

Constructing Smart Cities – Sustainable Planning, Designing and Building



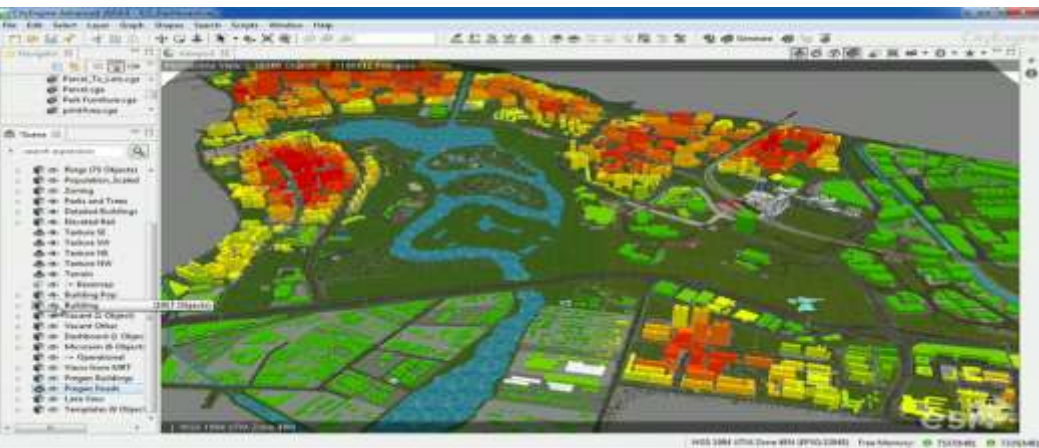
13 February 2019

Vatsal Dave



Ceinsys Tech Ltd
Formerly ADCC Infocad Ltd

GIS in City Planning



Plan A

- + Minimum changes
- + Closest to existing plan
- + Better site arrangement

- Traffic/accessibility challenge
- Attraction not in focus

Plan B

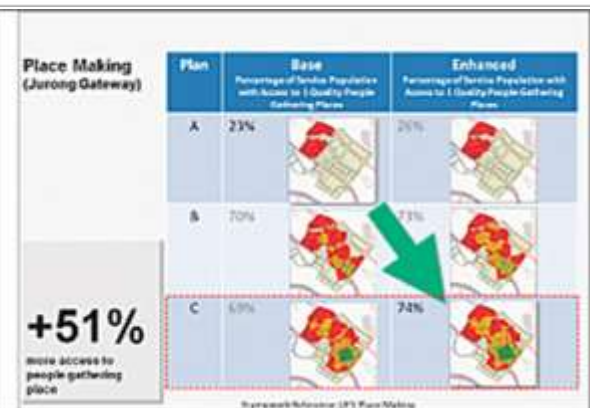
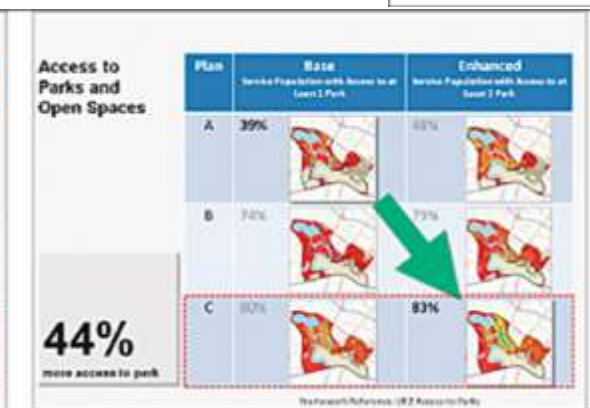
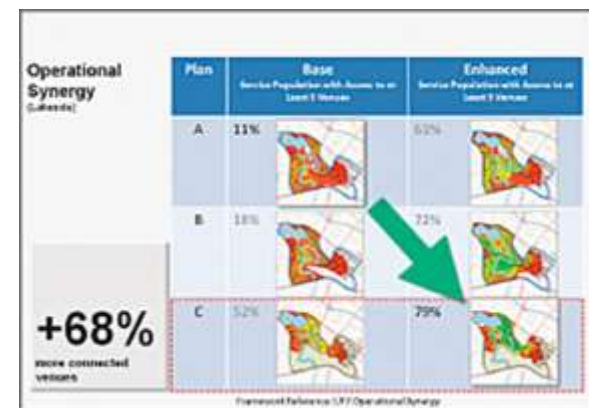
- + Core and clear focus
- + Connect 2 main attraction
- + Close to existing plan

- Partial changes to southern island garden

Plan C

- + Strongest core and clear focus
- + Connect 2 MRTs

- Major change for gardens
- Heavy burden for 2 MRTs and inland roads





BIM-GIS

Interoperability

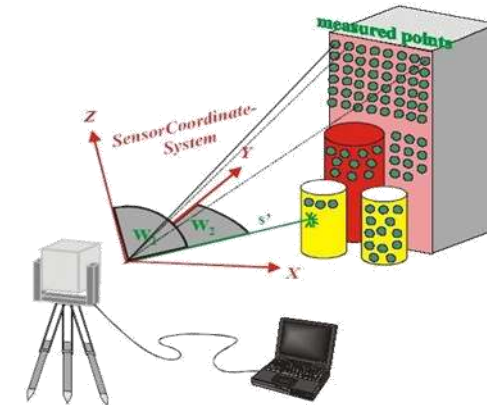
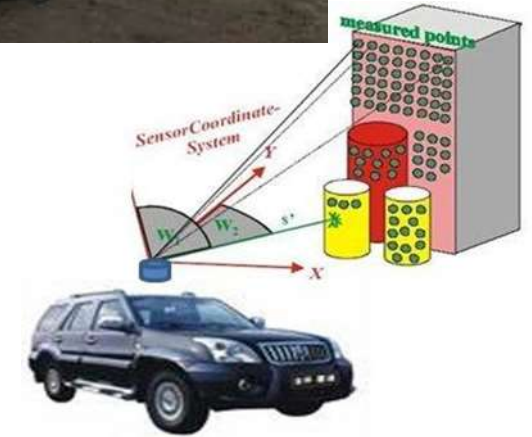
BIM vs GIS or BIM and GIS?

