

*Bringing ideas
to life*

DfMA Alliance Forum

BIM – Essential Tools to enable DfMA

**DfMA Alliance
Forum**
BIM – Essential Tools to
enable DfMA

24 Jul 2019

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We are as diverse as we are dynamic
As curious as we are clever

Engineering, re-imagined.



About Aurecon

We believe humanity depends on engineering; and we recognise we have a broader stewardship role to play.

As we continually strive for a life in balance, Aurecon clients will be both future ready and engineered for life.





Why Aurecon?

Our industry is changing. We must change too.

We believe for a brand to be resilient, it must speak to the truths of the organisation and its people.

FIVE TRUTHS about Aurecon:

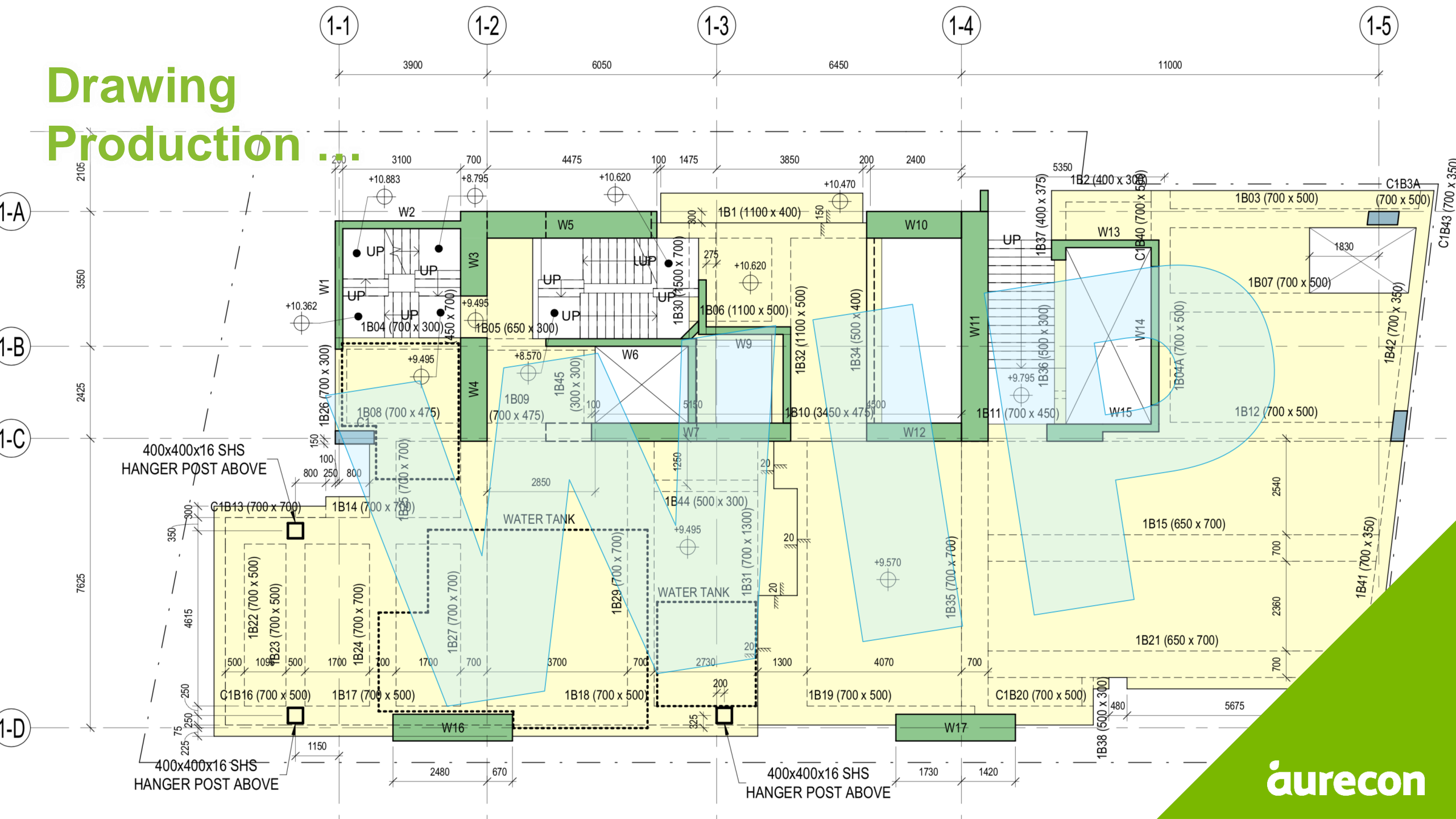
1. We draw on diversity in people to frame complex problems
2. Our eminent practitioners collaborate to solve challenging problems
3. We use digital insights to enhance physical assets
4. Our engineering design is human-centred
5. We consider our clients' clients in the work we do

