



**A review of the literature on  
geographical information system  
and digital projects in museums:**

**Digital construction to modern  
society---- Geography and History**

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# Outline

- **Concept Introduction**

Concept of Digital museum

Concept of Geographical Information system

- **Relevance to Major**

Relevance to History

Relevance to Geography

- **Impact to Major and the Social Digital Construction**

Impact of digital museum on History

Impact of GIS on Geography

The similarities between two areas (relate to digital construction)



# Concept about digital museums (Definition/History /Development)

- *D* Real collections – – digital elements – – create immersive environments (Cameron, 2003).

- *H* Since the beginning of the 21st century, the museum digitization movement has lasted for more than a decade (R. Y. Li & Liew, 2014).

**With the development – – connect the offline museum with online museum websites.**

- *D* According to Li et al. (2012), put the information on the digital web pages/record video of their tour guide. Ex. Hong Kong Palace Museum





**Digital Museum Development Example**  
**Hong Kong Palace Museum**



# Concept about Geographical Information System (GIS)

## GIS

It is defined as a special type of information system that is used to input, store, retrieve, process, analyze and visualize geospatial data and information (Awange & Kiema 2018)

## Data collection

GIS rely on technology of **remote sensing** like satellites to collect massive data.

## discrete objects

GIS can separate different objects on the map (like buildings, rivers) in different layer.





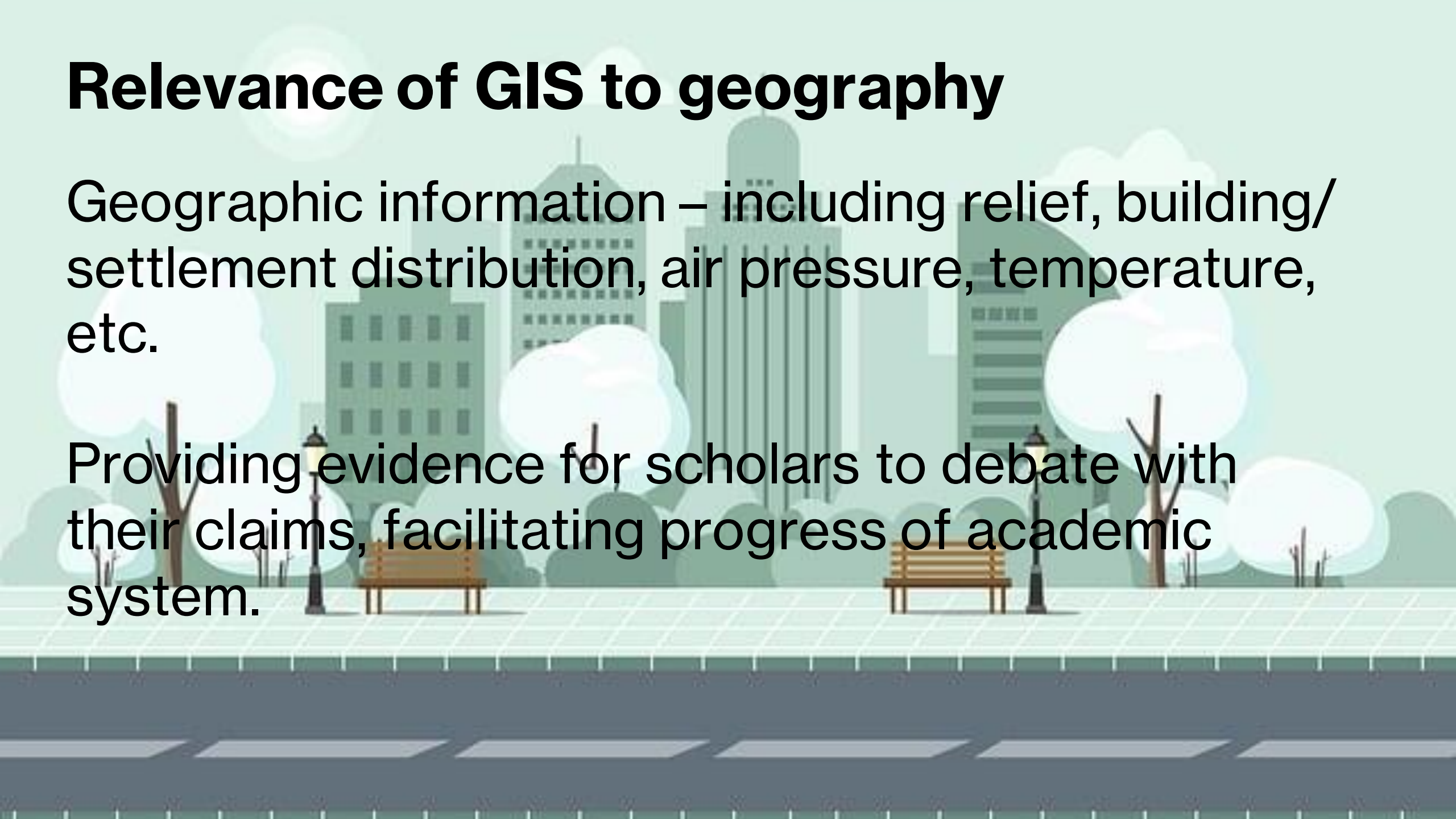
# Relevance of Digital Museums to History

