# 2022/09/12 Morita

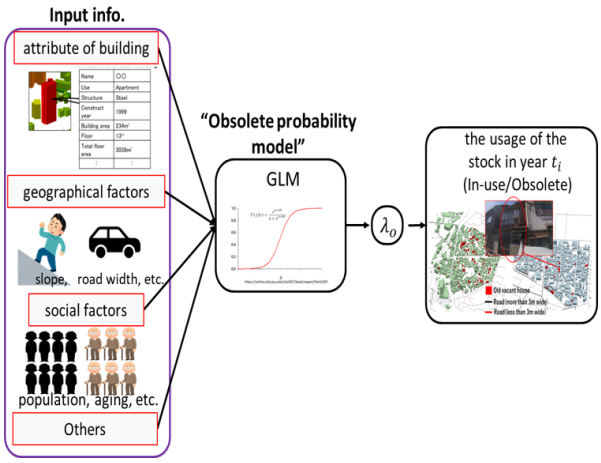
- 
- =
- =
- Motivation
  - 

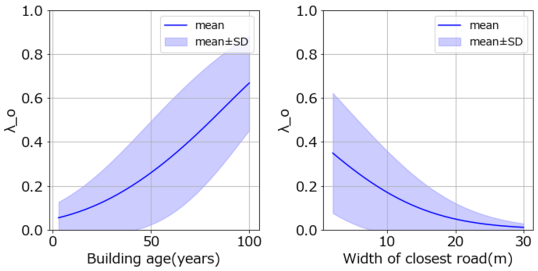
## ??

- . (GLM) .
- 
  - 1. .
  - 2.

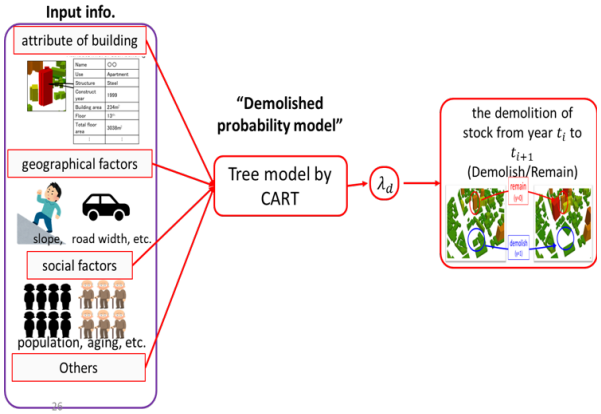
## ??

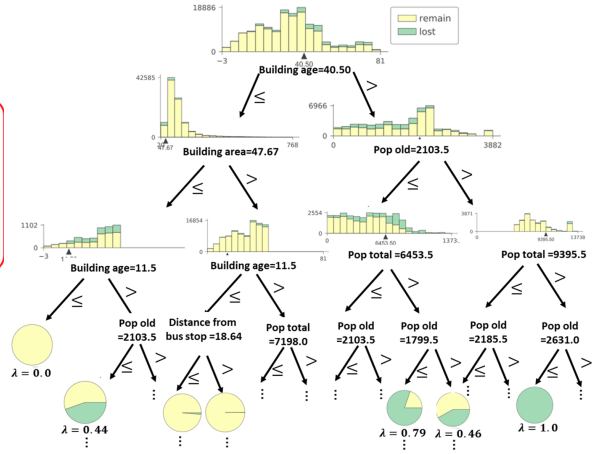
- . (CART) .
- 
  - 1. 40 .
  - 2. 40 .




