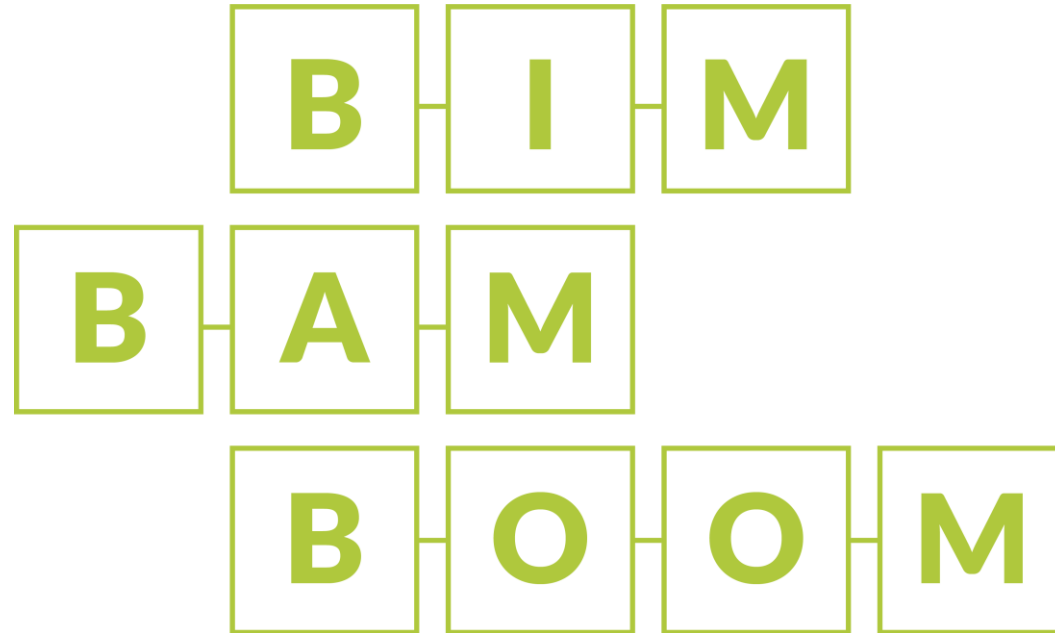
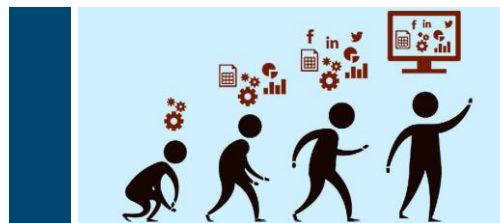


# WHAT IS DE & BIM?

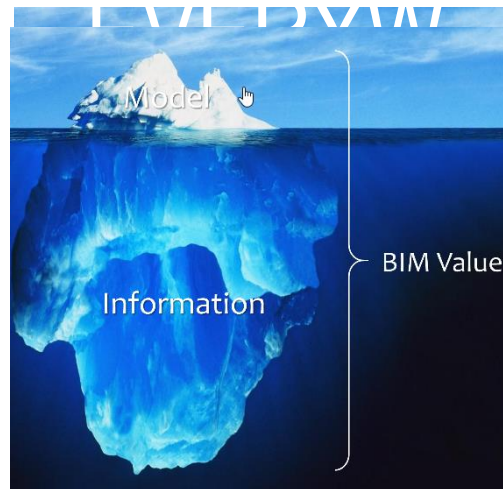


# DATA, DATA, DATA, DATA

Big Data, lot...



DATA,  
DATA





**NZ TRANSPORT**  
AGENCY  
WAKA KOTAHĪ



# ARE YOU READY?

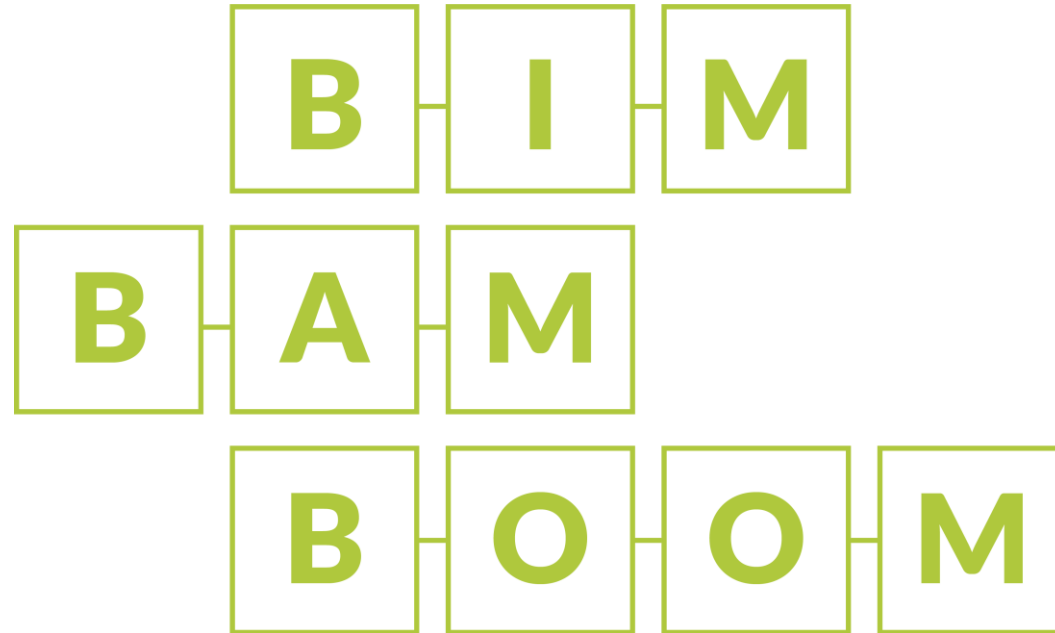
How do I get ready? &  
What does this mean to me?

