

Policy Support Mapping & Geoinfographics of Korean Local Governments

Myung-Hwa Hwang*,
Eun-Sun Im,
Seong-Je Jun

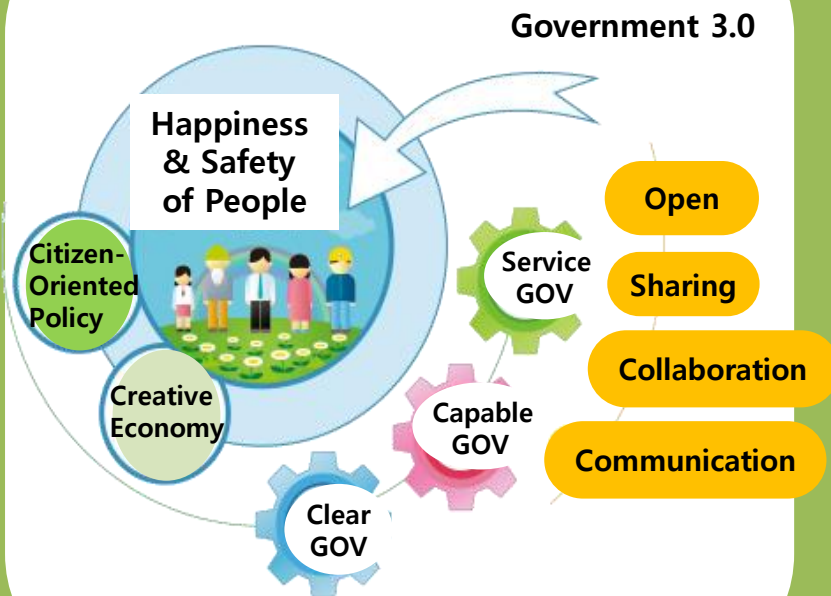
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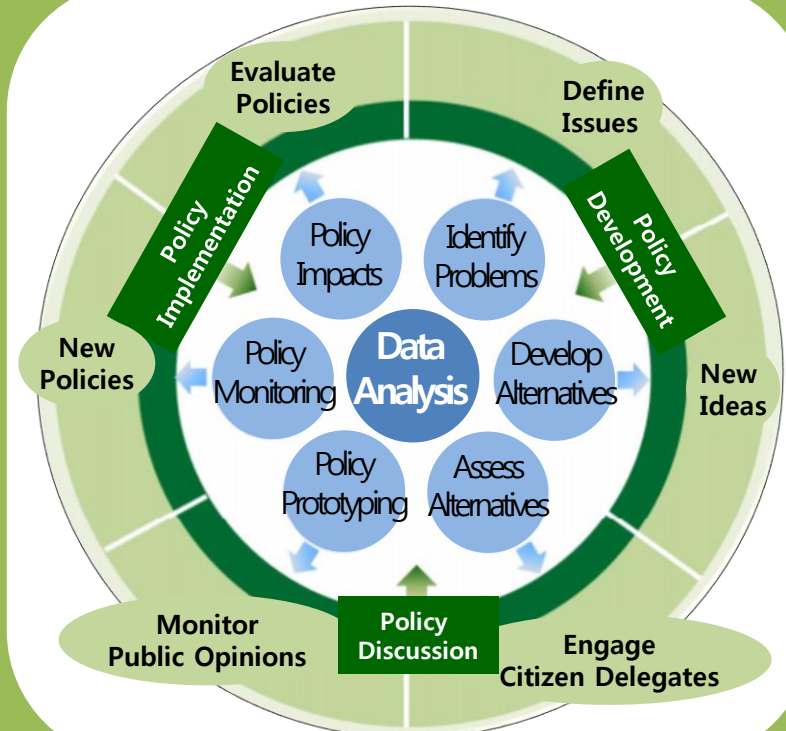
I . BACKGROUND & OBJECTIVE