BIM

Project Information Management with **BIM** being the **Centralized Database** assisting the design to develop a buildable design such that the project is **constructed as-Planned** for the best overall value

以**BIM**作为**中央数据库**进行项目信息管理为设计阶段引入施工考虑让项目得以**按计划施工**达到项目的最大效益

Drawing Production





SLOPES TO STUDY

THE SITE

POKFULAM ROAD

Drone & LiDAR Survey

HKJC Pokfulam Public Riding School



Setting up

Set up base point to calibrate GPS



GPS receiver

GPS receiver unit set up at each Ground Control Point to calibrate the GPS before Drone Flying



Control Points

Base point and Ground Control Points set up at open-spaced surface before the Drone Flying and LiDAR Laser Scanning



LiDAR Laser Scanner

Operation of a Lidar Laser Scan & Photogrammetry

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2D 3D

BIM + BMS + VIZ

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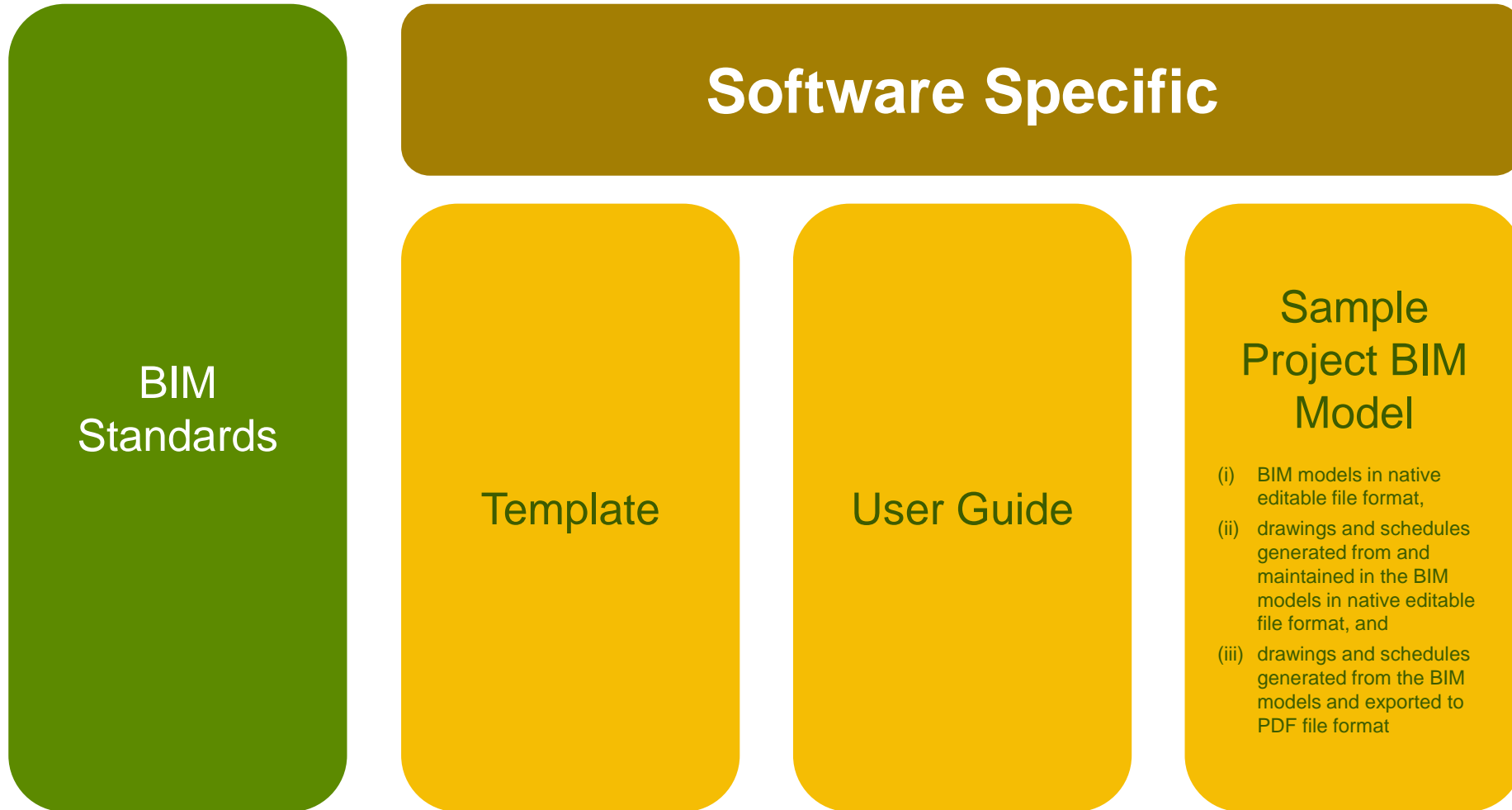