How do I take advantage of the  
information that's available?  
How do we exploit data ?



Its about.....

Using Data in  
every step of  
the way!





# NOUN



## 'B' IM

# VERB



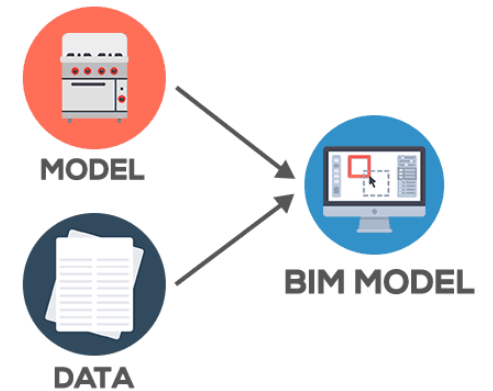
# WHAT IS DE?

## Digital Engineering

- GIS
- BIM
- Assets

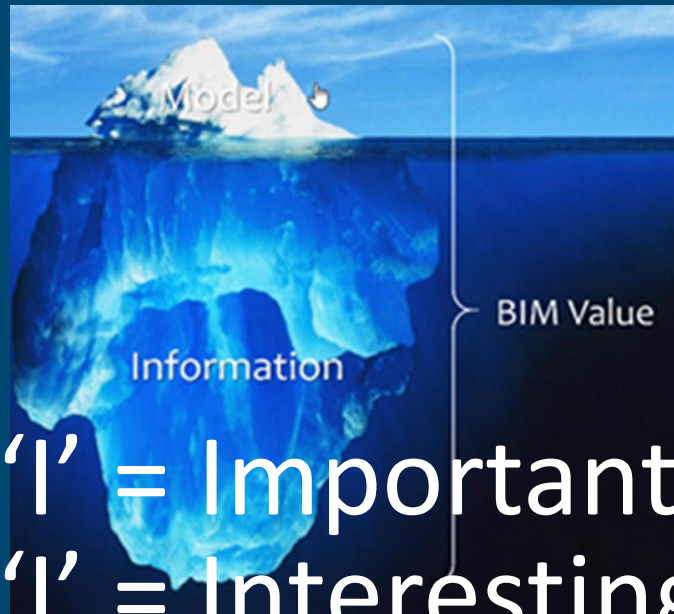
**Building Information Modelling (BIM)** is a digital representation of a physical & functional characteristics of a facility.

A BIM is a shared knowledge resource for information about a facility forming a reliable basis for decisions during it's life cycle, defined as existing from earliest conception to demolition.

