

majenta

Pioneering an offsite
manufacturing logic.

cobuilder



Berkeley
Group

Agenda.

- Disruptive Technologies / BML Approach + Strategic Drivers
- Offsite Manufacturing
- Controlling Data Flow / Structured Product Data
- Single Source of Truth / A PLM mindset
- Solution Challenges
- Solution As-is

Disruptive Technologies.



c200 years ago → Industrial Revolution



c100 years ago → Transport Revolution



c0 years ago → Offsite Revolution



BML Approach:

- Peak capacity: 2no shifts
- Shift Capacity: 6no modules
- Max Module Size: 12.0m*4.5m* 3.5m
- Module Cycle Time: 40 hours
- Max Module Weight: 20 tonnes
- Daily Replenishment: 244 tonnes

BML Strategic Drivers:

- Skills
- Pipeline Surety
- Product Performance

Offsite Manufacturing.

1. Manufacturing, not construction
2. Productivity can be leveraged using robotics, advanced automation and sophisticated control systems
3. A factory-based approach yields scope for scalability



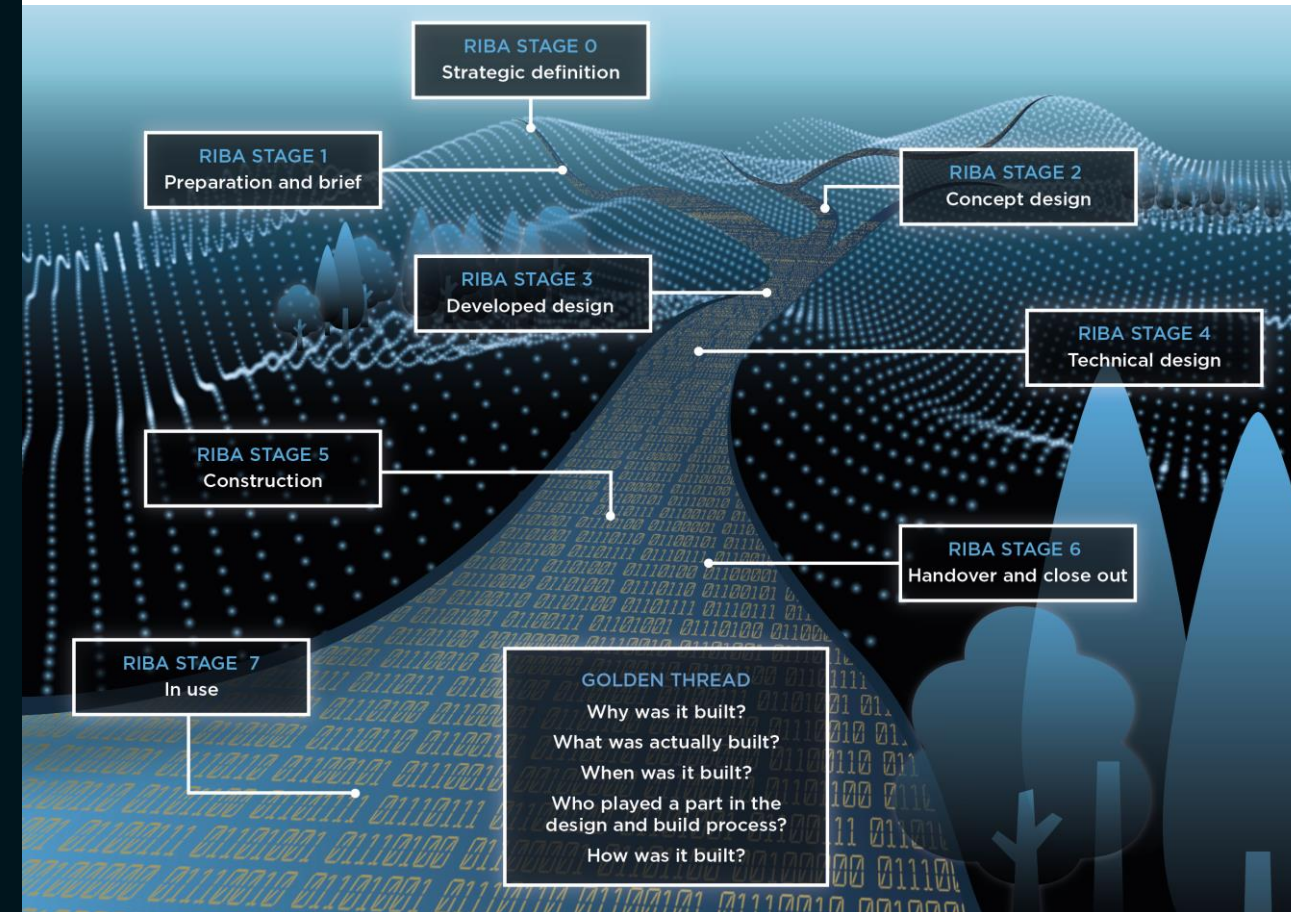
Controlling Data Flow.

- Challenges associated with creating a complete and accurate digital record for a new residential development from conception, through the design and build cycle to practical completion, are pernicious
- At BML, we have sought to develop a transformative methodology for creating digital connectivity and our digitally enabled agile manufacturing platform is intended to help resolve the conundrum of capturing the golden thread of information



Structured Product Data.

- There will be a lot of data so it is crucial to only create / consume what is needed
- The data has to be ready for consumption & usable
- Data lake used to converge all of the data into a digital twin.
- Model-to-Machine code generation from digital twin
- COBie data from digital twin



Focus on Productivity.

1. The solution can not restricted to a single tool, due to its downstream applications.
2. Automation streamlines this process to improve not only the speed but quality of the overall end-to-end process.
3. Systems are only as good as the operator operating it. Removing human interaction, mitigates the risk of certain data inaccuracies.