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Consultancy Services for Building Information Modelling (BIM) Standards of Statutory Plan Submission to the HKSAR Government for the Construction Industry Council (CIC)

Ir Francis LEUNG
Executive Director (Structural Engineering &
Digital Delivery), Greater China
Founding Chairman, HKIBIM

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DfMA

Design for Manufacture and Assembly

DfMA is the combination of two methodologies

- **Design for Manufacture**, which means the design for ease of manufacture of the parts that will form a product
- **Design for Assembly**, which means the design of the product for ease of assembly

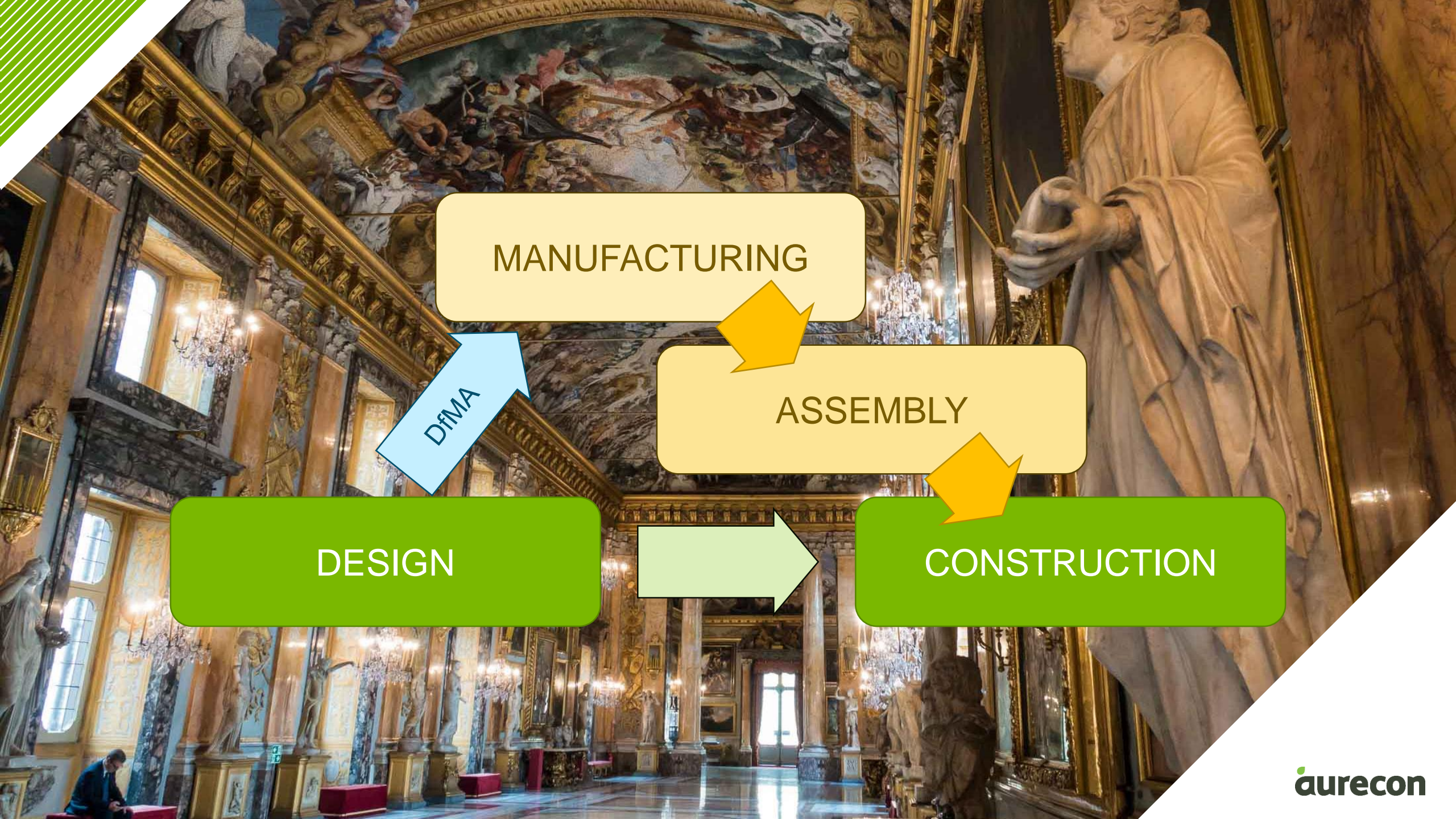
<https://en.wikipedia.org/wiki/DFMA>

DfMA是指在产品设计阶段，充分考虑来自于产品制造和装配的要求，使得机械工程师设计的产品具有很好的可制造性和可装配性，从根本上避免在产品开发后期出现的制造和装配质量问题。