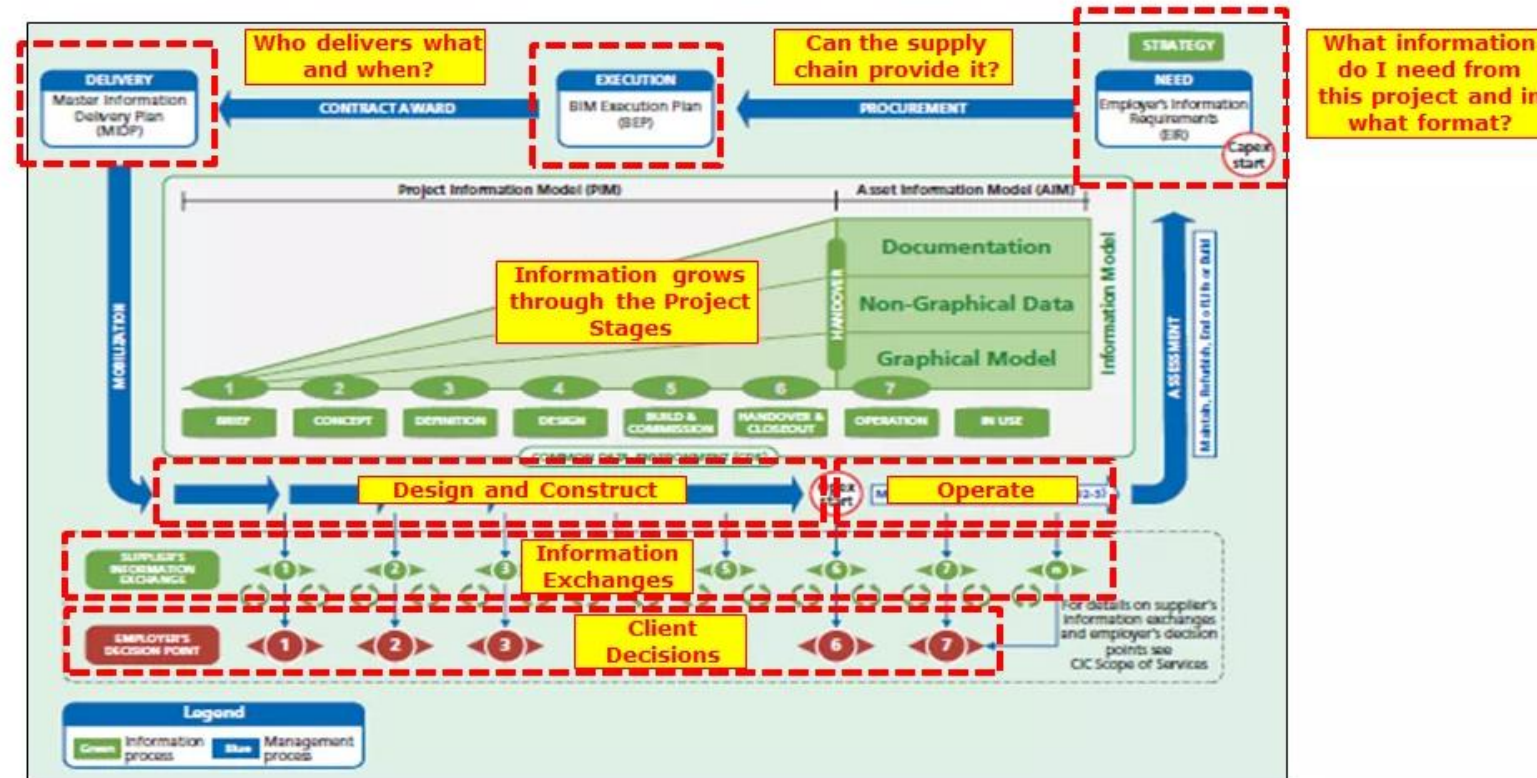


# B 'I' M = INFORMATION

Data has not been modified to  
allow the greater capabilities of  
BIM to be exploited!



## Yes BIM being used specific sites



No agreed 'Asbuilt data' standard





# To specify the asbuilt data Standard

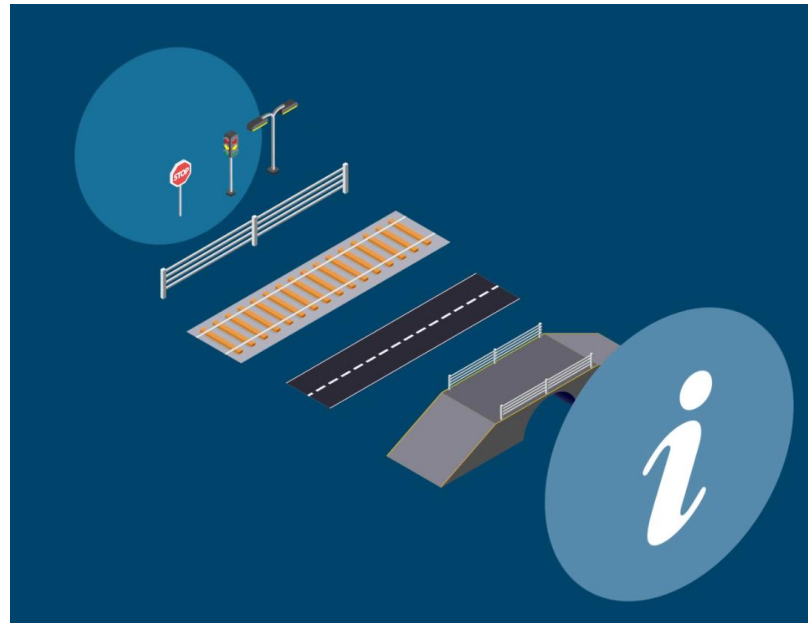
Using common language!

## FULLY LEVERAGED!

## Digital Engineering for Transport



# But why is this so important?



## Process of Building!

Array of  
professionals!  
Different kinds  
Who make it all  
happen!