Changes in Policy-Making Paradigms

Towards Open & Participatory Policies

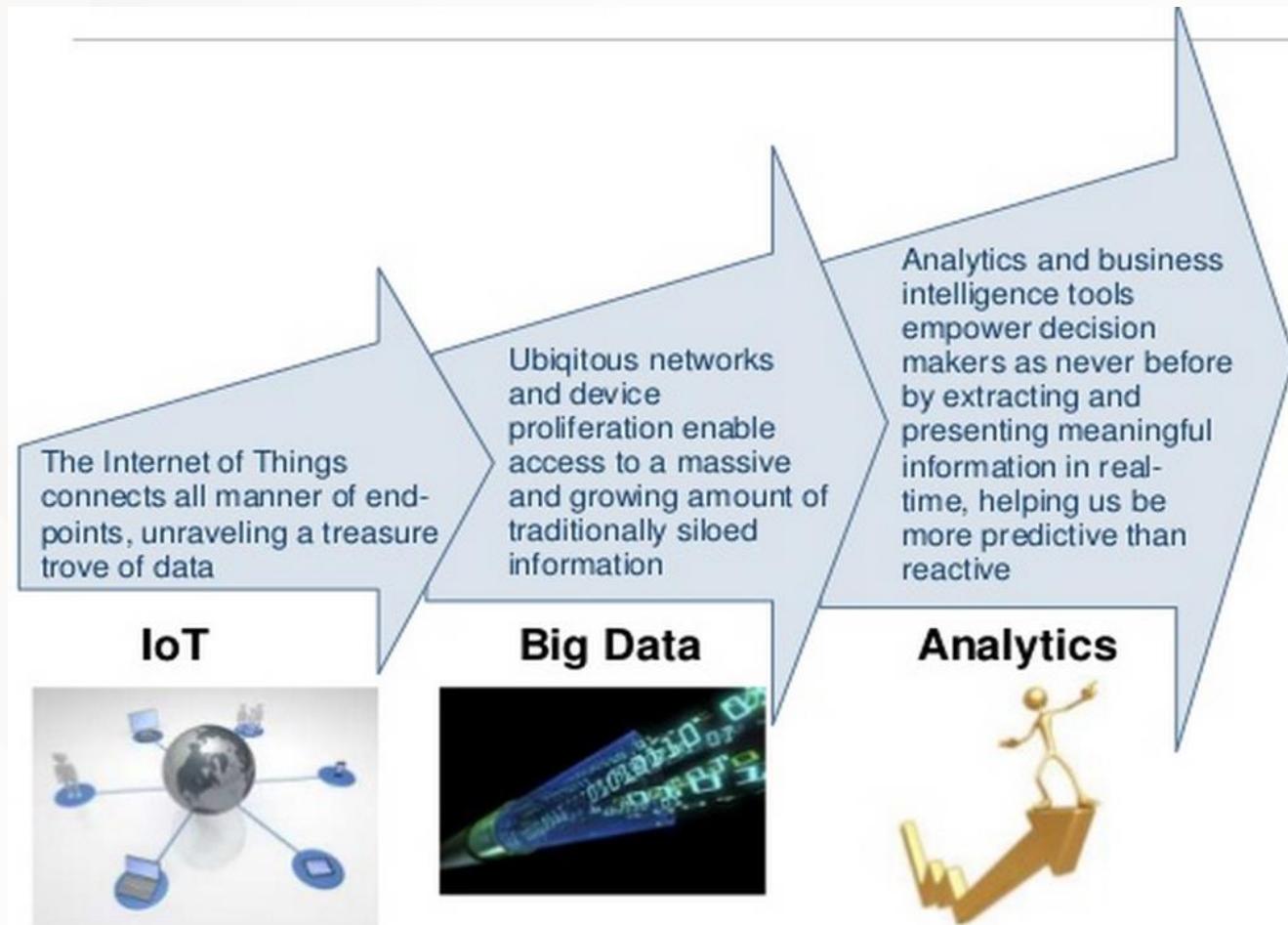


Evidence-based Policies



* Source: Data Evidence Based Scientific Policy Making(NIA, 2015)

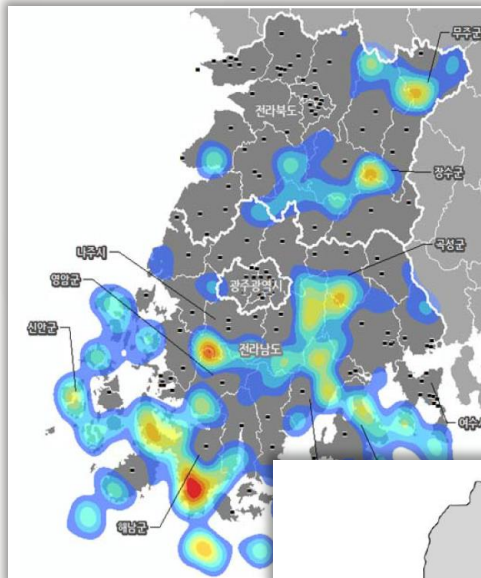
Improvements in Data Accessibility and Analysis



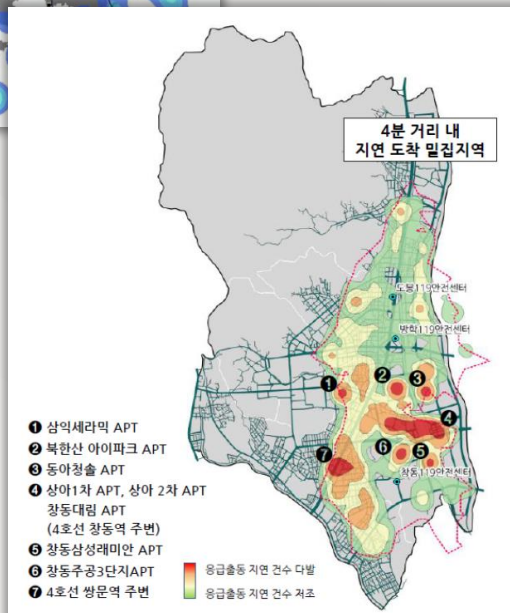
* Source: <http://jameskaskade.com/wp-content/uploads/2014/08/Screen-Shot-2014-08-18-at-1.59.46-PM.png>

Mapping for Policy Support and Communications

Areas Vulnerable to Fire

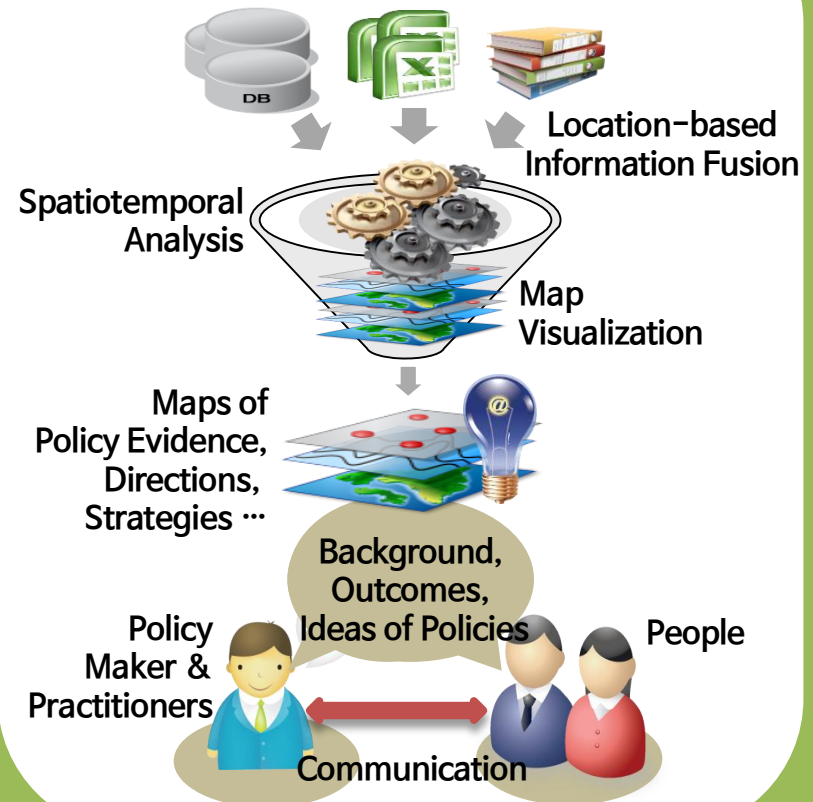


Areas of
Slow Emergency
Service



Use Maps for Policy Support

Small area statistics, geospatial data, register data, big data, ...



