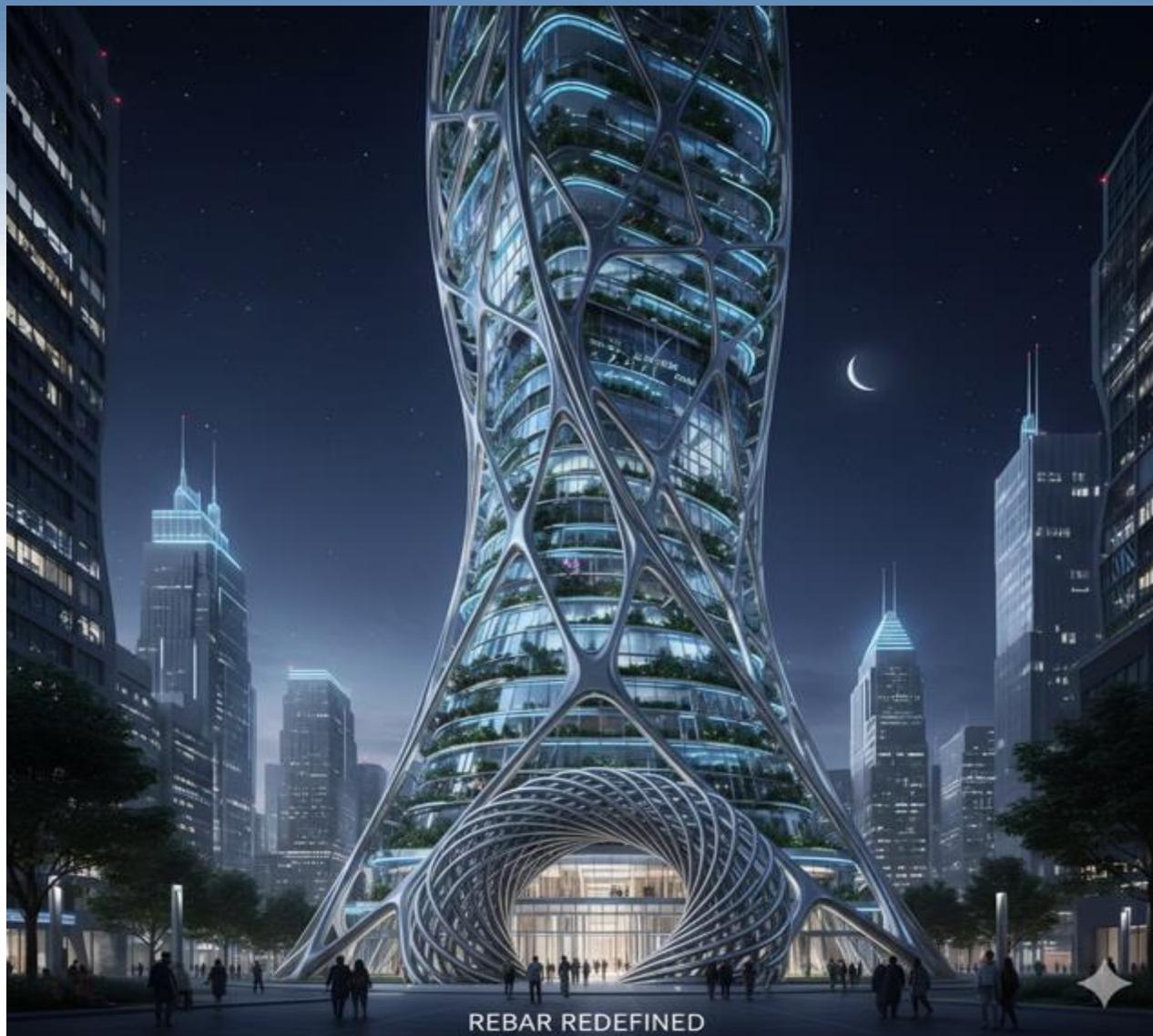
Midland Steel 2026 Rebar Redefined

At Midland Steel we prioritise; innovation, safety and sustainability

Rebar Reinvented: DfMA-Led Automation and BIM Integration for High-Productivity MMC Construction – a manufacturer's view on optimising reinforcement design within standardised processes