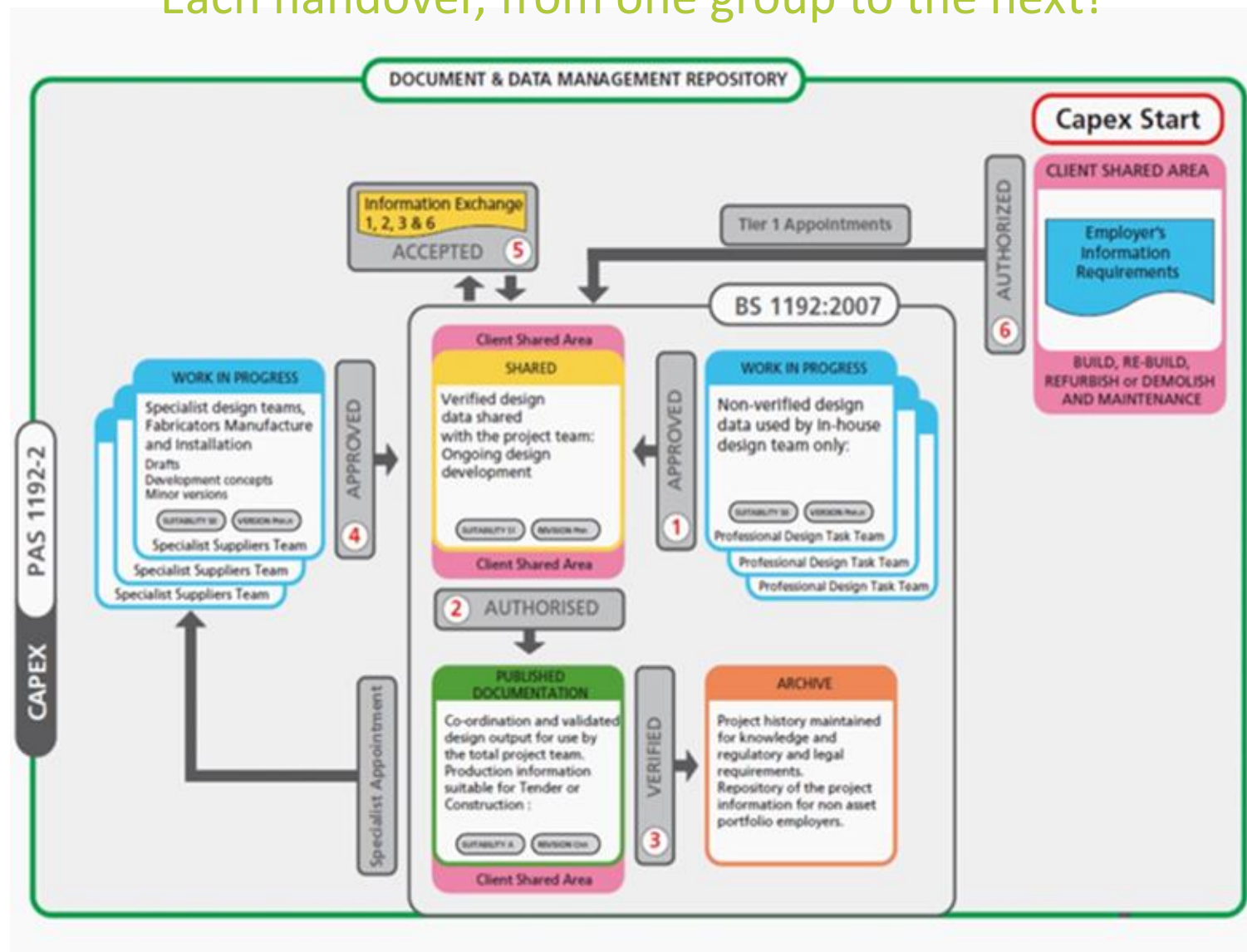


# GAP

## Firstly!!!

Data might remain in silos!  
Information lost or forgotten!  
And assumptions might be made!

Each handover, from one group to the next!





Secondly!!!!

Form of English

Professionals have their Quirks  
&  
TLA's

Professional  
jargon

We all talking our own  
language



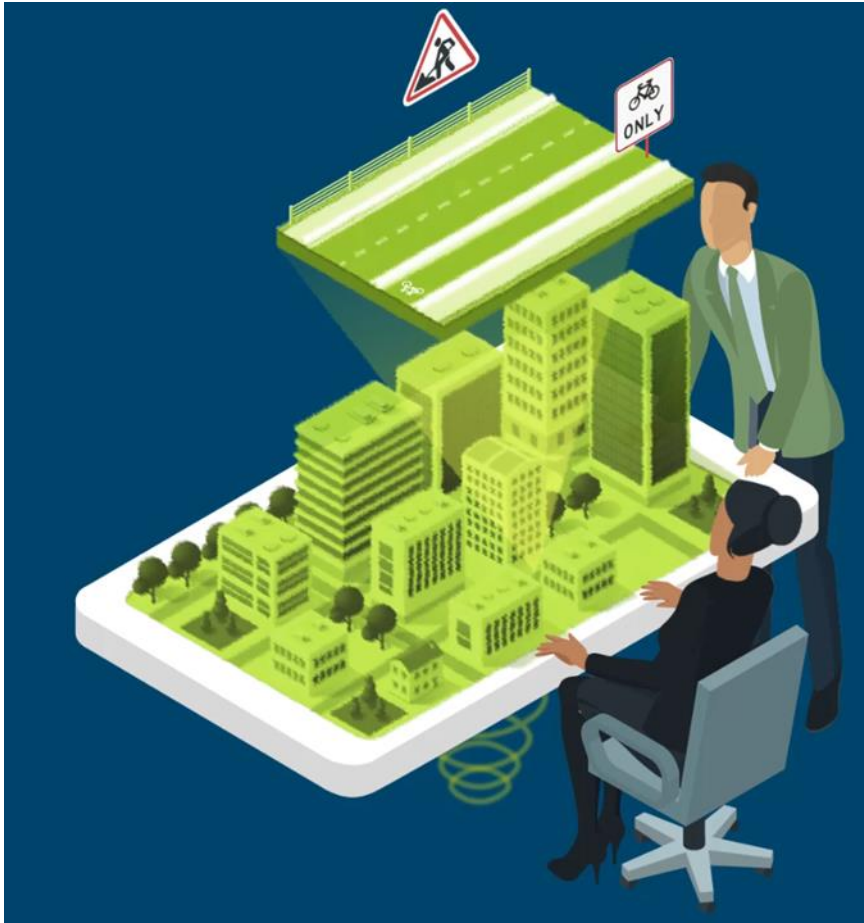
[https://www.youtube.com/watch?v=g\\_jmGQvr6dQ](https://www.youtube.com/watch?v=g_jmGQvr6dQ)





# These are the issues DE sets out to address

More Intelligently, More Collaboratively, More informed Way!



By Modelling the infrastructure!

&

Available to all Stakeholders!