Research Question & Objective



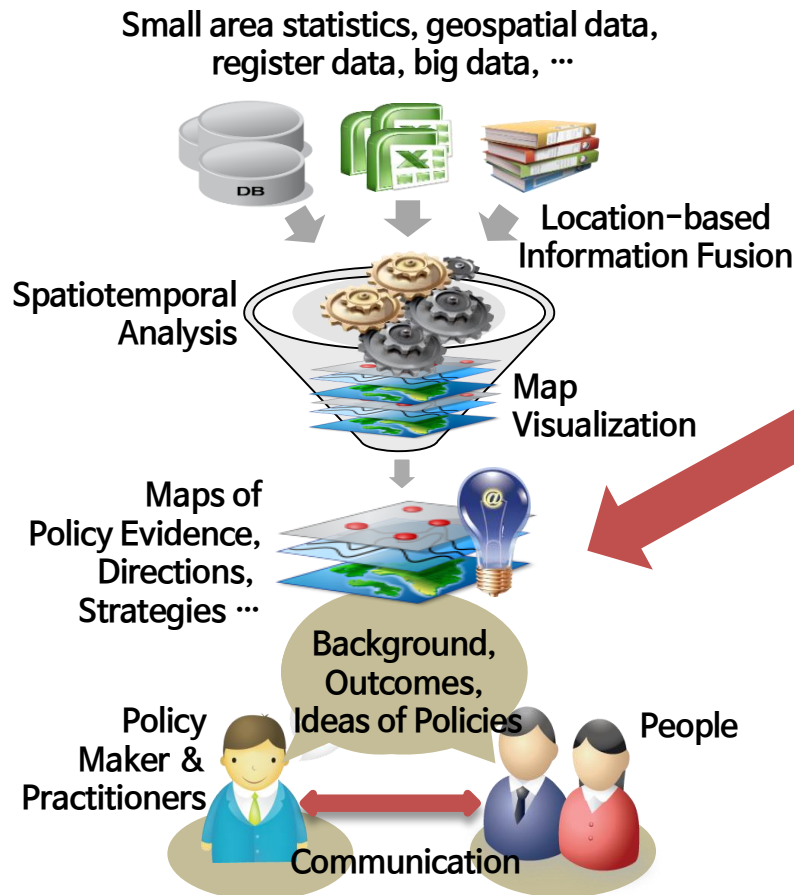
At present, we are here!
How can we extend the use of maps
from supporting evidence-based
policy making to supporting policy
communications?



How about integrating infographics
technologies with maps developed
for policy support?



INFOGRAPHIC



II . POLICY SUPPORT MAPPING IN KOREA

Concept of Policy Support Mapping

The process and results of developing, analyzing, and visualizing map data in order to help policy makers and citizens understand issues, formulate and evaluate new policies

Korean Cases of Policy Support Mapping - A List-up

- **1 Central Gov, 2 Metropolitan Areas, 3 Local Gov, 3 Research Institutes**

Institute Type	Institute	Period	Project
Central Gov.	MOLIT Dept. of Green Construction	2013~5	Policy Support Mapping Services Based On Building Data
Metro-politan Areas	Seoul	2014~5	Seoul's Policy Support Mapping
	Inchon	2015	Open Map from Administrative Data
Local Gov.	Kwangsan-Gu, Kwangju City	2012~4	Kwangsan's Policy Support Mapping
	Dobong-Gu, Seoul	2013~4	Constructing GIS-based Maps for Policy Development
	Seo-Gu, Inchon	2014	Developing Policy-related Maps
...			

MOLIT, Dept. of Green Construction

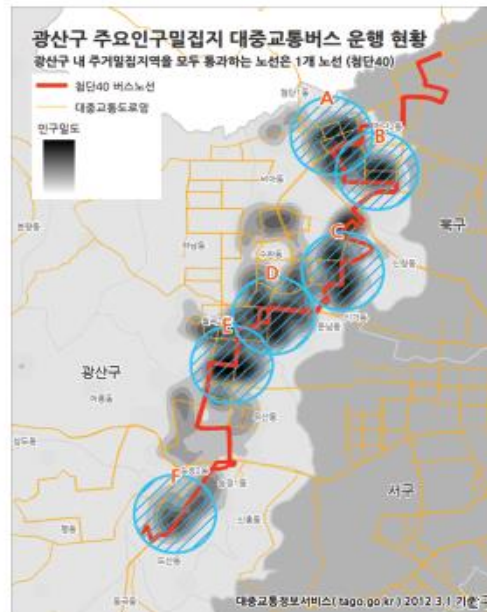


Seoul



Cases of Other Local Governments

Kwangsan-Gu



지역	인구(명)	각 구역을 지나는 버스노선 수
A	44,405	15개
B	34,880	15개
C	40,433	10개
D	61,710	17개
E	51,510	12개
F	25,618	14개

자료 : 2012년 3월 기준

- 광산구를 남북으로 연결하고 주요 인구밀집지역을 모두 경유하는 노선은 1개 버스노선(첨단40) 운행하고 있음.
- 첨단40번 버스는 첨단-송정을 운행하는 데 소요 시간은 길지만, 주요복지시설을 대부분 경유하고 있음.
- 현재로서는 배차간격이 약 20분으로 광산구 남북간에 원활한 왕래에 어려움이 있다고 판단됨.
- 이 시설들을 보다 효율적이고 광역적으로 활용하기 위해서는 해당노선의 운행횟수를 조정하거나, 노선을 추가하는 등 개선이 필요함.