Partial Dependency Plot in obsolete probability model

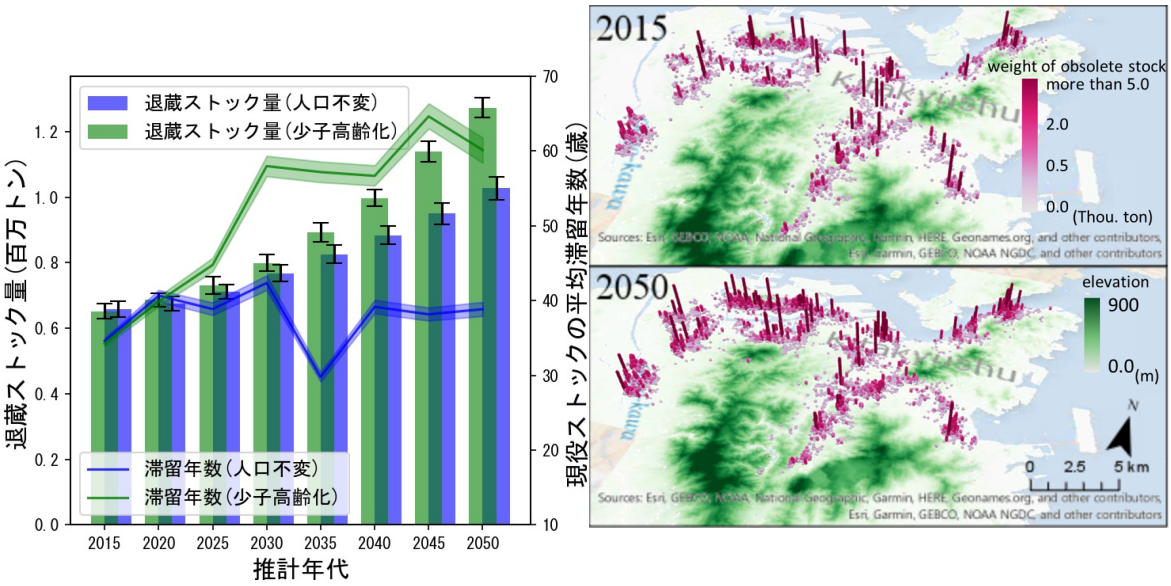



Tree structure of demolished probability Model (from top to the 4th layer in total 15 layers)

## &

- × × . .
-
  - 1. & 34.2 (in2015)→60.1 (in2050)
  - 2. & .2050 &




- 1: ?
  - ? & ? ...
- 2: ?
  - ?
  - ??

” ” ...!

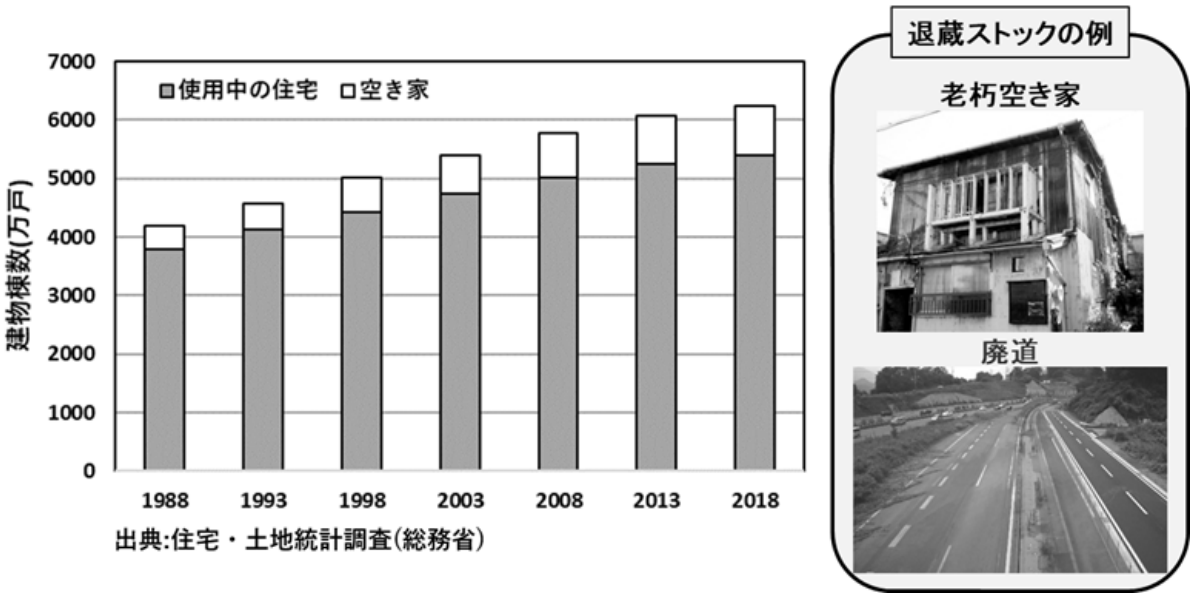



Figure 1: Fig.