# Start Working off the same page

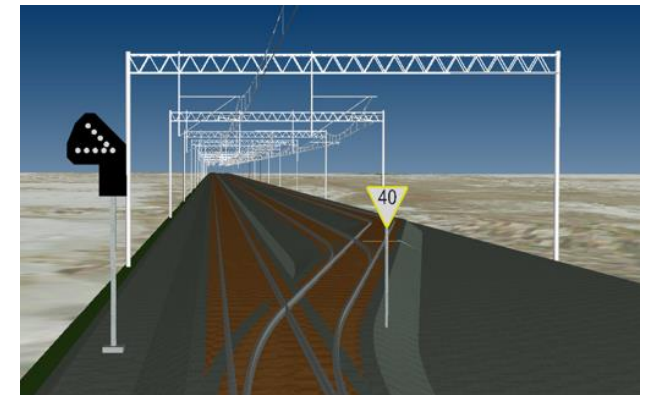
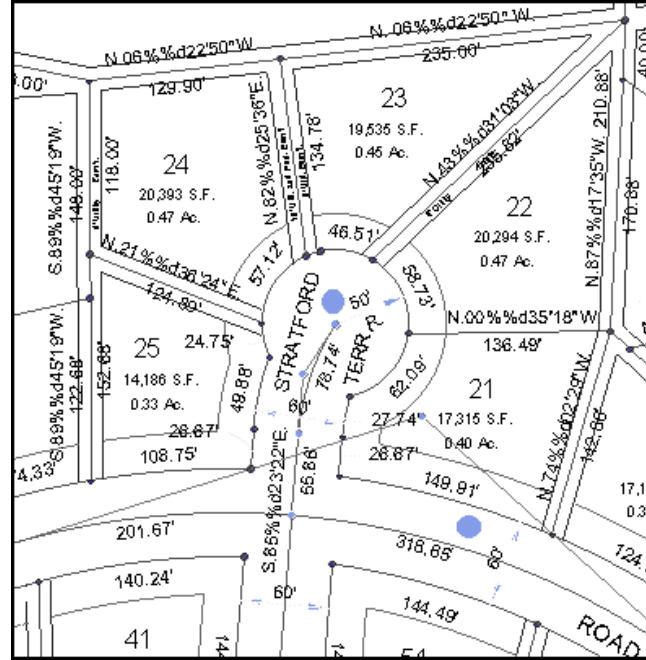
Professional  
Group become  
the contributor



Spatial  
environment,  
adding discipline  
specific data to  
single shared  
Model!