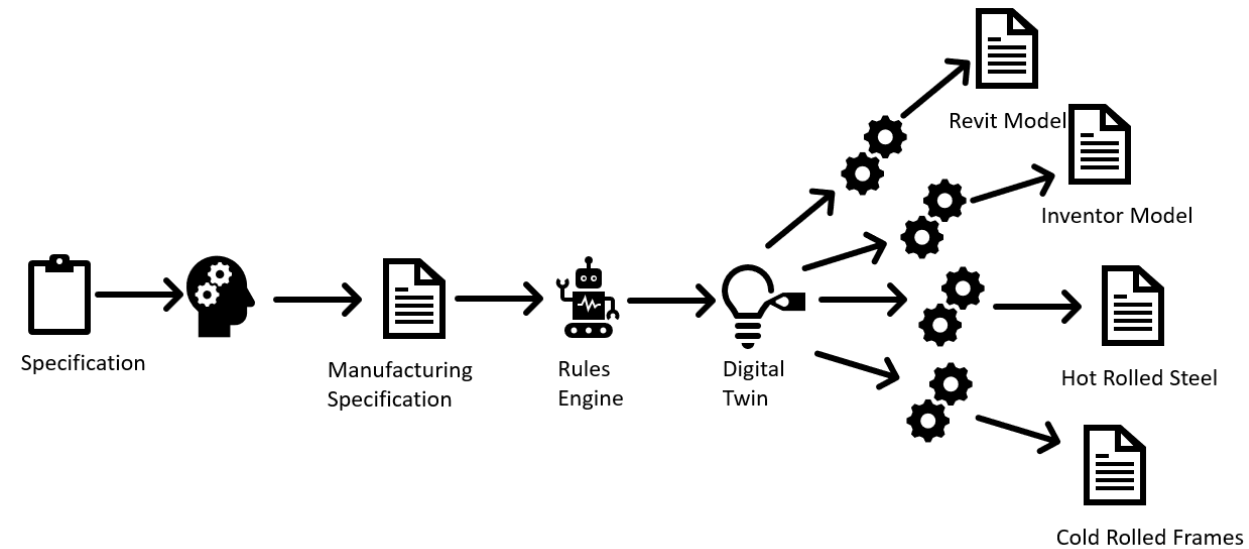
Single Source of Truth.

1. Data is king. It is the water in our digital river and without this water we cannot build our Data Lake.
2. We have to power leading solutions with data that reliable and robust.
3. If data is not reliable and robust it can cause consequences such as Ordering materials or Downstream liability.
4. Partnership with suppliers is crucial as they are the source of the data.



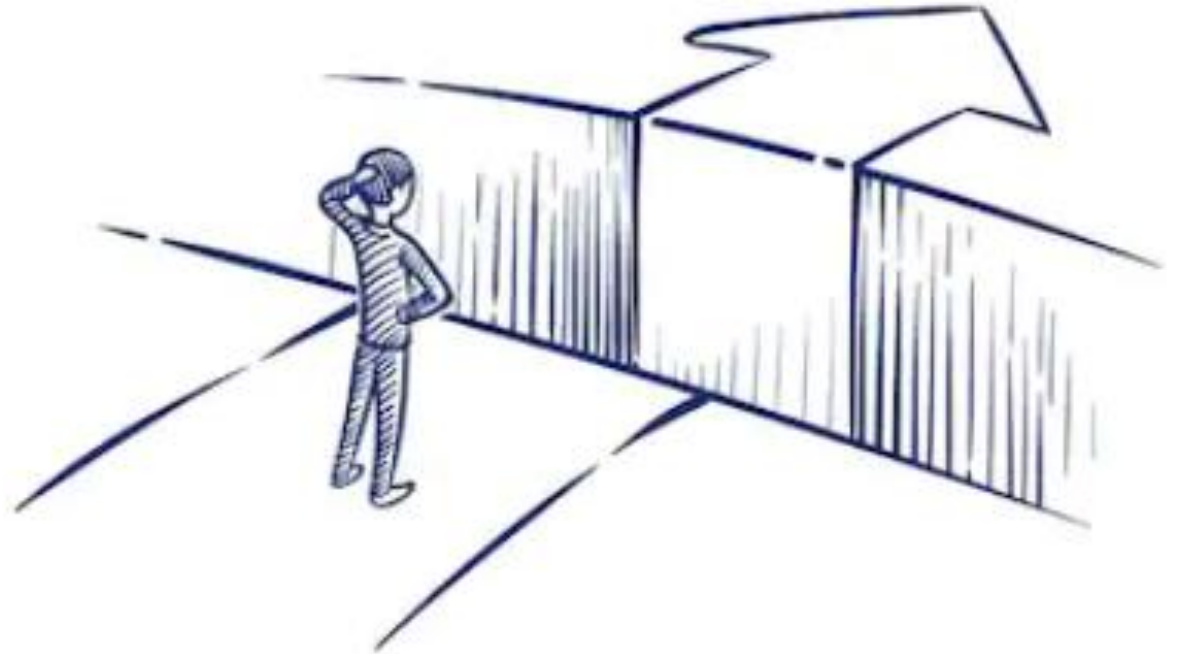
A PLM Mindset.


1. Learn from Automotive / Aerospace / Traditional Manufacturing methodologies.
2. Adopting the Golden thread means that it essential to capture the data at source.



Solution Challenges.

1. Data Validation/Quality is paramount as retroactively amending data would oppose our Golden Thread/Single Source of Truth principles.
2. Data Filtering enables us to only capture what data we require and understand its downstream use.
3. Storage of both the geometrical and meta data has to be taken into consideration.





“Data pollution will quickly turn our
Data Lake into a Data Swamp”

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Questions & Answers

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