- 
- 

- & GIS
- 
- 

## 1 &

- ( ) ( )
- ...!
  - (ex. ” ”, “ ”)
  - ( )
    - * “ ” ( )

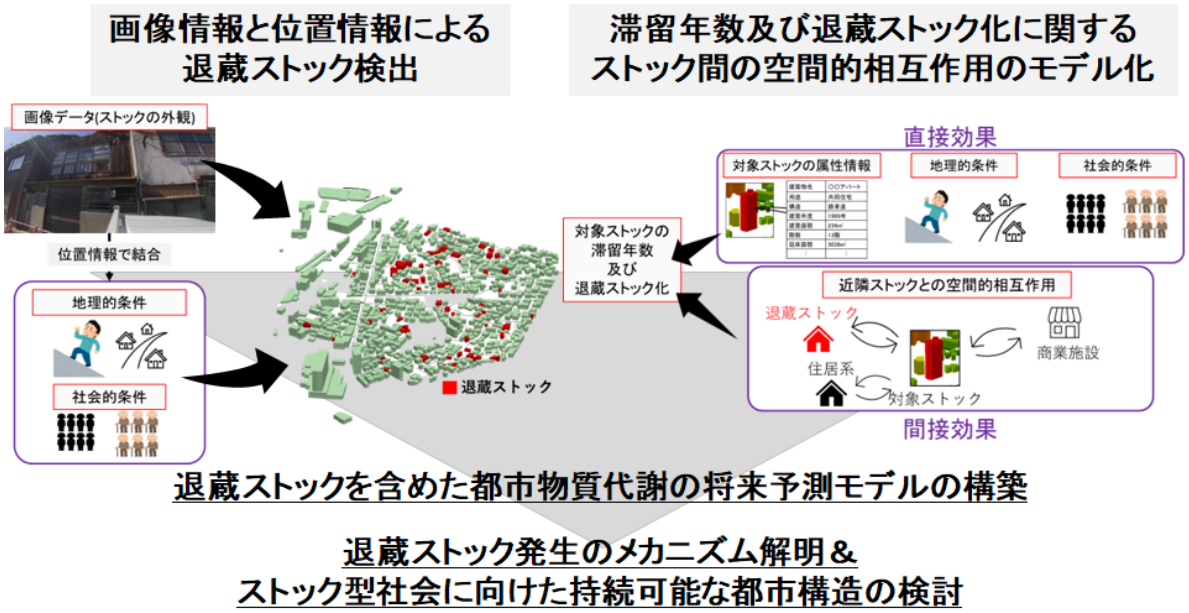



Figure 2: Fig.

