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Volunteering
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for a better living

(PAPER ID 11316) The SmartKADASTER Way – An Approach Towards 3D Geovisualisation Beyond Cadastre Purposes in Malaysia

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Background:

3D environment **overcome limitation** of 2D techniques & cater cadastre **new emerging roles**

SmartKADASTER was developed and updated by JUPEM to cater **3D geovisualisation**

Key features:
3D city model (various LoD), 2D cadastre information, specific AOI in city area

Fusing geospatial information with 3D environment for **spatial analysis** in city area



SMARTKADASTER INTERACTIVE PORTAL (SKIP) (PHASE 2)

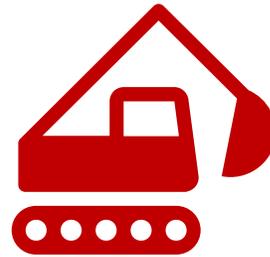
Further reading the background:

<https://fig.net/resources/publications/prj/showpeerreviewpaper.asp?pubid=11316>

Highlights of presentation:



**SK 1 vs
SK2**



**Challenges of
developing SK2**



Way Forwards

Further reading:

<https://fig.net/resources/publications/prj/showpeerreviewpaper.asp?pubid=11316>

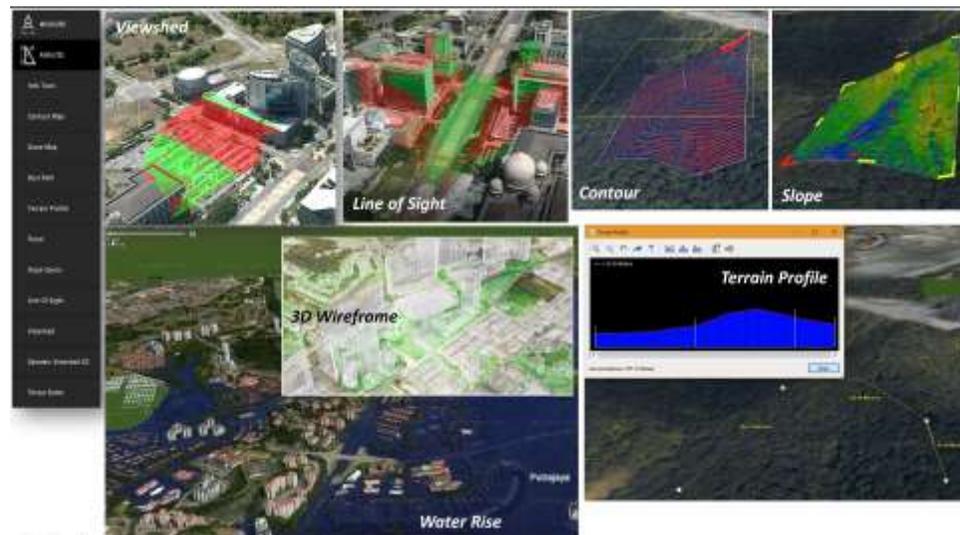
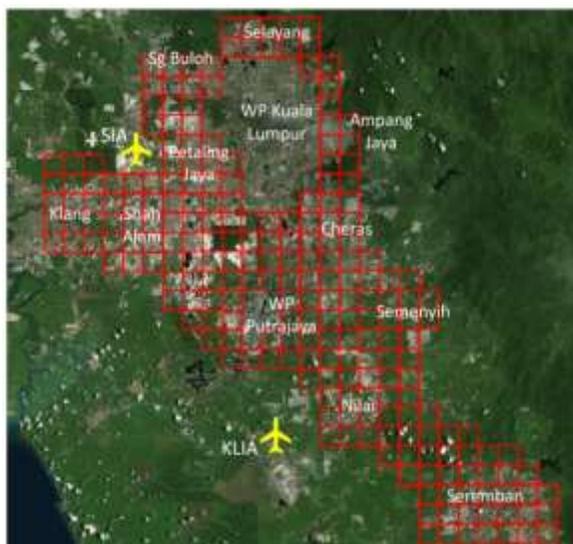
SMARTKADASTER PHASE I vs PHASE II

Expanding Area of Interest: (Greater Kuala Lumpur, Seremban and Nilai)