Kwangsang-Gu



Cases of Other Local Governments

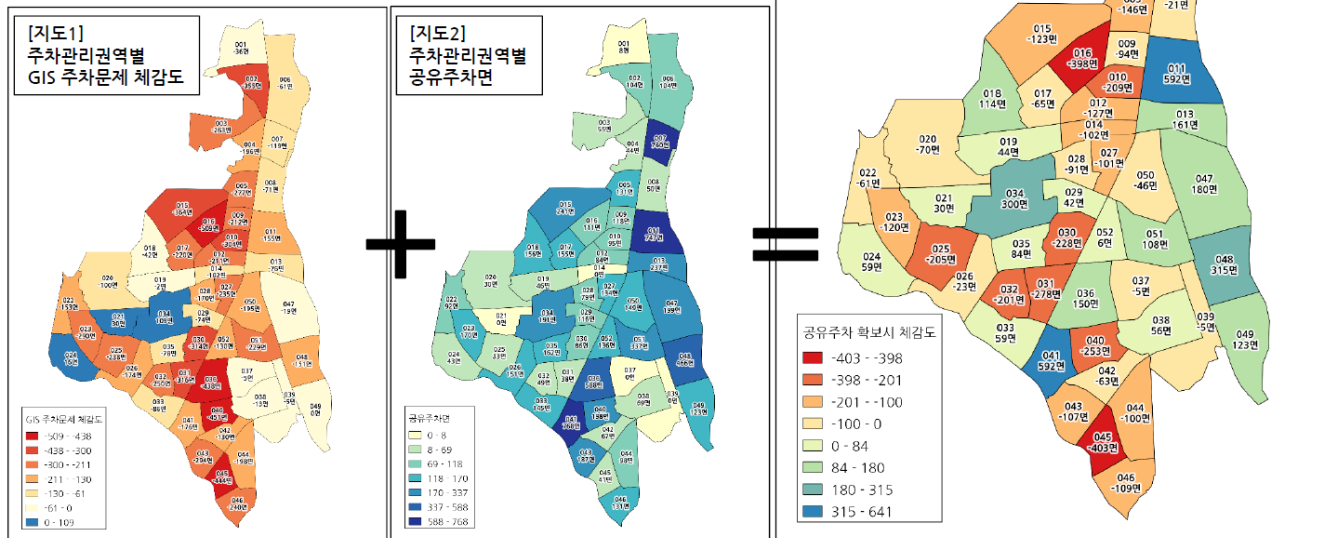
Dobong-Gu

공유주차면 적용 후 GIS 주차문제 체감도 변화

GIS 주차문제 체감도와 주차관리권역별 공유주차면을 합산함

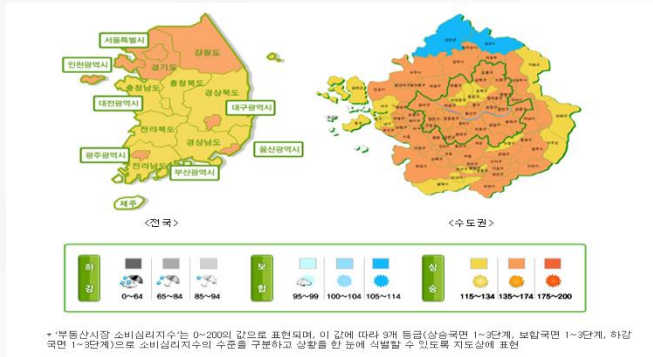
매입임대주택과 부설주차장의 주차면이 모두 공유될 경우 [지도3]과 같은 결과를 얻을 수 있음

주차문제 핵심지역 도출 및 공유 주차장 사업 진단

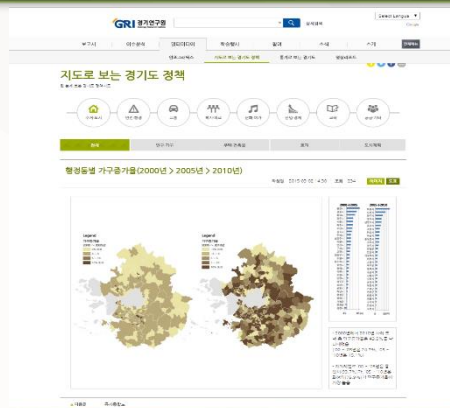


Cases of Research Institutes

KRIHS

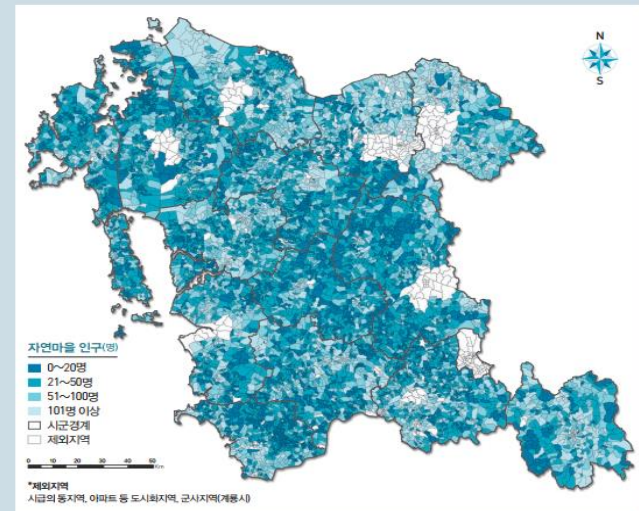


Kyunggi Research Ins.



Chungnam Research Ins.

01 자연마을 인구 현황 Chungcheongnam-do



- 전국 최초로 구축된 충남 자연마을 개수 10,830개소(계룡시 제외)
- 인구 20명 이하 과소 자연마을 3,512개소(전체 자연마을의 32.4%)
- 특히 서천군 46.5%(전체 807개소 중 376개소), 서산시 40.9%(전체 1,015개소 중 416개소), 청양군 40.0%(전체 651개소 중 261개소) 순으로 인구 과소 자연마을 비중 높음

자연마을 인구분포 비율(%)