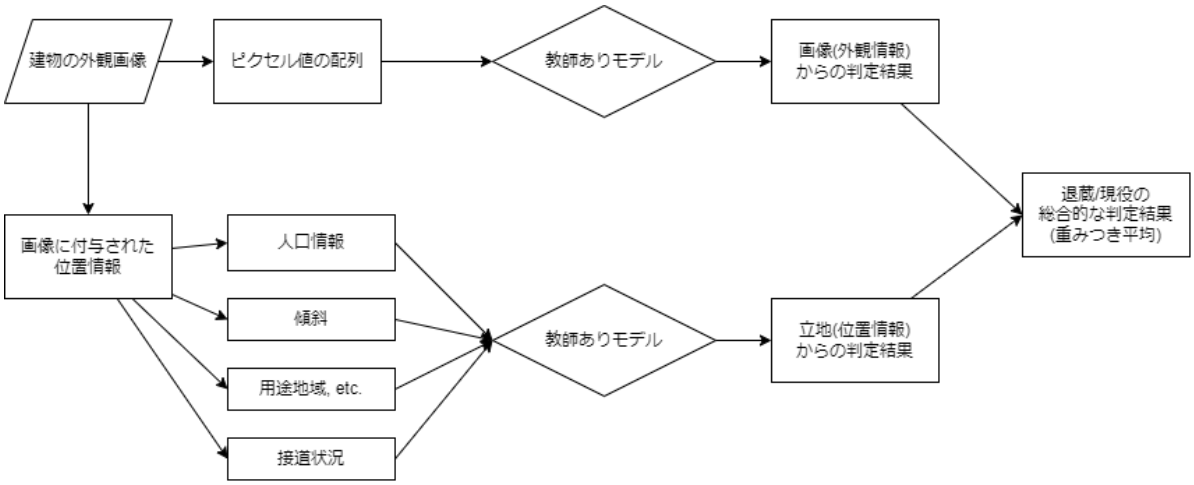



Figure 3: Fig. &

- 
- 
- inuse→out of use
  - 
- ...!!
  - → →
  - 

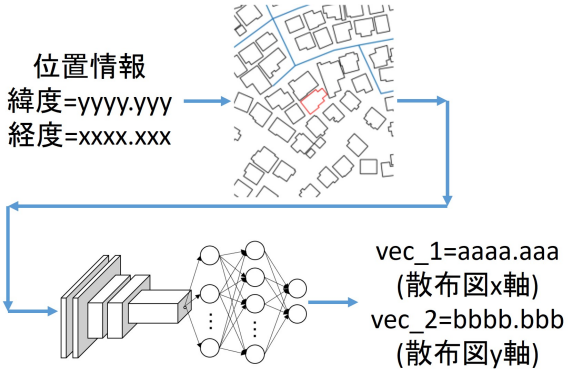



Figure 4: Fig.

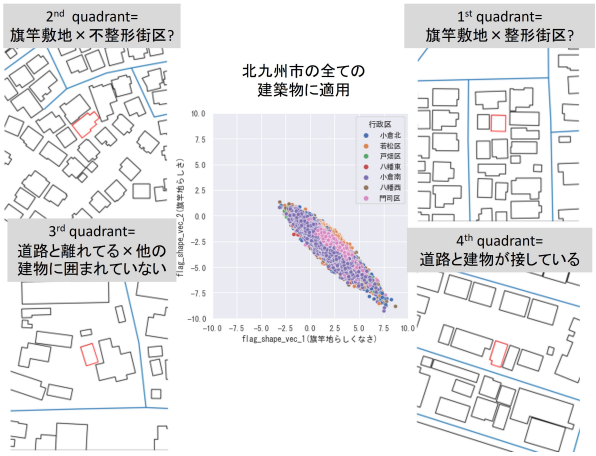



Figure 5: Fig.

## 2

- ” ” ” ” ” .
  - ...! ex1) ...? ex2) ...? ex3) " " " " ...?

    “ ” ...!

    ...??

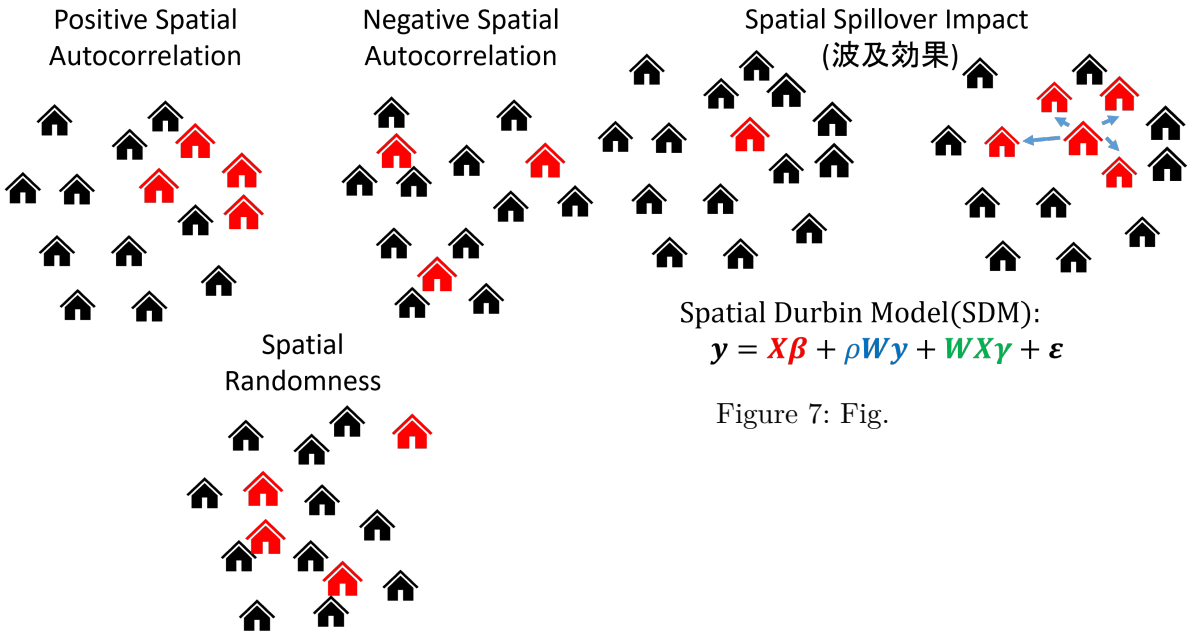



Figure 6: Fig. (Spatial Autocorrelation)




Figure 7: Fig.