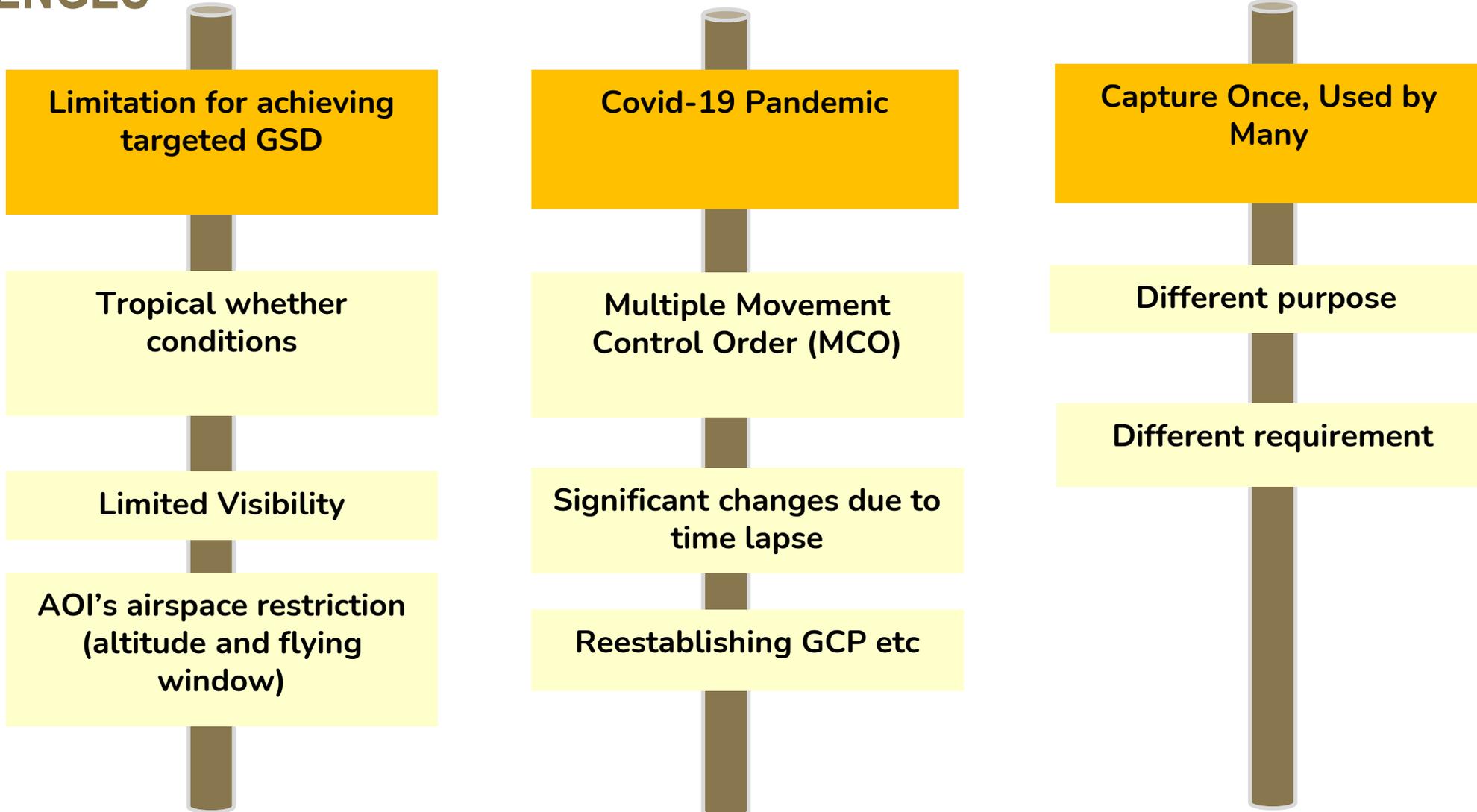
Functionality Enhancement & New Applications

Inclusive of Stratified Information

3D Modeling and Database



CHALLENGES



CHALLENGES

**Insufficient coverage for
3D modelling / mesh**

Airborne and terrestrial
data acquisition coverage

Limited / Restricted access

Incomplete model / mesh

**LoD 1 Building Height
Reference**

Identifying the height
reference

Meeting beyond cadastre
purposes

Huge data

Multiple data acquisition
due to MCO and others

Repeating of multiple
data reprocessing

Growing size and storage

Hardware and software
limitations

Further reading on actions taken to resolve these challenges:

<https://fig.net/resources/publications/prj/showpeerreviewpaper.asp?pubid=11316>

WAY FORWARD

Researchers identified more than 50 use case of 3D city model

Assessment study of the SK2 impact

SK2 city model for AEC community

3D geovisualisation

Testing on User Experience and SK2 usability

Integration with QT (eLand)

Aesthetic quality considerations

X as a service

Fit for purpose

Further reading on the way forward:

<https://fig.net/resources/publications/prj/showpeerreviewpaper.asp?pubid=11316>

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