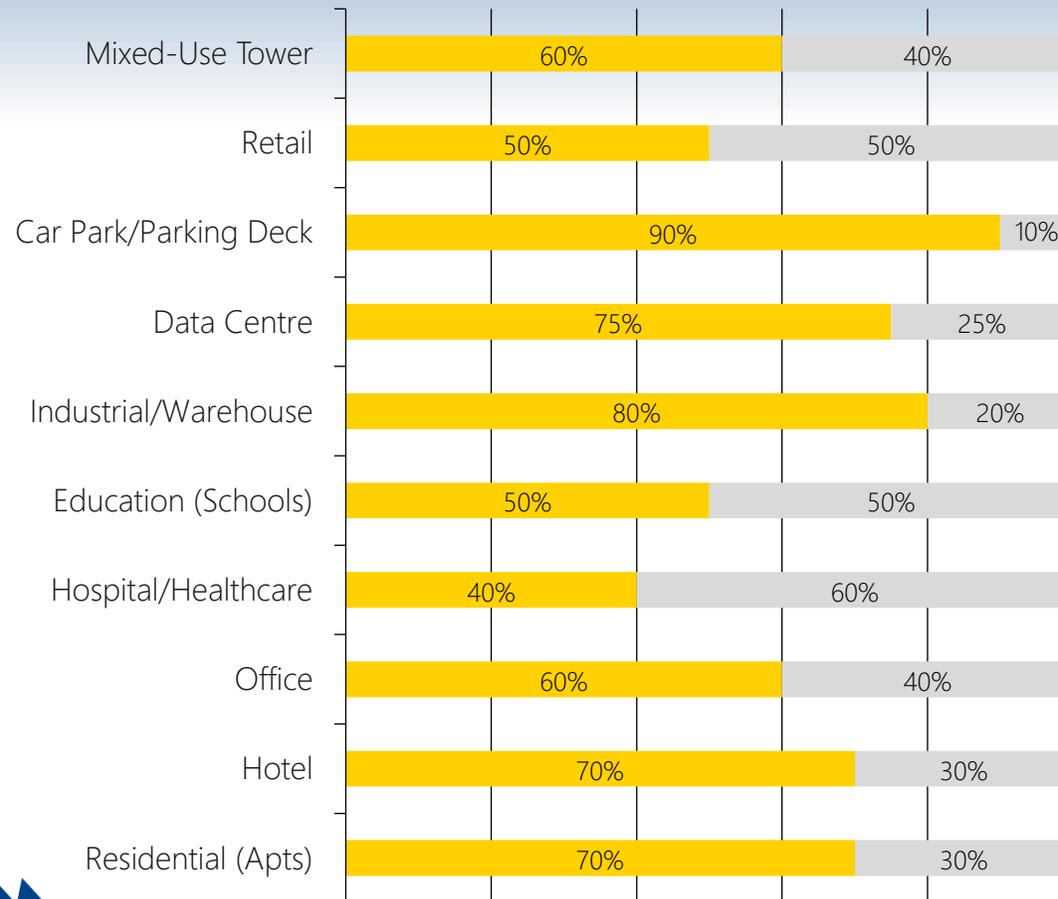
MMC
IRELAND
NATIONAL CONFERENCE

FASTER-FIX RE-DEFINING DETAIL TO DELIVERING EFFICIENT BUILDINGS



What percentage of a building can be standardised?

Indicative by building type

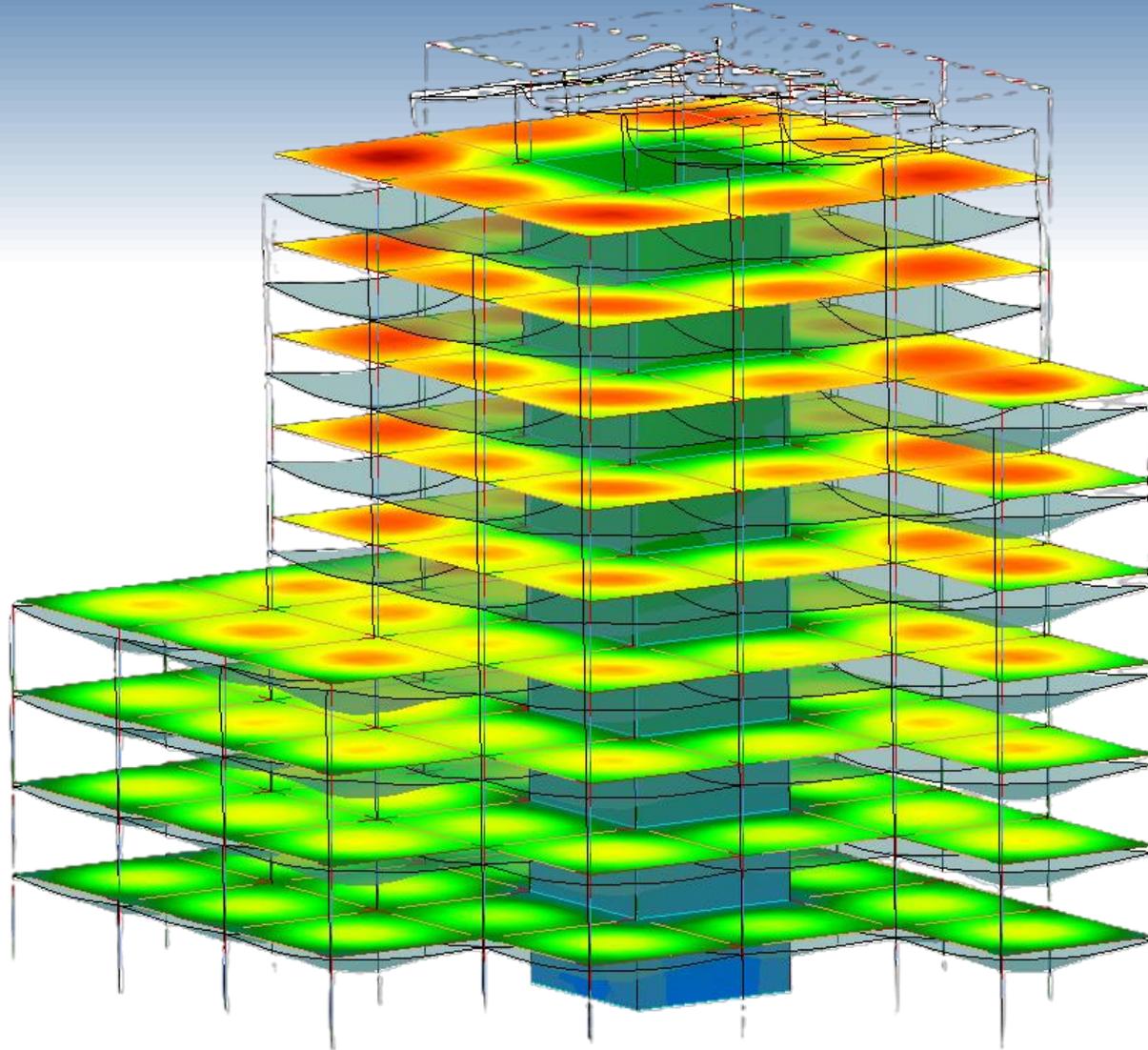


What counts as standardisable?