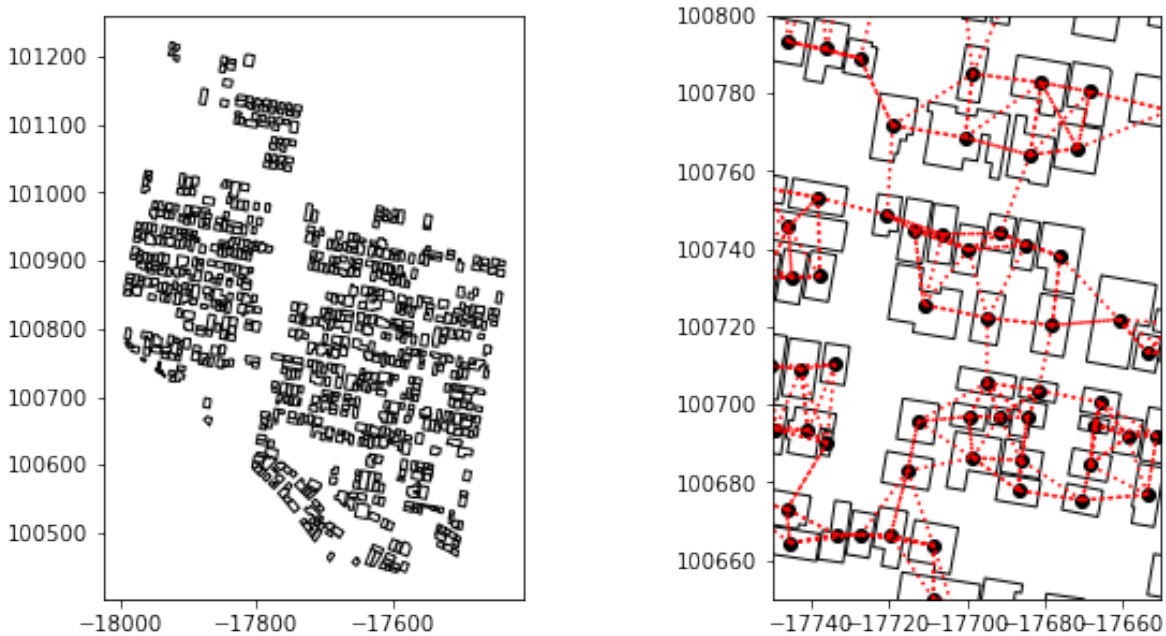



Figure 8: Fig. (ex. 4 )