<https://baike.baidu.com/item/DFMA>



CRAFTSMANSHIP



MANUFACTURING

ASSEMBLY

DESIGN

CONSTRUCTION

DfMA



Deterioration of civilization





<https://www.dezeen.com/2016/05/21/foster-partners-jonathan-ive-apple-union-square-store-san-francisco/>



Minimize Wet Trade on Site

<https://www.youtube.com/watch?v=i33YUDKMtTI>



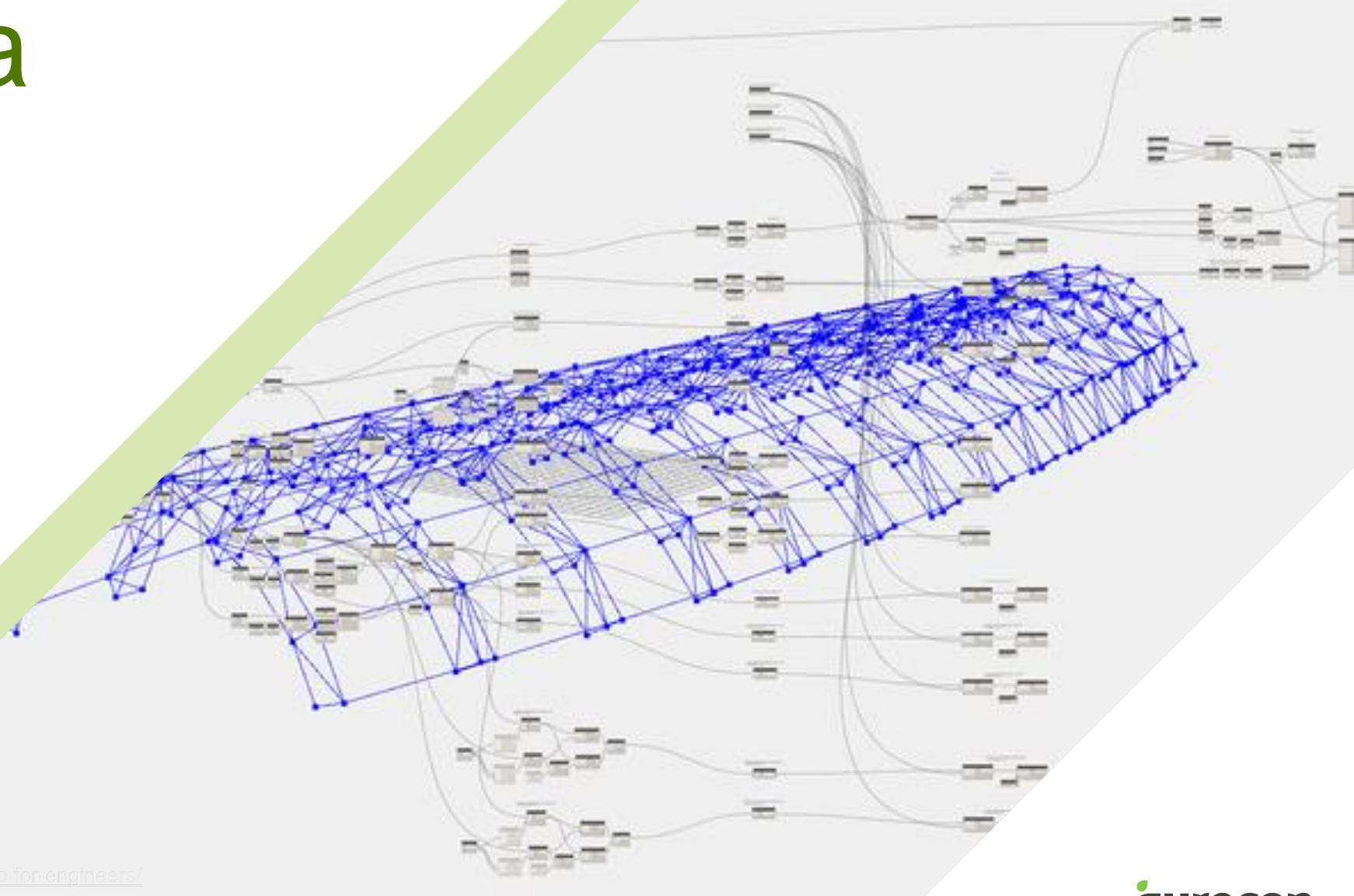