- Repeating floorplates, grids & cores
- Repetitive rooms/stacks
- Modular façades & panels
- Predefined rebar cages & meshes (mats, beams, walls)
- Standard details, joints & connections
- Kit-of-parts for stairs, lift shafts & bays

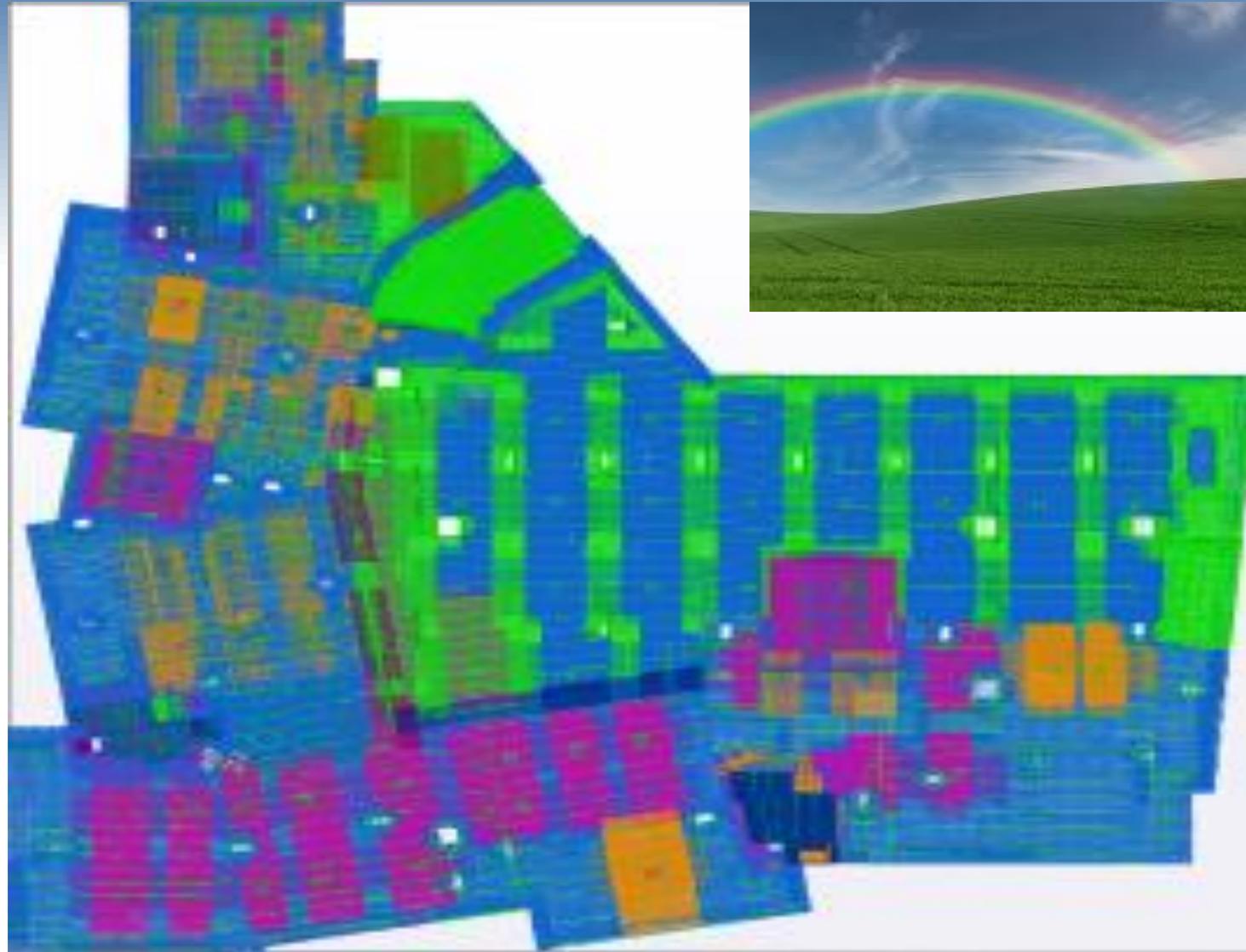
- Standardisable %
- Non-standard %

ANALYSIS VS STANDARDISATION.