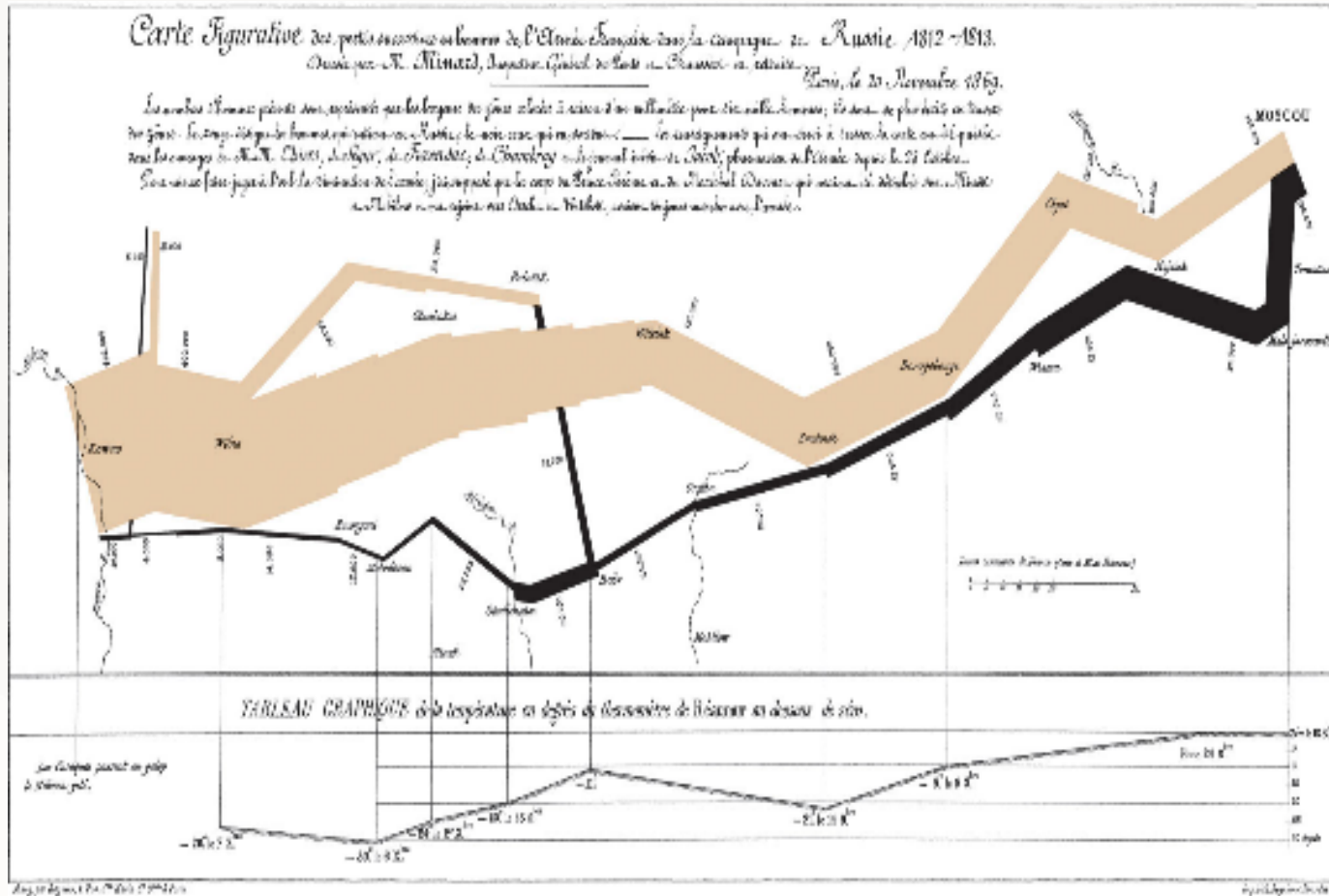


Implications

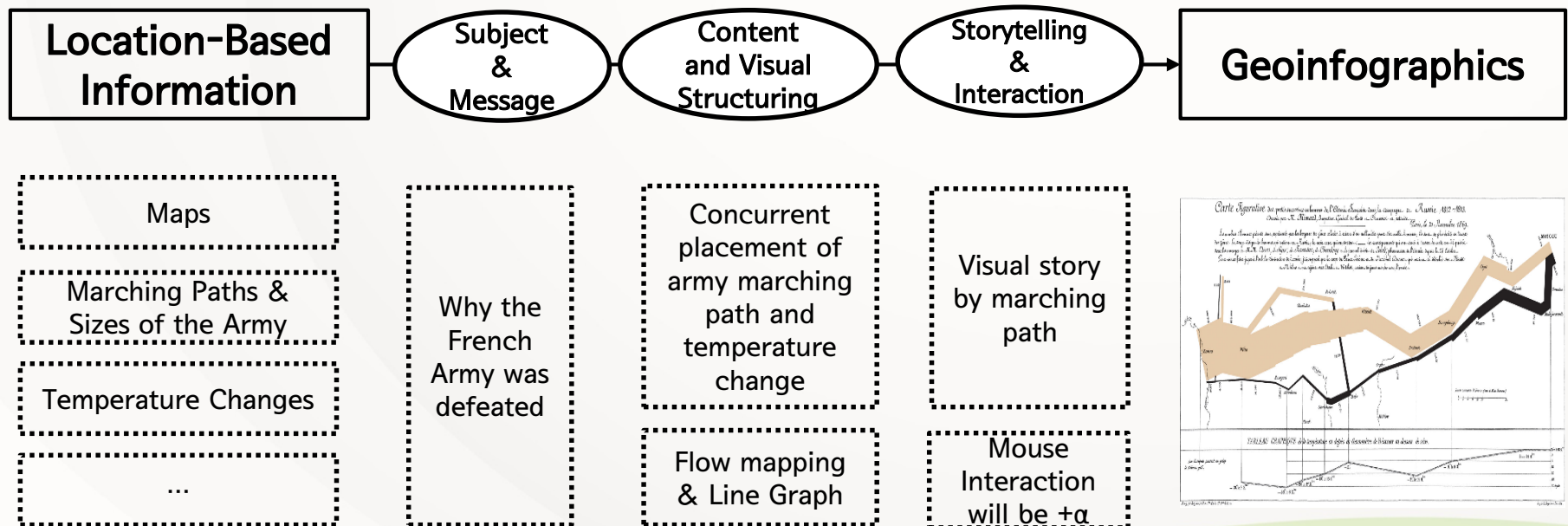
- At present, policy support mapping in Korea aims at
 - Sharing of data from administrative businesses
 - Providing data-based evidence for policy development
 - Serving as a tool for policy evaluation
 - Becoming an open data channel and a tool for communicating with citizen
- Current projects can be classified into three types
 - Comprehensive: providing maps of various subjects
 - Specialized: providing maps of a specific subject
 - Communicative: developing maps based on data, opinions, feelings of citizen
- Policy support mapping focuses mainly on deriving evidence and insights for policies, but not much on communicating policies to citizen