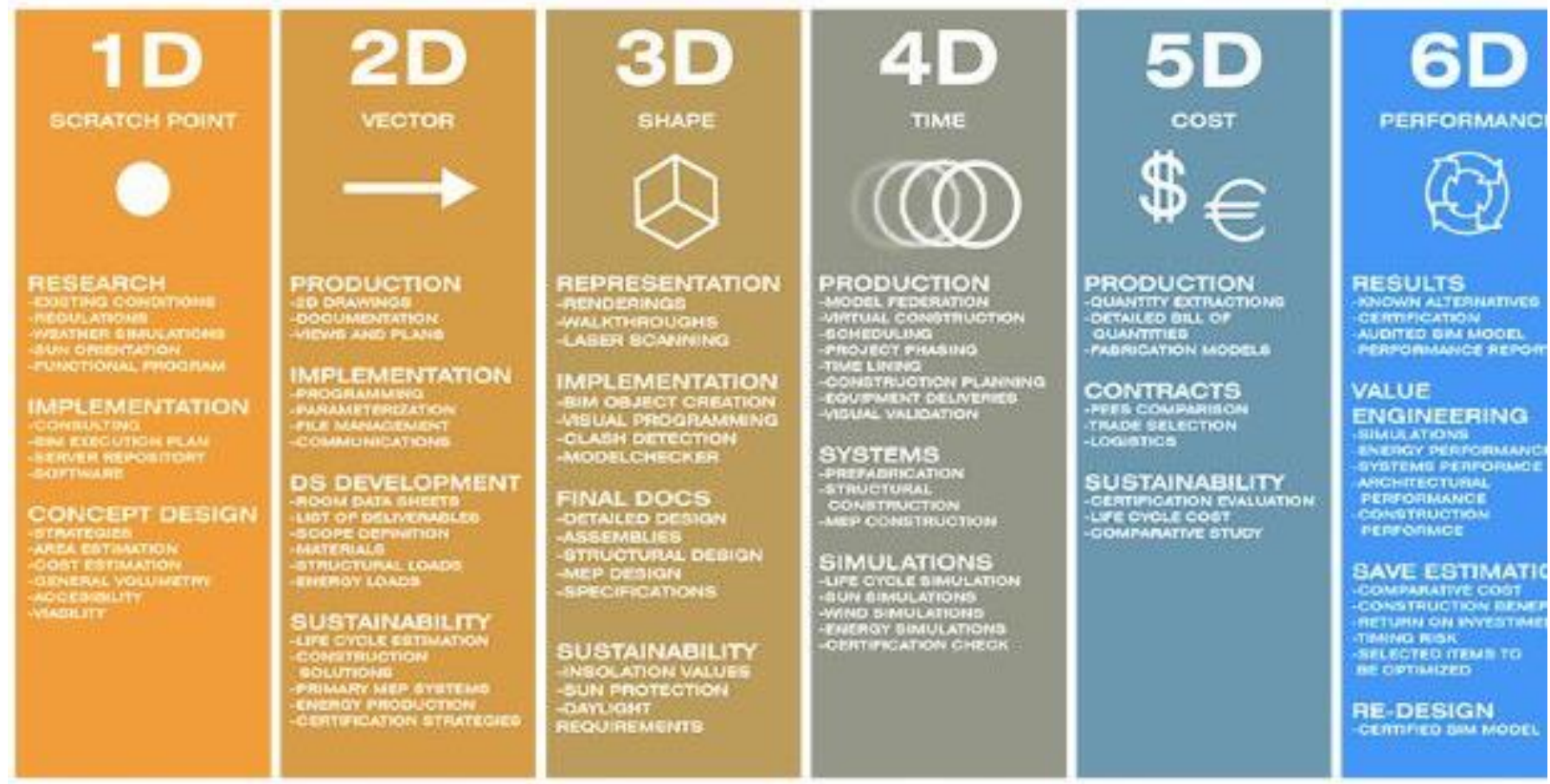


# OLD DAYS VS NEW DAYS





# DE GOES FURTHER THAN 3D





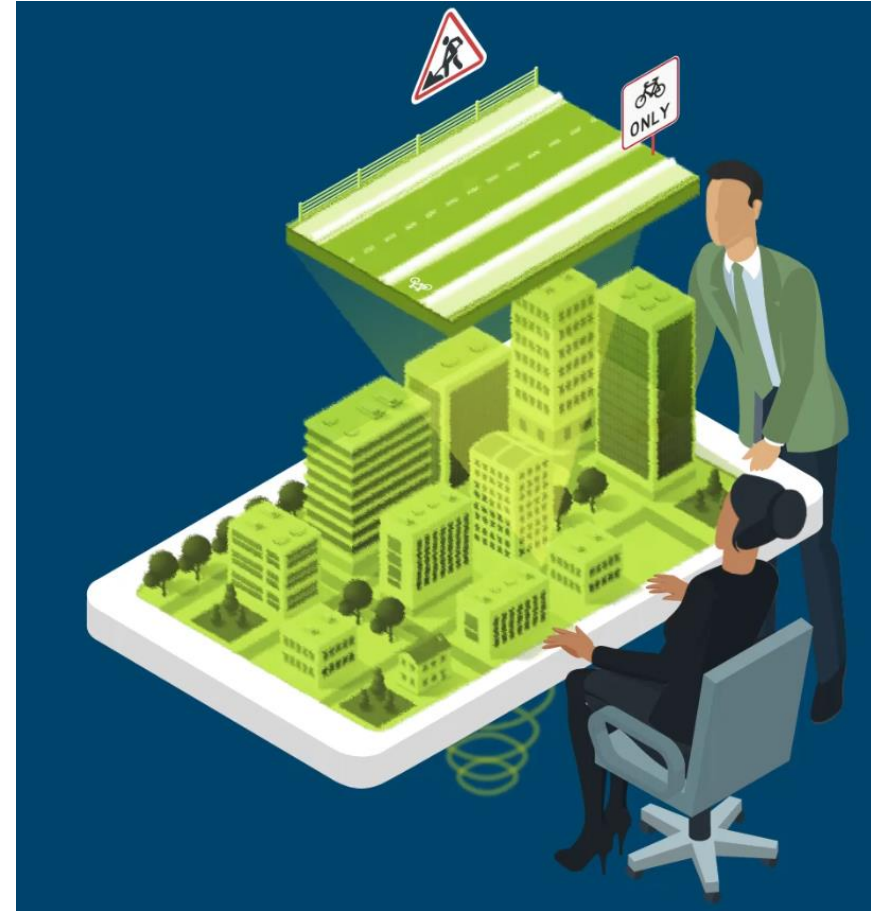
# Back to Gis! This is Fundamental to DE!

GIS & BIM

We create multiple dimensions

Develop not JUST a 3D Model but a  
SPATIAL environment!

Rich data linked with it!



# DE becomes the single information source

What, When,  
Why and How!