TRADITIONAL REBAR DESIGN INTENT

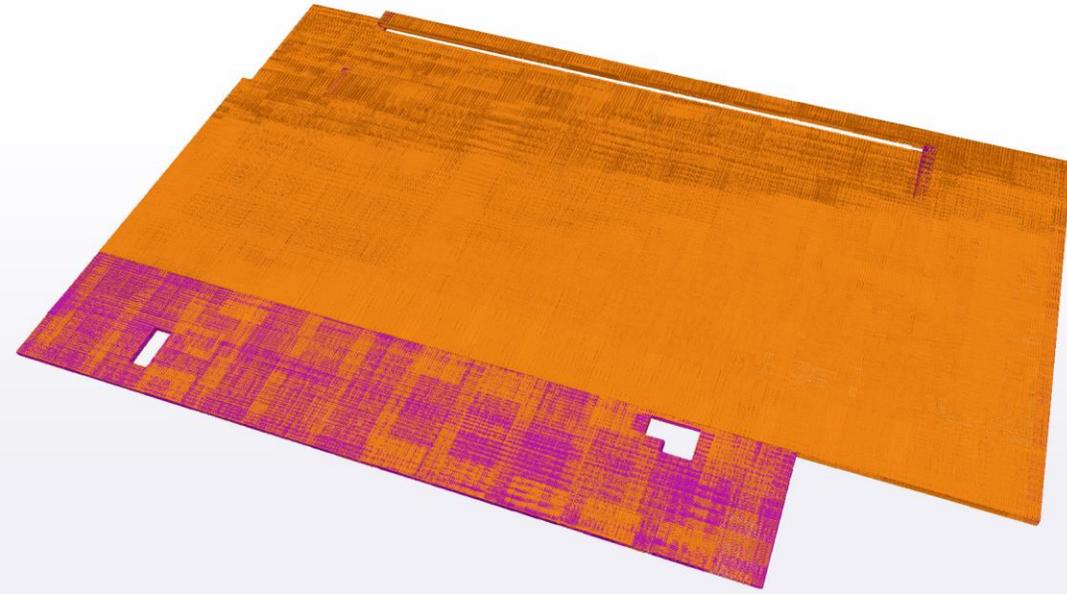
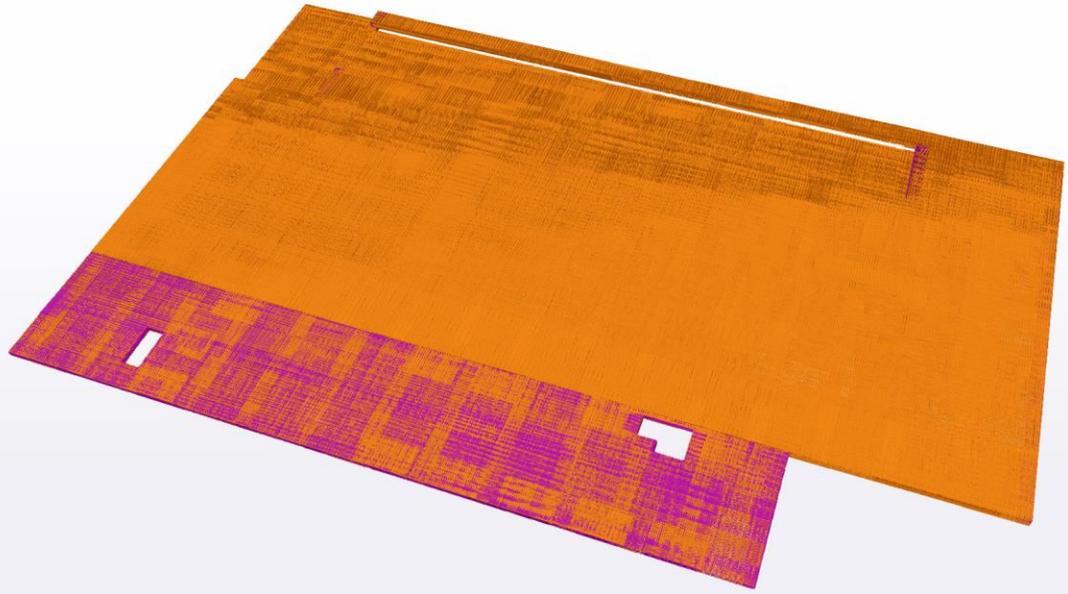
Every colour is
Bar Diameter
20% waste 1M
Deep Raft



Standardise Design Intent .

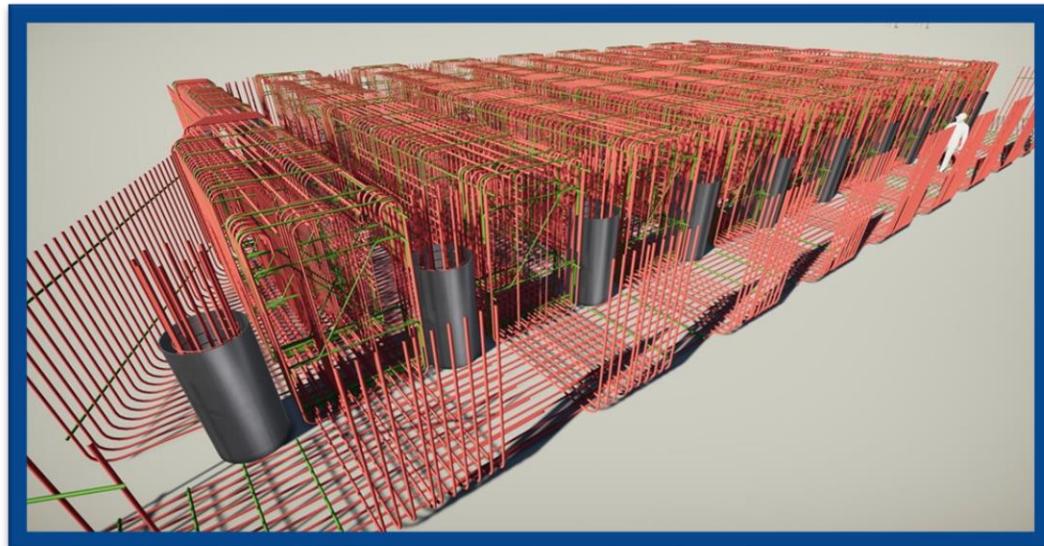
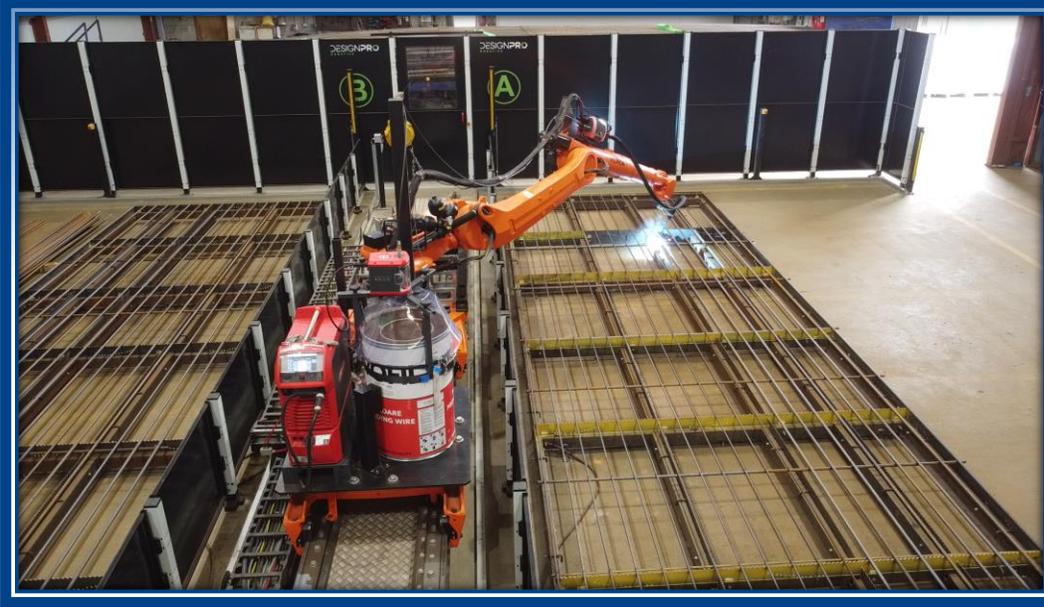