III . A GEOINFOGRAPHICS APPROACH

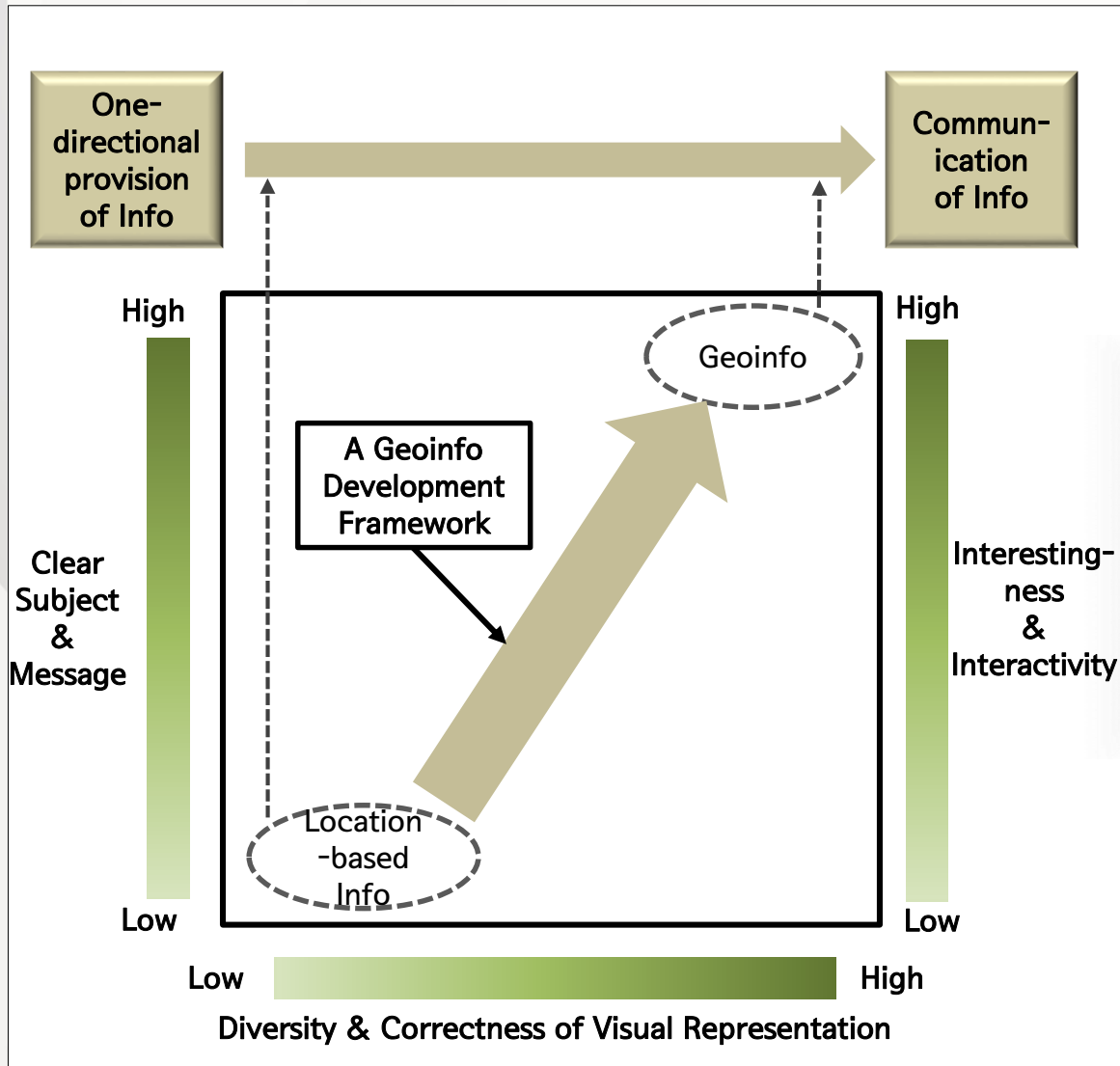
An Inspiring Example



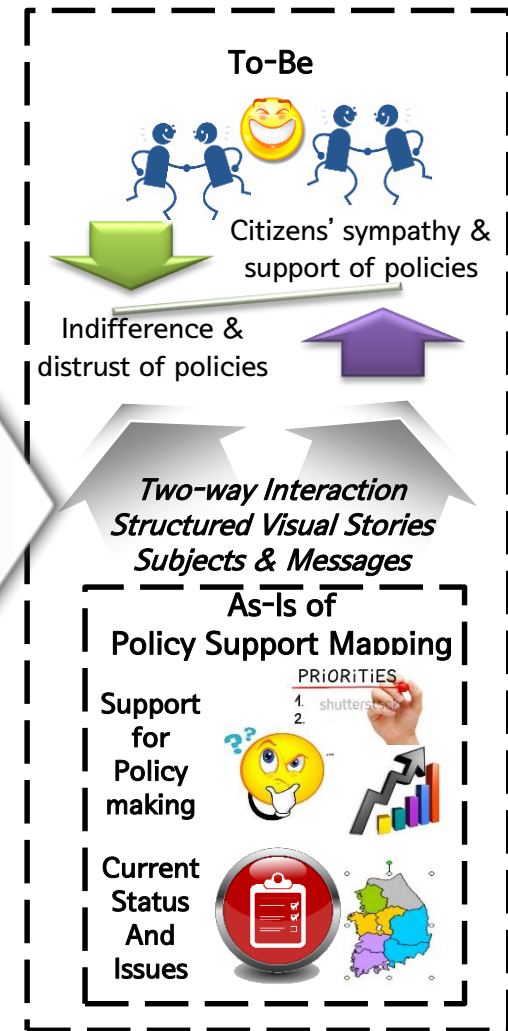
Concept of Geoinfographics



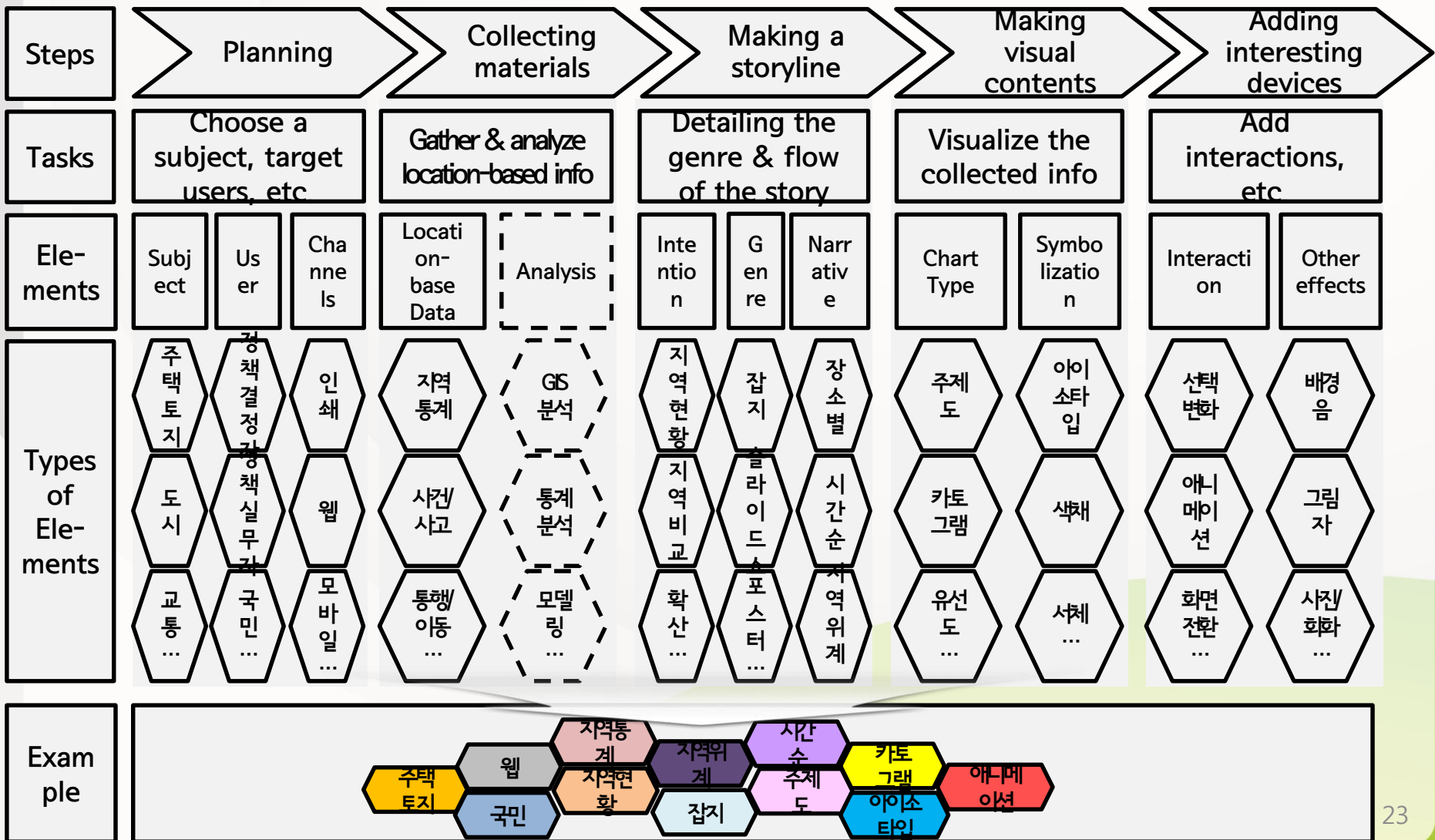
Goals in Developing Geoinfographics



Application
To
Policy
Support
Mapping



The Proposed Framework for Geoinfographics Development

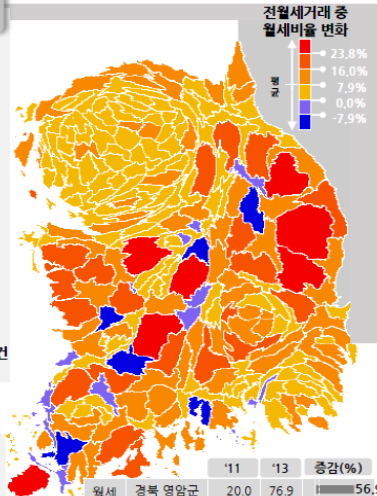
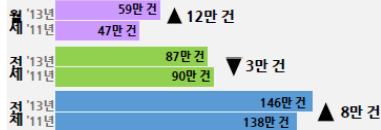


Examples (Under Development)

변화하는 주택임대차 시장, 주택 정책 어떻게 변화해야 하는가?

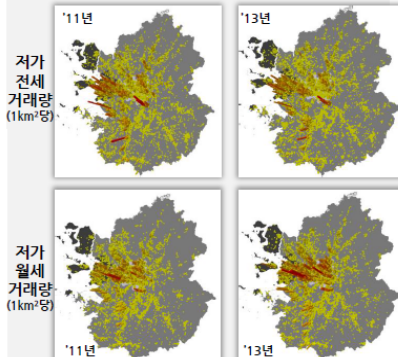
1 전세거래 감소, 월세거래 증가