- GIS is used to decide “What” should be built
- BIM provides the guaranteed outcome of what is going to be built



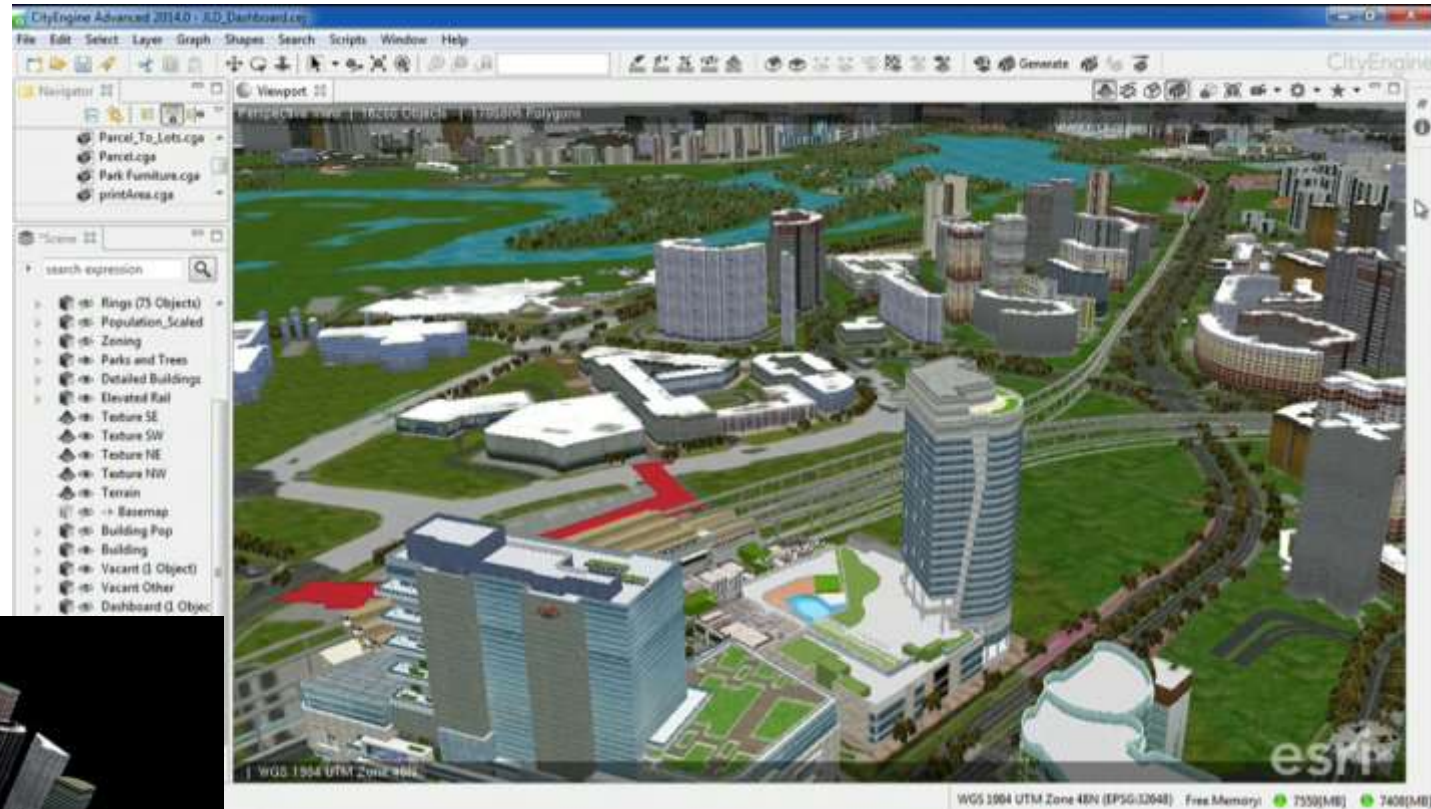
Data

- Understanding
- Holistic
- Patterns & Relationships
- Opportunities



3D - GIS

- 3D City models provide ability to manage and design holistically and comprehensively
- How things connect through cities
- How cities change with time



- Forecast and predict complex phenomena
- Predict future growth rate
- Understand how the system is currently being used
- Interpret unstructured data in many different ways
- Get deep insights

- Machine Learning can be used in GIS for 3 main things:
 - Prediction: Predict impact of global climate change on local conditions
 - Classification: Fading and emerging hotspots (accidents, crime, fire)
 - Clustering: Identify impervious surfaces from high resolution imagery to better plan for floods

In Conclusion....

- With all the emerging and advanced technologies...

GIS enables more understanding.....

more collaboration....

creative problem solving..

We need to leverage our best technology

Thank you!