Every colour is a Bar Diameter 0% waste 1M deep Raft



Your Logo⁶ Here

BIM integration



FASTERFIX ▶▶



Modular rebar demands extreme precision

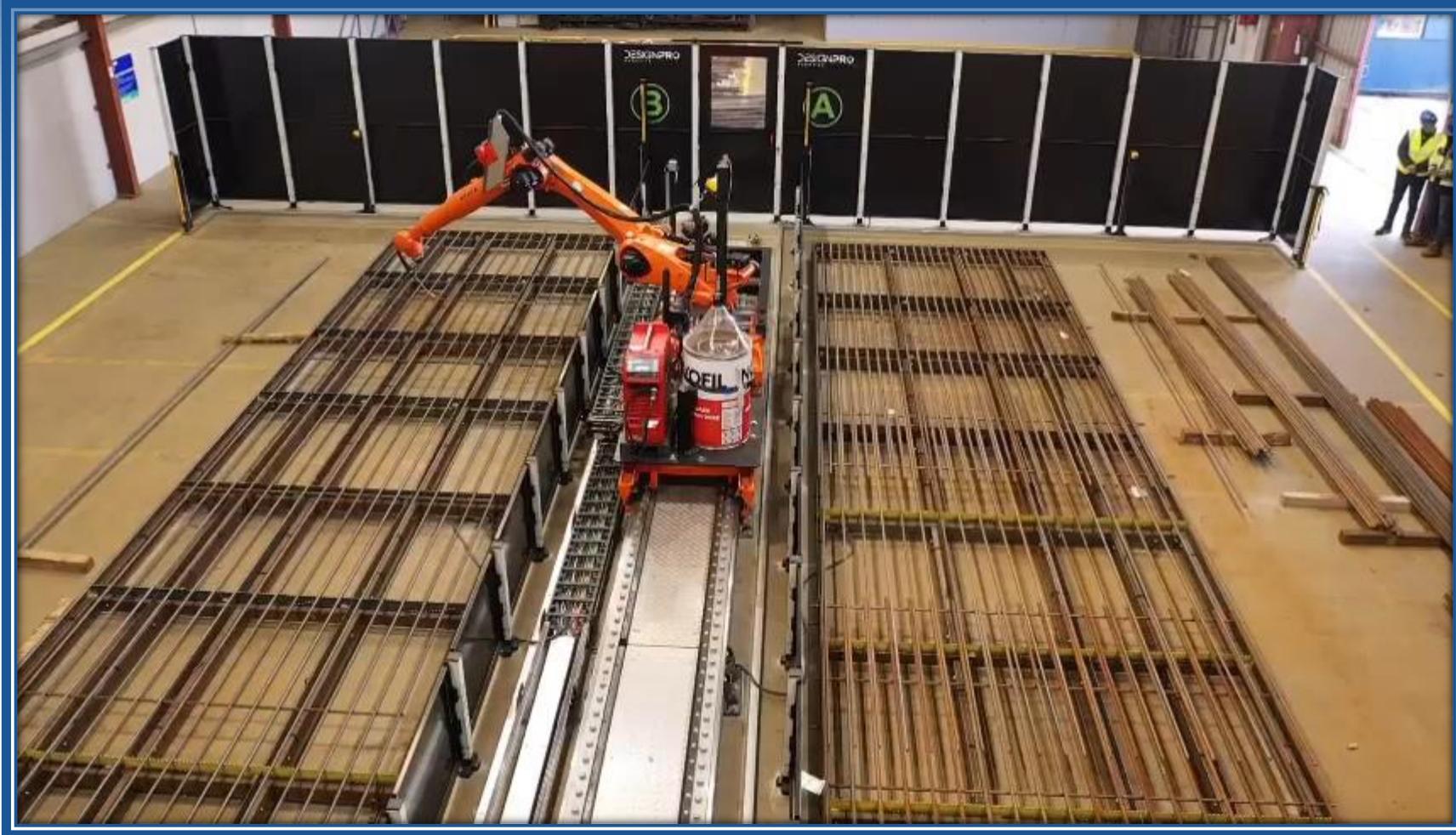


Standardisation Enables design for manufacture and assembly (DFMA)