국토교통부 부동산실거래가 자료에 따르면 2011년에서 2013년 사이 전월세거래 전체 8만 건 증가, 그러나 전세거래는 3만 건 감소한 반면 월세거래는 12만 건 증가, 월세거래 비율증가 양상은 지역적 차이 나타나



2 저가전세 감소, 저가월세 증가

보증금 5천만 원 미만의 저가전세 거래 전국에서 4.6만 건 감소한 반면, 보증금 2천만 원 미만 저가월세는 5.3만 건 증가, 수도권에서는 거래증감패턴 공간적 상이



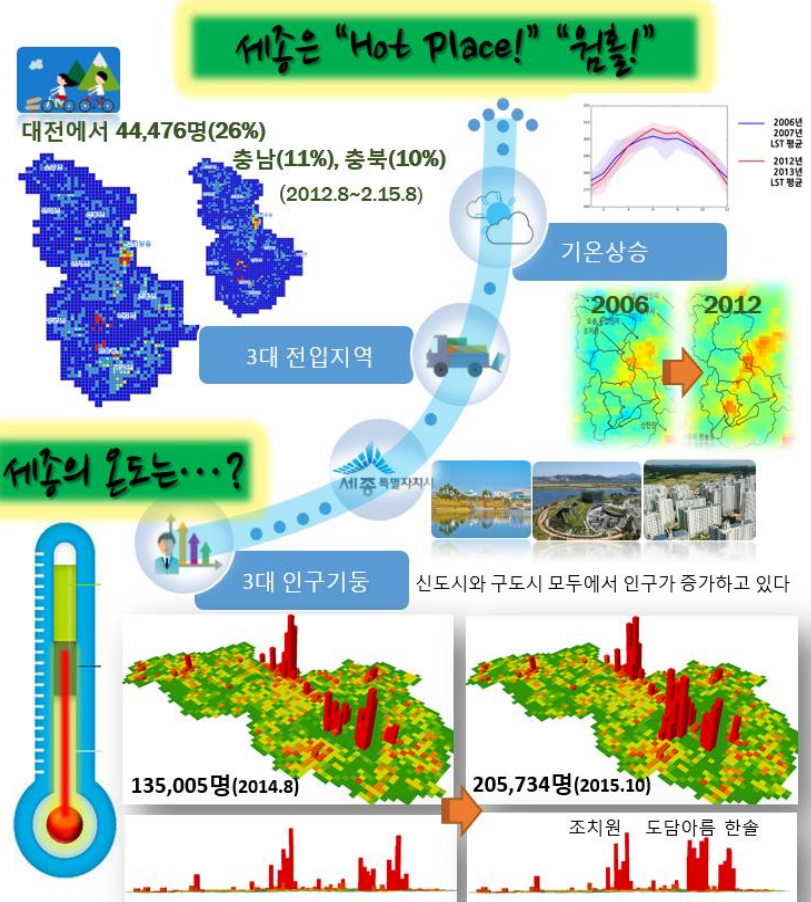
	'11	'13	증감(%)
월세 비율 증가	경북 영암군 20.0	76.9	56.9
	강원 태백시 26.1	62.3	36.2
	전북 진안군 20.7	54.8	34.1
상위 5개 지역	경북 청송군 48.5	80.8	32.3
	세종시 0.0	31.3	31.3
월세 비율 감소	전북 임실군 56.5	39.8	-16.7
	경북 영주시 44.7	28.3	-16.4
상위 5개 지역	전북 영암군 54.9	40.1	-14.8
	경남 사천시 58.6	48.1	-10.5
	충북 보은군 54.1	45.1	-9.0
	0 평균 +7.9%		