## For all details about the infrastructure environment



For who everyone  
needs to do  
anything  
with or to the asset

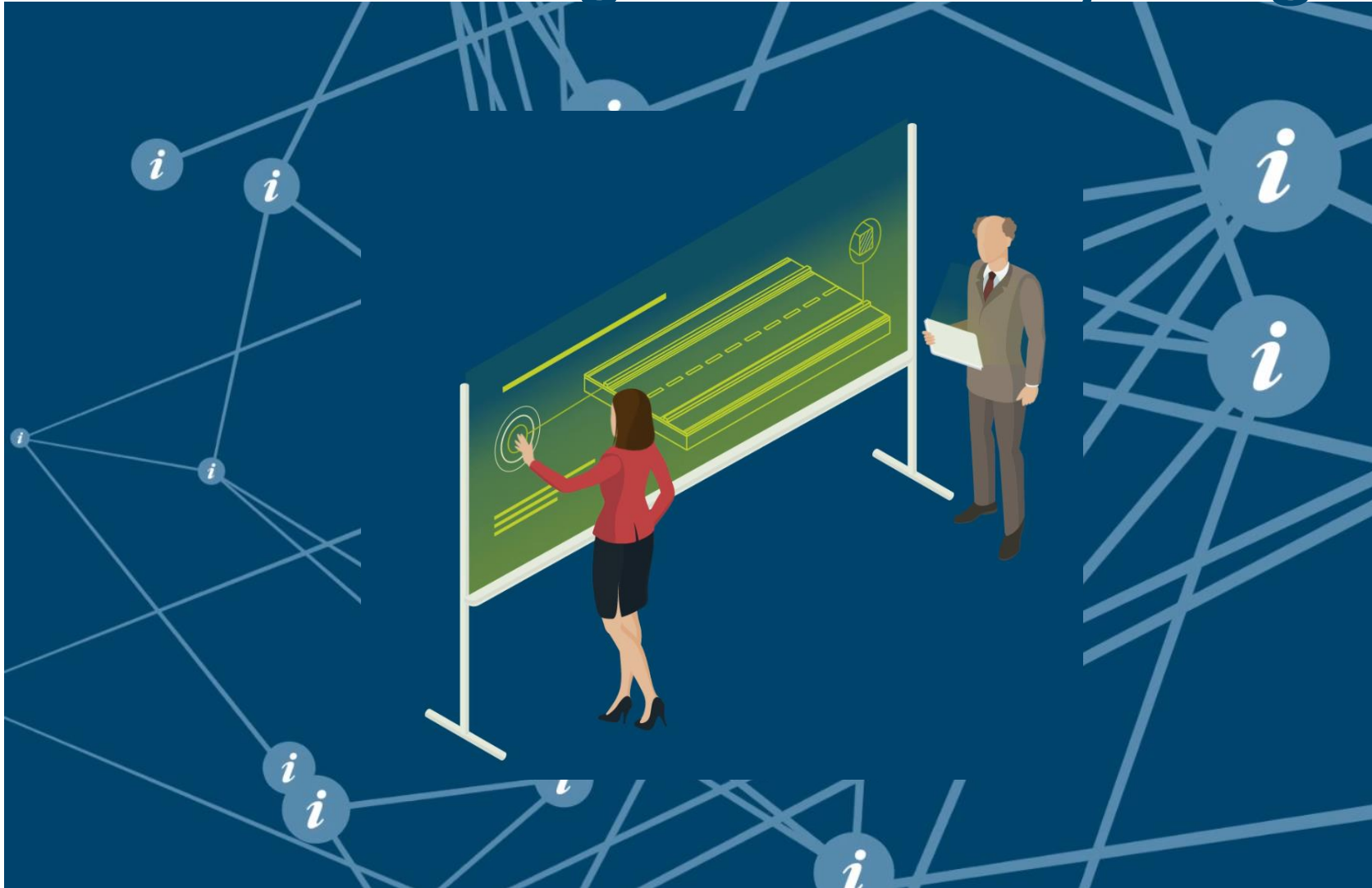


# Now we talking about everything!

DE is about!

Capturing  
Sharing  
Analysing  
Presenting

Digital Asset!



# Provides Evidence for informed Asset management decisions

Access information from  
anywhere at anytime!

- The infrastructure description and its location, geometry, condition, and performance
- Works and inspection schedules, delivery, impacts and observations
- Performance: infrastructure, activity, financial, ONRC
- Controls: environmental, capacity, access, statutory & regulatory
- Infrastructure and consequential service risk and management
- Data provenance and quality





Presented in different formats

Parametric

Geometric

Images

Documents

Accessible and  
meaningful to  
whoever needs  
it!