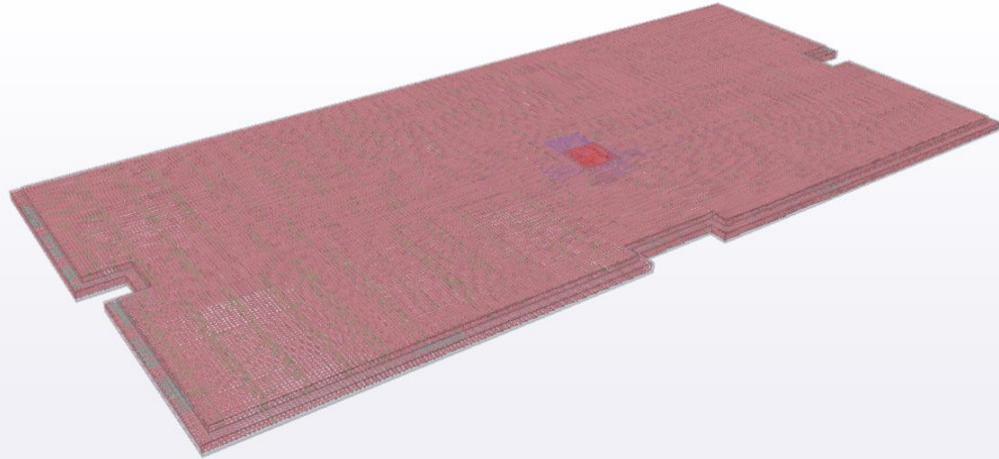
Site installation becomes faster and safer