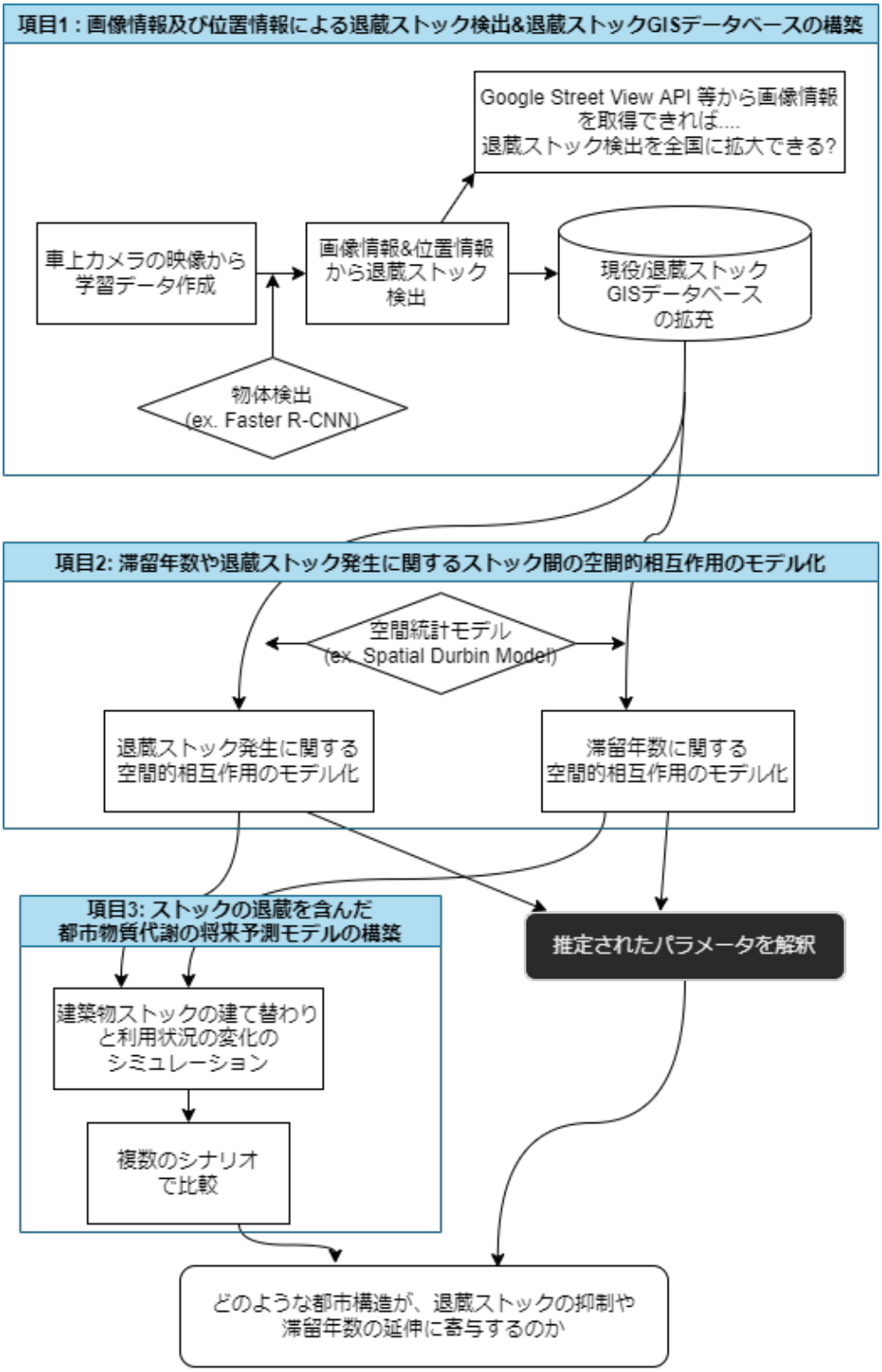
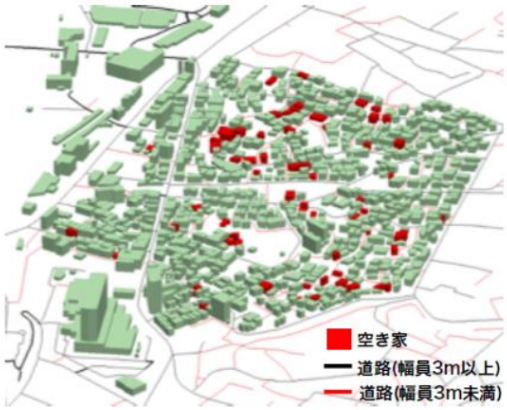
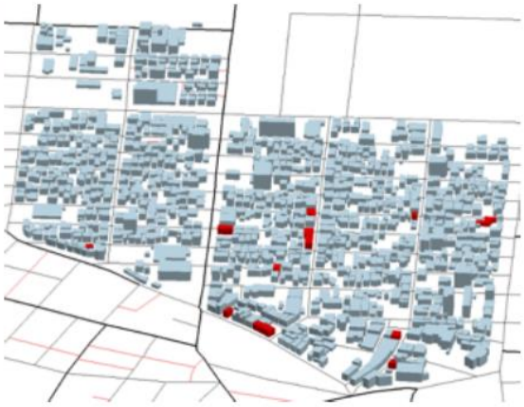