- Digital — — digital technology
- Museum — — carrier of history — — historical relics — — historical information
- Combination — — Digital + Museum
- Emphasis the impact

# Relevance of GIS to geography

Geographic information – including relief, building/settlement distribution, air pressure, temperature, etc.

Providing evidence for scholars to debate with their claims, facilitating progress of academic system.





# Impact of Digital Museums to History

- Key words: heritage preservation/historical research
- History focuses on the research
- The study of recorded historical events and the study of existing historical sites.
- Help to solve the problem: the fragility of some museum collections (Sylaiou et al., 2009).
- Primary historical materials
- The digital museum project contributes to the preservation of historical sites and facilitates further in-depth research by researchers.



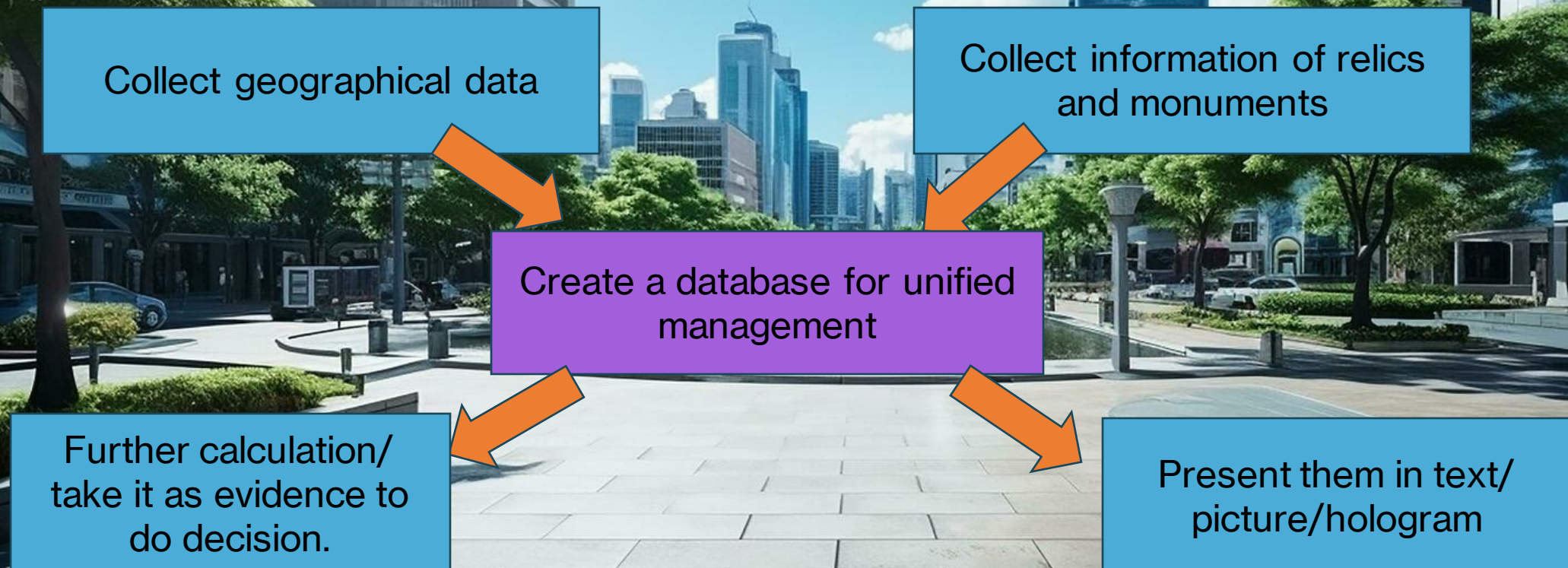
# Impact of GIS to Geograpghy

- Urban planning – GIS support urban planning by generating planning model, which can prevent potential problem like traffic jam. As a result, city enjoy a more effective resource management.
- Weather predicting – GIS contain strong calculation system and massive database. By analyzing such data, weather can be predicted and prevent large loss from hazard, like analyzing regional air pressure can predict the existence of typhoon.



# Impacts to the Social Digital Construction (Both Geography 「GIS」 and History 「Digital Museum」 )

- As we mentioned before, both GIS and Digital Museum collect data and information of real items.
- Then, they create a database for unified management.





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