FASTER-FIX STANDARDISATION IMPROVES MANUFACTURING

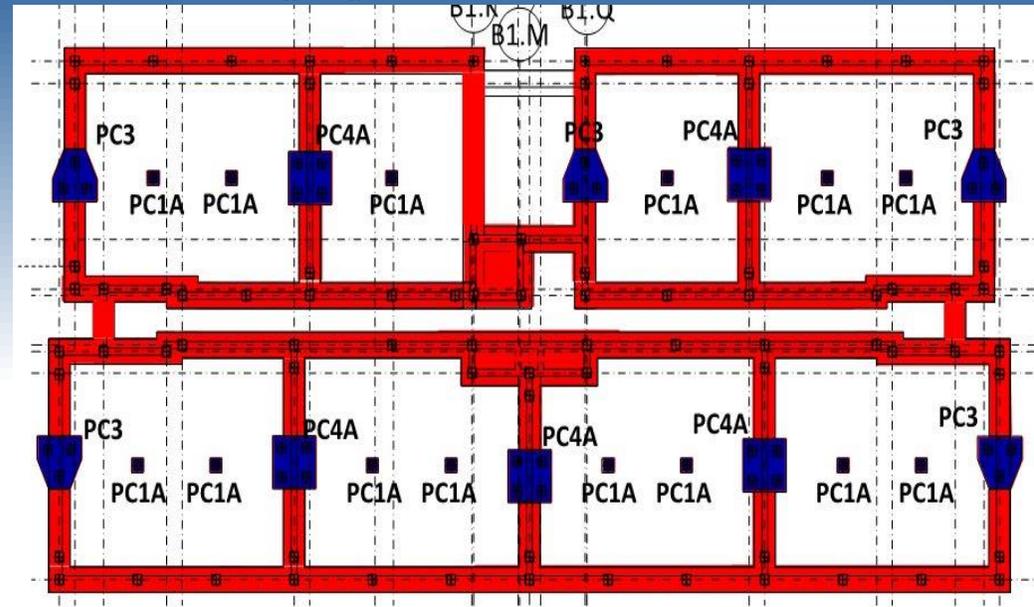


FASTERFIX ▶▶

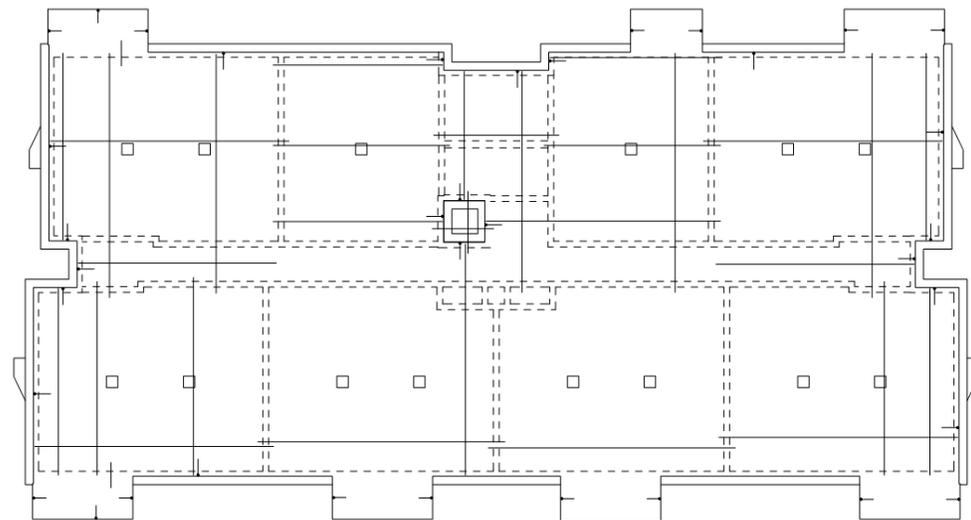
PROPOSAL RAFT SLAB



CURRENT DI



Standardised detail

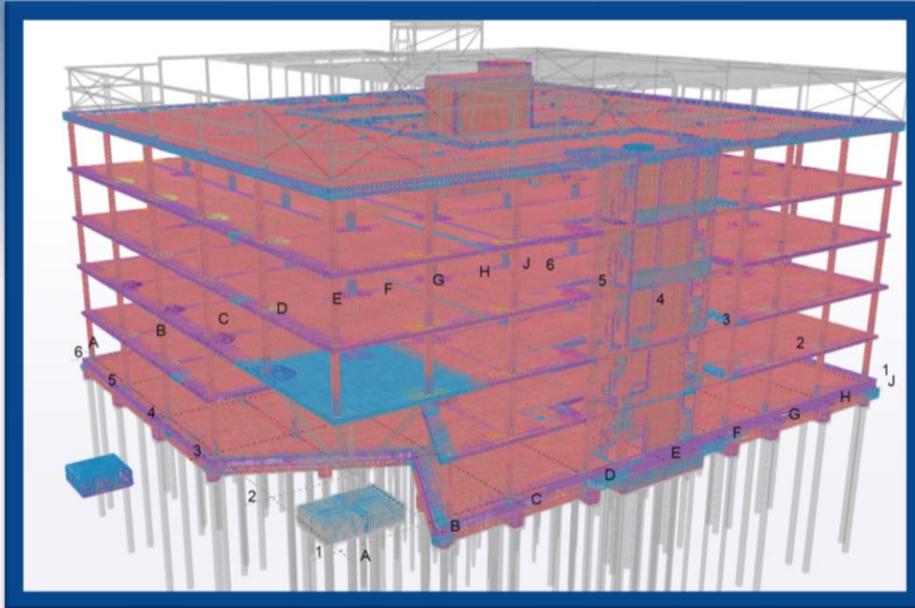


SUMMARY

Element	CLIENT	MSS	DIFFERENCE / SAVINGS (T)
	Weight (T)	Weight (T)	
PILECAP	7t	0t	7t
GBAND UPS.	45t	0t	45t
SLAB/RAFT	27t	63t	-36t
TOTAL	78t	63t	15t

BIM integration with rebar

FASTERFIX ▶▶

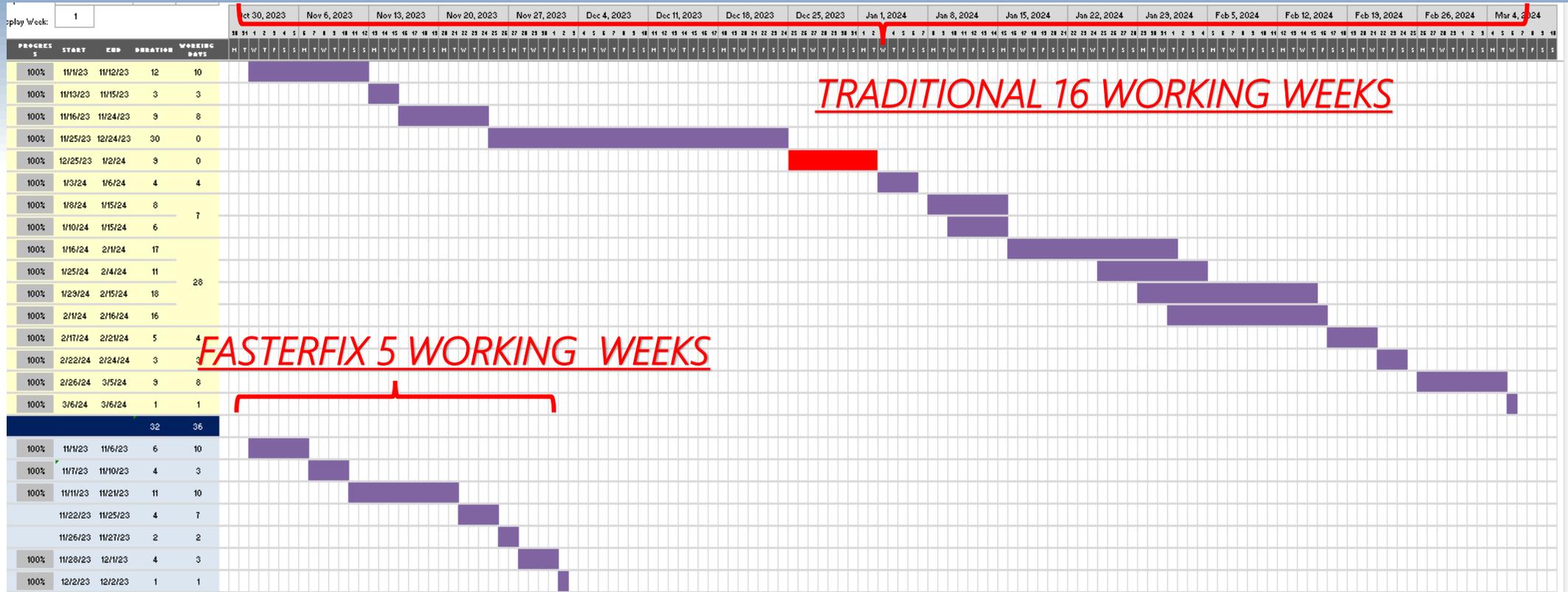


(BIM) integration plays a key role in FasterFix by creating a digital link between design, manufacture and installation. FasterFix is modelled accurately in 3d, enabling the units to be manufactured off-site with precision and installed on site.



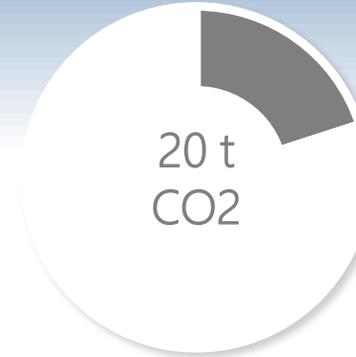
Midland Steel, this is the our New World , Digital drawings, real-time information, smarter coordination and modularisation are transforming and accelerating how reinforcement is delivered and installed.

PROGRAM COMPARISON PER APARTMENT BLOCK



FASTERFIX IS SAVING AT AN EST. 11 WEEKS PER APARTMENT BLOCK

ENVIRONMENT IMPACT PER APARTMENT BLOCK



TRADITIONAL

- Pile Cap
- Ground Beams
- Basic Walls
- Ground Slab



FASTERFIX

Raft Slab



CO2 SAVED



Green co2 savings



Building better

commercial/public | residential
45% | **40%**
reduction in emissions
by 2030

We will increase the energy efficiency of existing buildings, put in place policies to deliver zero-emissions new builds and continue to ramp up our retrofitting programme.

Ramp up retrofitting to 120,000 dwellings to BER B2 by 2025, jumping to 500,000 by 2030.