項目1：画像情報及び位置情報による退蔵ストック検出&退蔵ストックGISデータベースの構築
Google Street View API 等から画像情報を取得できれば....
退蔵ストック検出を全国に拡大できる?
車上カメラの映像から学習データ作成
画像情報&位置情報から退蔵ストック検出
現役/退蔵ストックGISデータベースの拡充
物体検出
(ex. Faster R-CNN)
項目2: 滞留年数や退蔵ストック発生に関するストック間の空間的相互作用のモデル化
空間統計モデル
(ex. Spatial Durbin Model)
退蔵ストック発生に関する空間的相互作用のモデル化
滞留年数に関する空間的相互作用のモデル化
項目3: ストックの退蔵を含んだ都市物質代謝の将来予測モデルの構築
推定されたパラメータを解釈
建築物ストックの建て替わりと利用状況の変化のシミュレーション
複数のシナリオで比較
どのような都市構造が、退蔵ストックの抑制や滞留年数の延伸に寄与するのか

Figure 9: Fig.

- 1 / ( )
- 2 3 /
  - 2 / ...!( / 3 2000 ...)




枝光地区の空き家分布状況



浜町地区の空き家分布状況

  -

- 360
- 360

http://www.trlosaka.co.jp

Insta360EVO

- ( ...)

  - Insta360 one x(360 ) GPS Smart Remote( GPS )
  -
  - Tips
  - GPS
  - ONE X GPS Smart Remote Tutorial
  - With GPS Smart Remote , you can inject GPS metadata into your video and photo.

- 
  - * 360 ( ) ( , ) ====> - Insta360 (
    * mp4
  - GPS Smart Remote GPS
    * ...
    * Insta360 one x
  - GPS
    * Insta360 (2021 11 )
    * ...
      · ExifTool
    * .mp4 Python ...!

**1:**

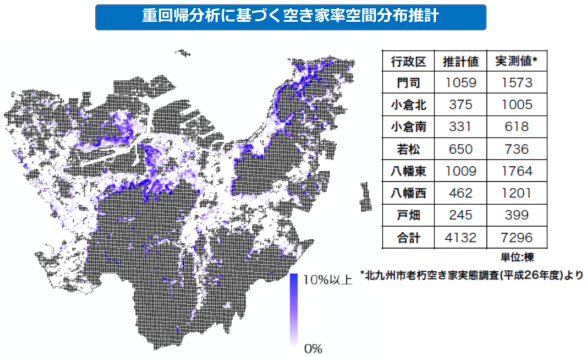
- 

**2:**

- (Google street view ?)
- ( ) (100~200 )

- 11 ...!

# 




| 行政区 | 推計値 | 実測値* |
|---|---|---|
| 門司 | 1059 | 1573 |
| 小倉北 | 375 | 1005 |
| 小倉南 | 331 | 618 |
| 若松 | 650 | 736 |
| 八幡東 | 1009 | 1764 |
| 八幡西 | 462 | 1201 |
| 戸畑 | 245 | 399 |
| 合計 | 4132 | 7296 |

単位:棟

*北九州市老朽空き家実態調査(平成26年度)より

Figure 10: Fig. 2020

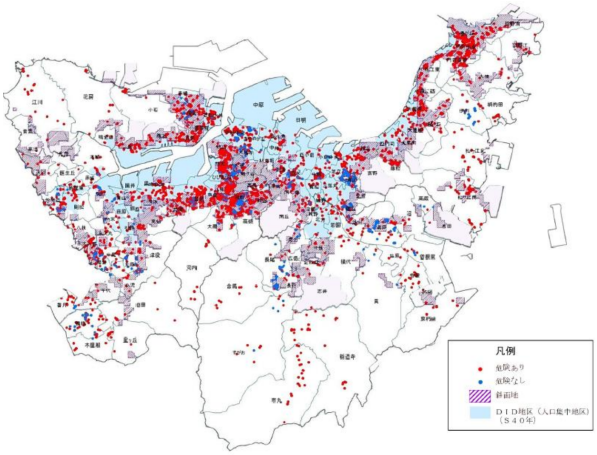



図 1-8 北九州市の老朽空き家の分布（出典：北九州市資料）[8)]