## Digital Engineering for Transport

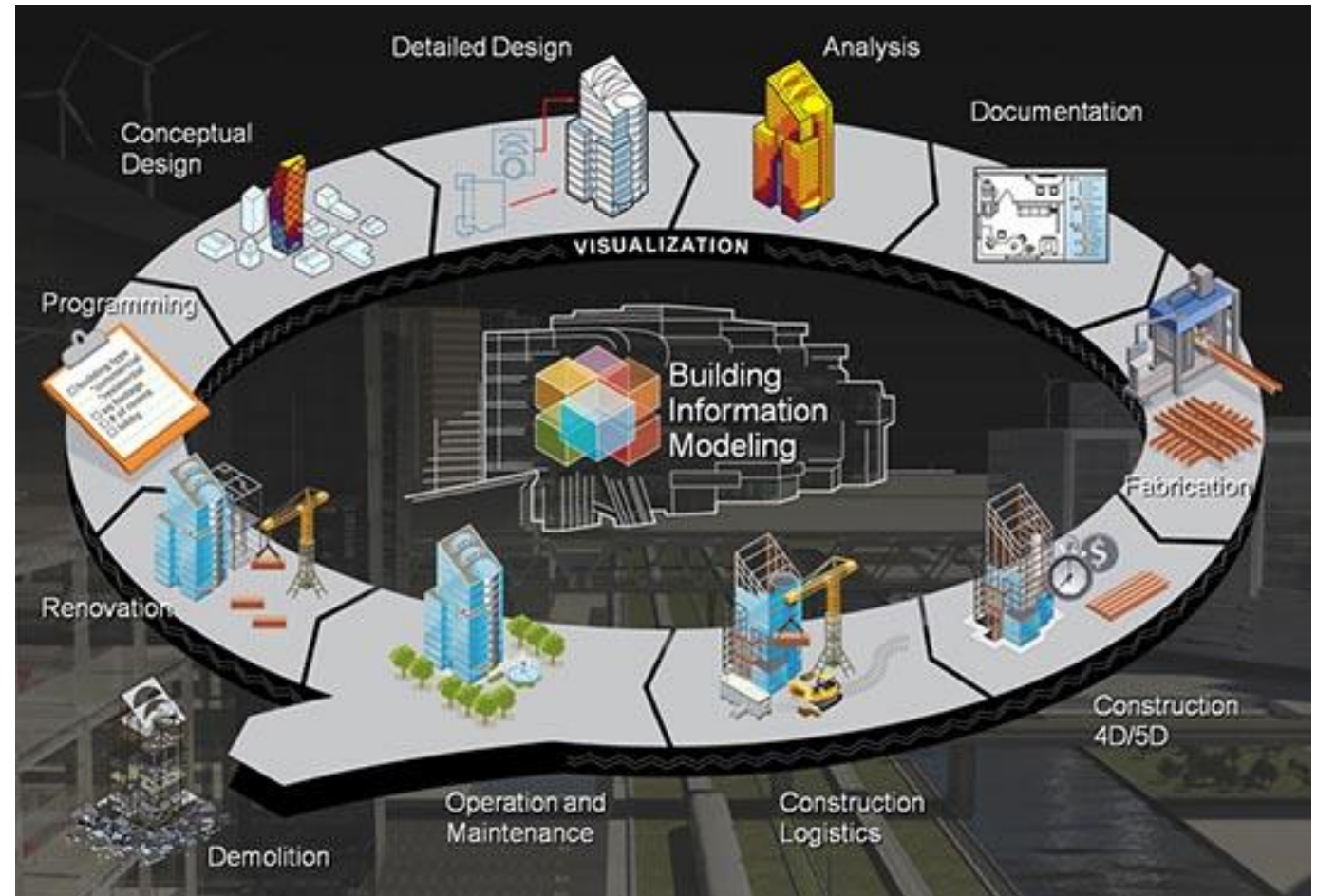


**Working together!**

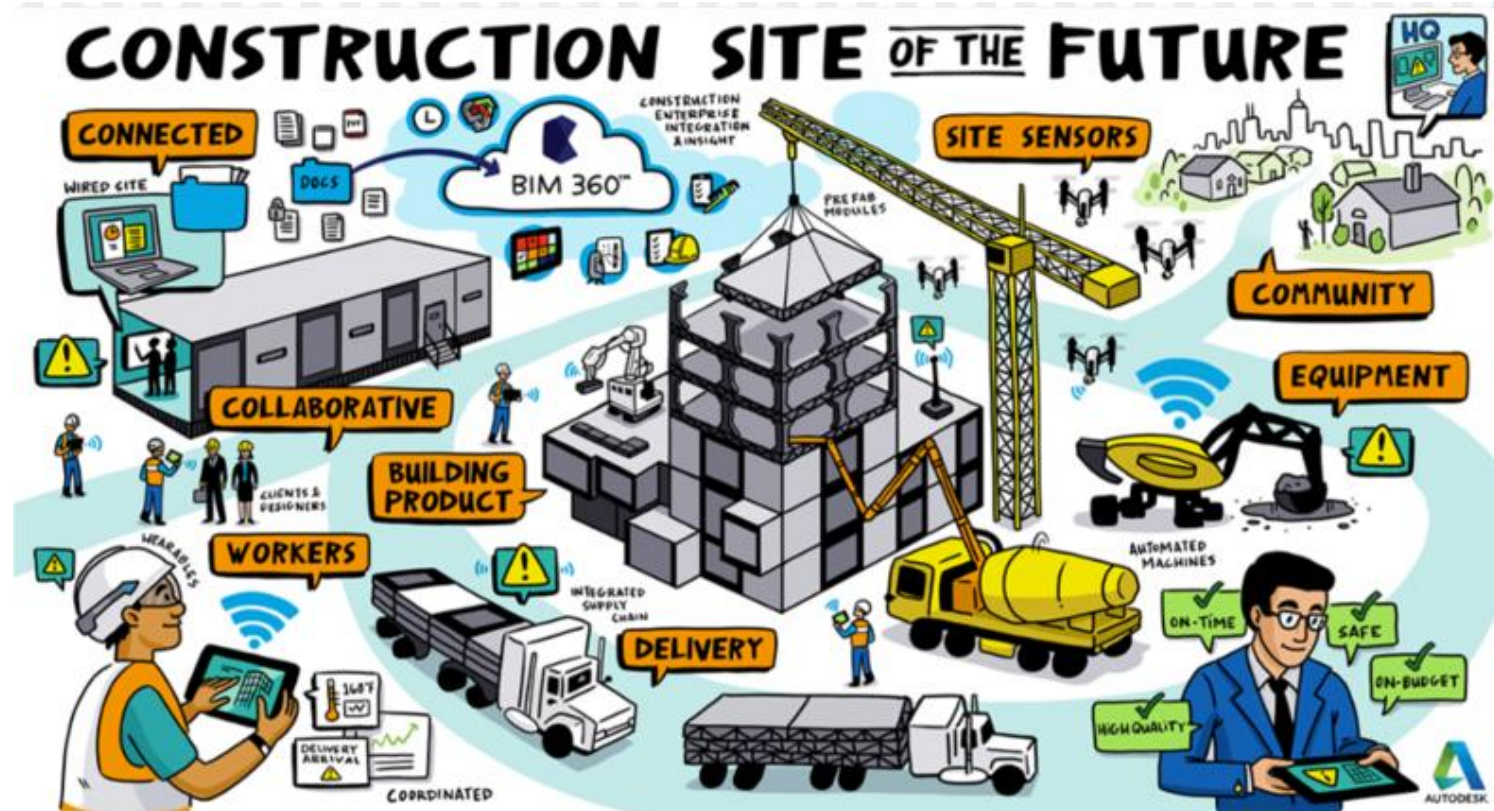


# Common data Environment

Linking information



# DE can revolutionize



# CAN'T MANAGE WHAT YOU CAN'T MEASURE

What should I be measuring and managing and more importantly where?





# THANK YOU!