Communicate better with Manufacturers

<https://www.seatingvm.com/blog/office-chair-fabrics-and-upholstery/>

BIM  data

**Generative
Modelling**

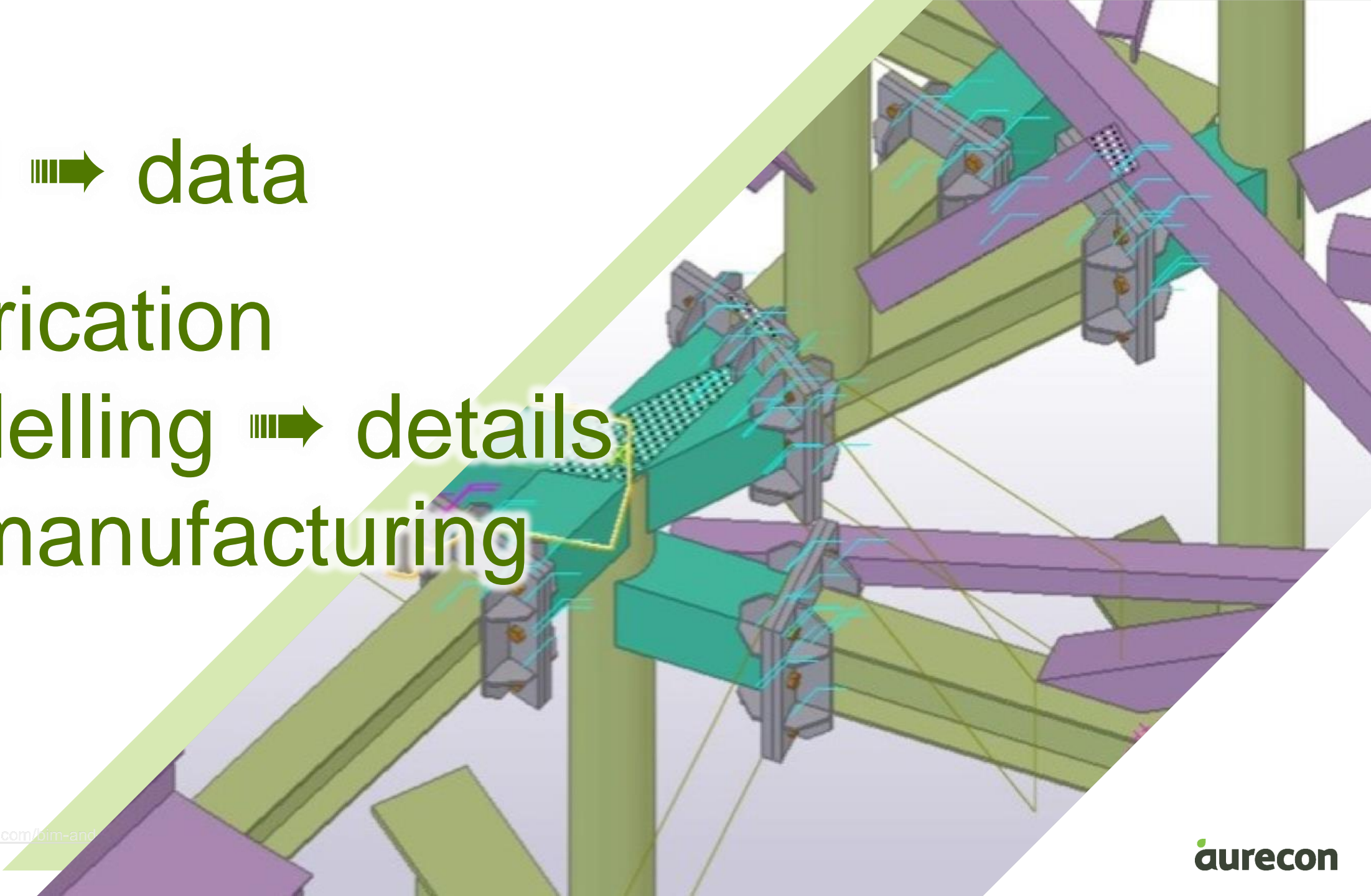
 **logic**



BIM  data

Fabrication

Modelling  details
for manufacturing



DfMA – Paint the Painting in Studio and Hang it on Site



Thank you



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