Figure 11: Fig. 2014

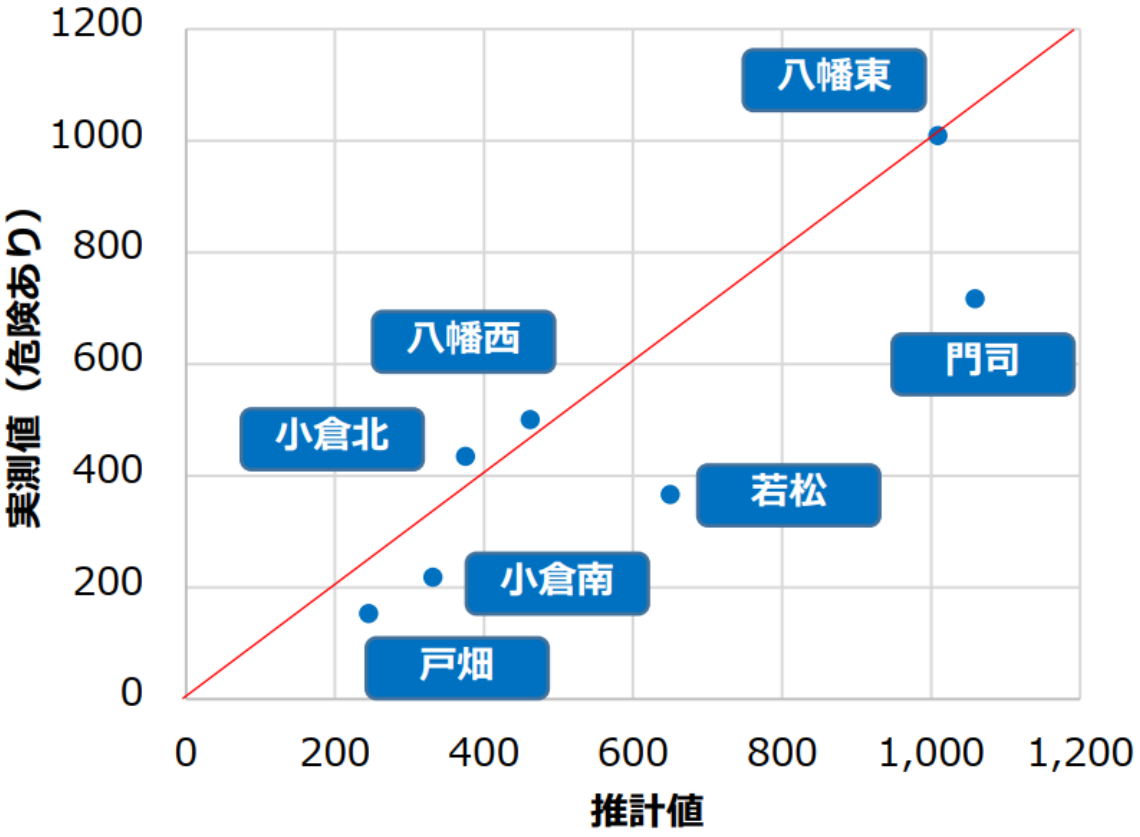



図 1-10 森田 [12]による推計値と北九州市による実測値 [8]の比較

Figure 12: Fig. ( )

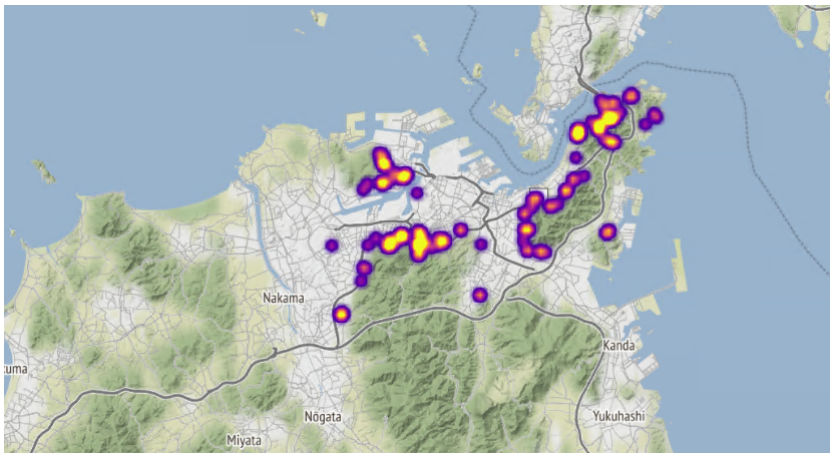



Figure 13: Fig.