3 맞춤형 주거안정 정책 필요

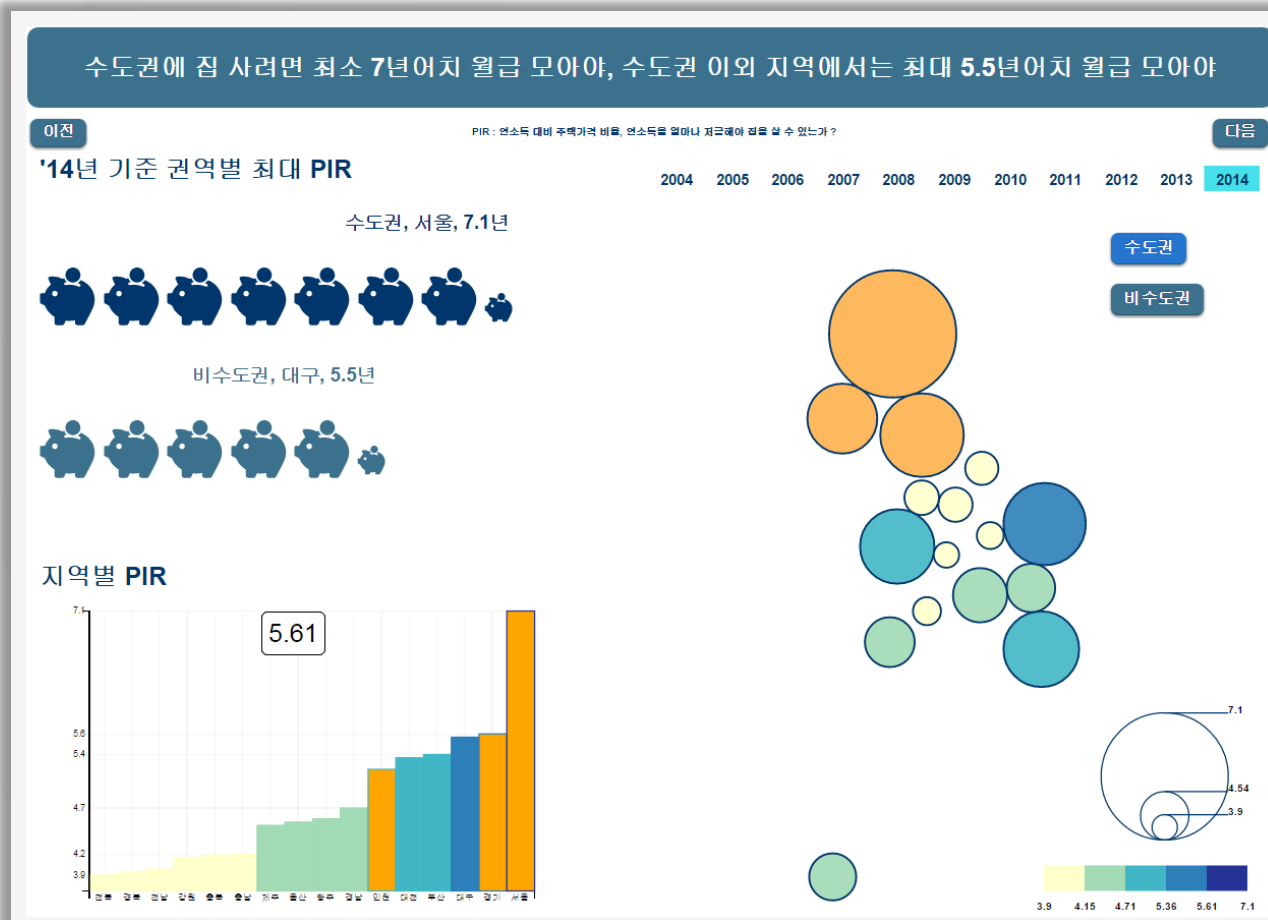
소득수준, 임차유형, 지역별 차별화된 주택정책 펼쳐야



세종시, 국토균형발전을 향한 블랙홀인가? 웜홀인가?
아파트처럼 올라간 인구기동. 유입된 인구는 어디로부터 왔을까?
전국에서 모여 함께 살고 있는 세종은 기온도 점차 상승하고 있다



Examples (Under Development)



http://grahn2.cafe24.com/krihs_geoinfographics/pir_1.html

IV . CONCLUDING REMARKS & FUTURE WORK

Concluding Remarks

- Policy support mapping on the rise in Korea to enable evidence-based and communicative policy process
- While policy support mapping has served well as an analytics tool for policy making and fulfillment, its current outcomes are under-utilized for policy communication for citizens
- The proposed geoinfographics approach would help improve the communication capability of policy support mapping via
 - The process of extracting, simplifying core messages from complex, multi-dimensional outputs of policy support mapping
 - Structured visual storytelling of those messages

Future Work

- User test and verification
 - Will the geoinfographics approach improve the communicative capability of policy support mapping?
- Develop specific guidelines for policy practitioners
- Develop software tools for easy creation and editing of geoinfographics
- Research on advanced visualization techniques

Thank You!