Put heat pumps into 45,000 existing and 170,000 new dwellings by 2025, up to 400,000 existing and 280,000 new dwellings.

Generation up to 0.8 TWh of district heating by 2025 and up to 2.5 TWh by 2030.

Greening business and enterprise

35%
reduction in emissions
by 2030

We're changing how we produce, consume, and design our goods and services by breaking the link between fossil fuels and economic progress. Decarbonising industry and enterprise is key to Ireland's economy and future competitiveness.

Decrease embodied carbon in construction materials produced and used in Ireland by at least 30%.

Reduce fossil fuel use from 64% of final consumption (2021) to 45% by 2025 and further by 2030.

Increase total share of heating to carbon neutral to 50-55% by 2025, up to 70-75% by 2030.

Significantly grow the circular economy and bioeconomy.

Sector Average
787kgCO₂/tonne

Average carbon output of
322.3kgco₂/tonne

Under the sector average by
464.7kgco₂/tonne



12.6%

Reduction in CO₂



0

Waste on Site

FASTERFIX ▶▶

COST BENEFITS PER APARTMENT BLOCK



€ 492 k

Traditional



€ 178 k

FasterFix



€ 314 k

Estimated Cost Saving

Market Location



Data Market

64%

LESS COST!!!



Benefits

SUSTAINABILITY
EFFICIENCY
COST SAVING

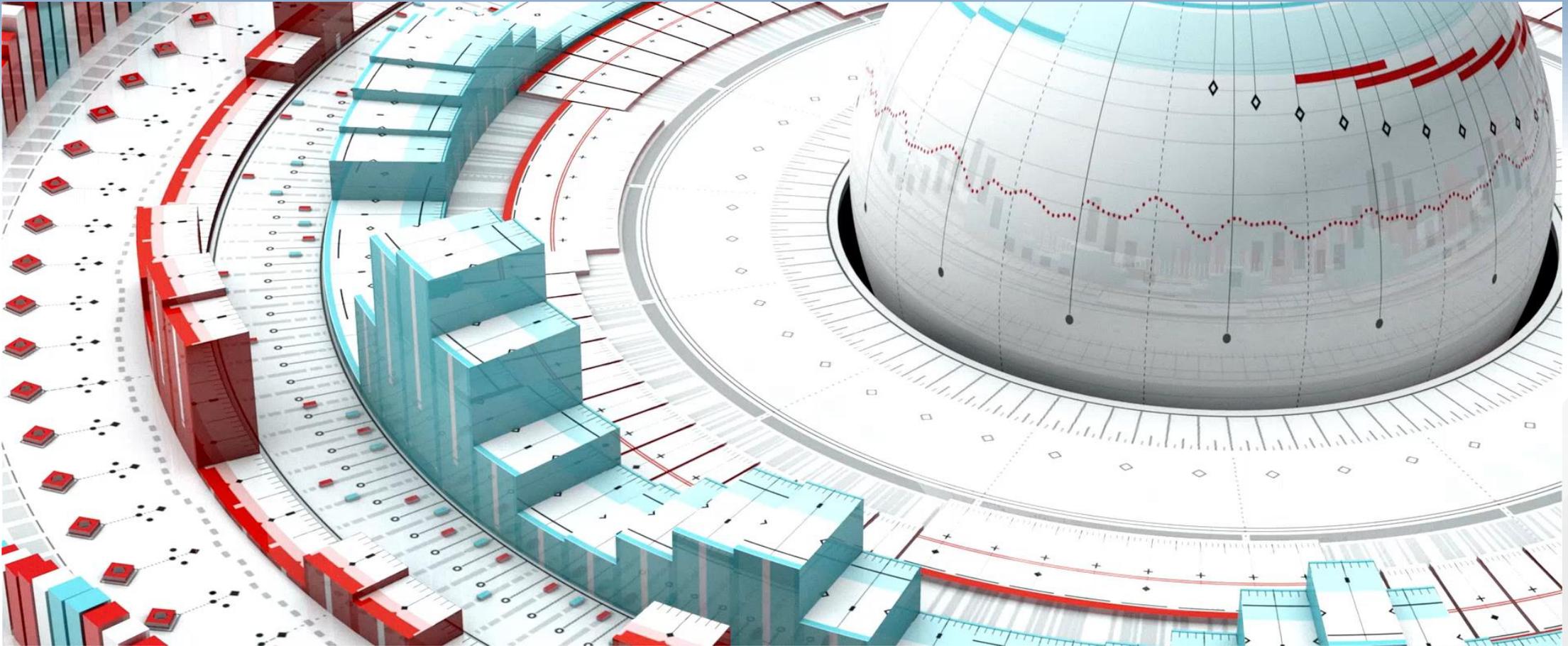
CONSIDERATIONS & SCOPE

1. STANDARDISING Designs

1. 85% off all buildings internally are rectangular or Square
2. Massive Impacts & cost are often overlooked because industry Does not involve the suppliers at early stage
3. Maximising Raw material in detail is 8% saving in reducing waste becoming more efficient than computerised assessment which has parameters restricting it .
4. The type off construction used in foundations Traditional Pads & Strip vs Raft construction is 60% slower
5. Standardisation on designs off structures can have a 25% Carbon Emissions saving
6. Pre-lims cost "Real Money" identify that saving in assessment it solidifies using offsite
7. Early Stage at scope and tender Is vital to the outcomes
8. What we can deliver is 75% Faster 80% less labour onsite & 0% Waste Guaranteed
9. Midland Steels offering is completely unique and creates enormous value add
10. We bring the best value to industry Worldwide in Reinforcing steel

Offsite construction is the future

FASTERFIX ▶▶



Work Smarter not Harder using

FASTERFIX ▶▶

0.3t per man hour



3t per man hour





**MIDLAND
STEEL**

FASTERFIX ▶▶

Thank You
MMC IRELAND