

Policy Support Mapping & Geoinfographics of Korean Local Governments

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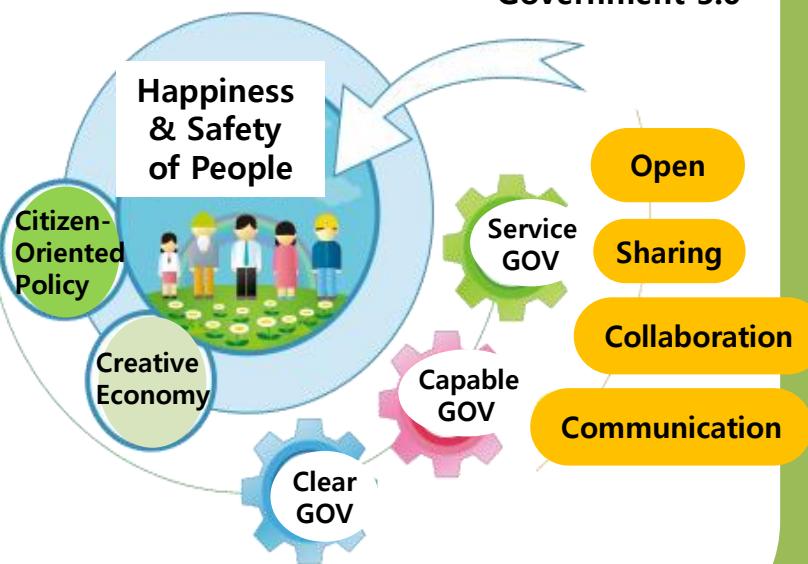
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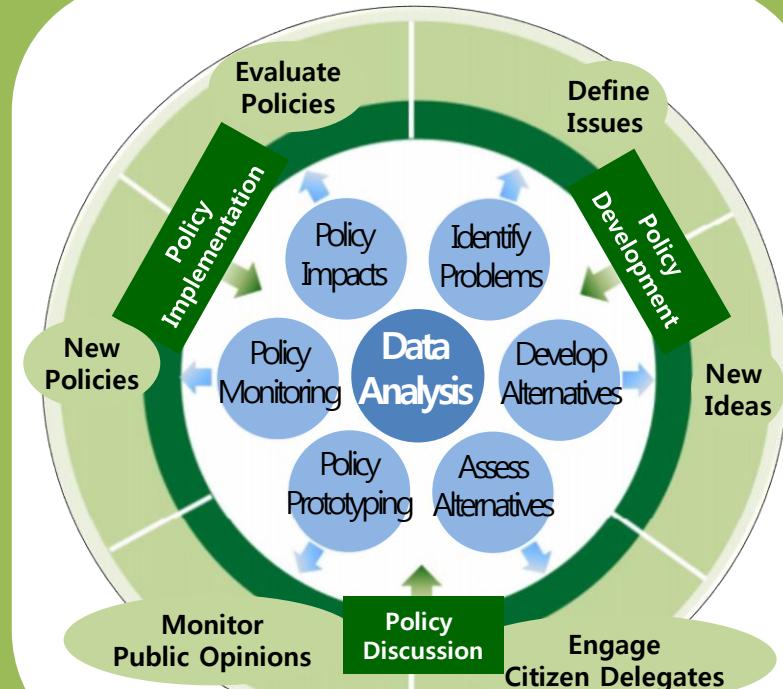
I . BACKGROUND & OBJECTIVE

Changes in Policy-Making Paradigms

Towards Open & Participatory Policies

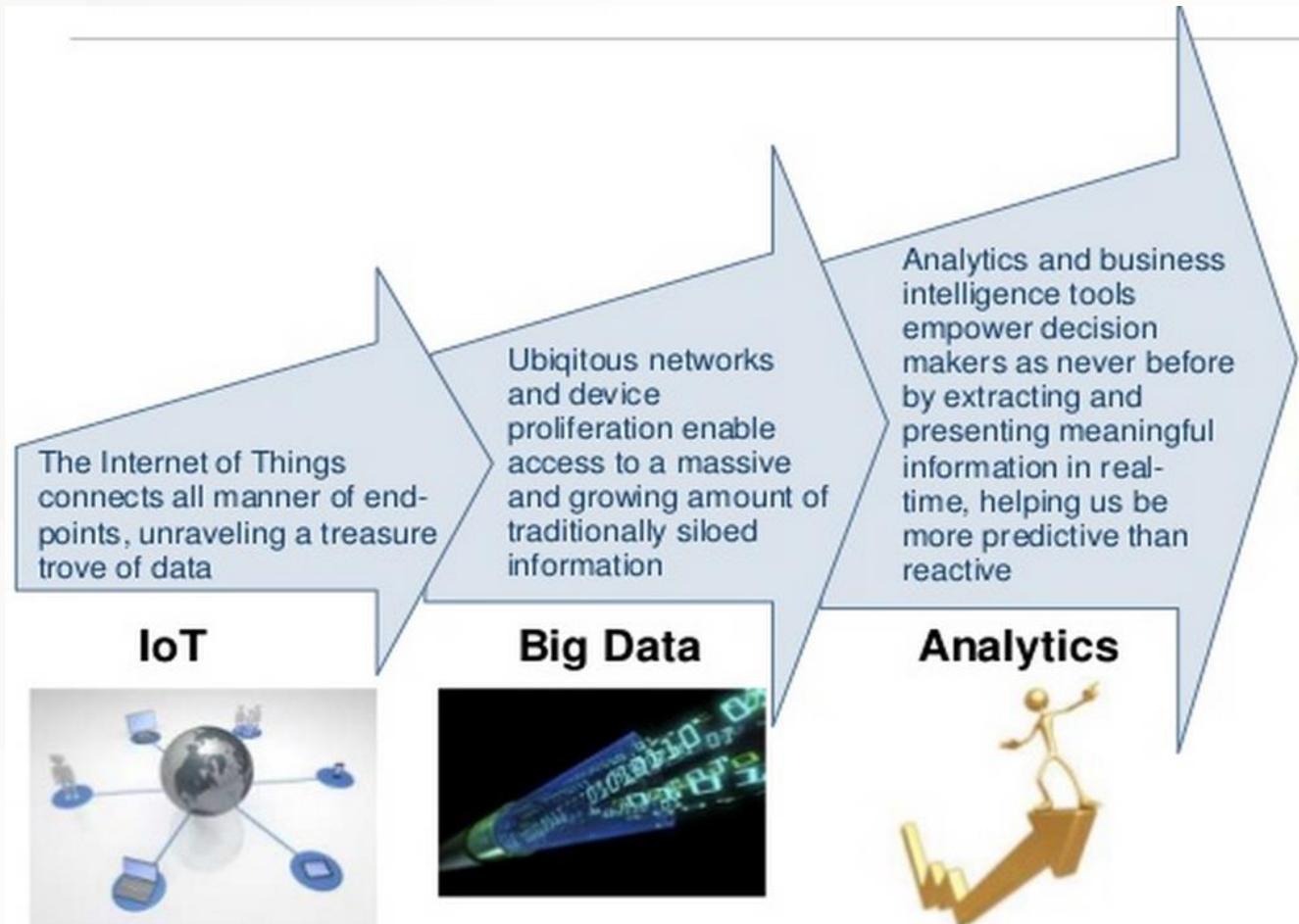


Evidence-based Policies



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

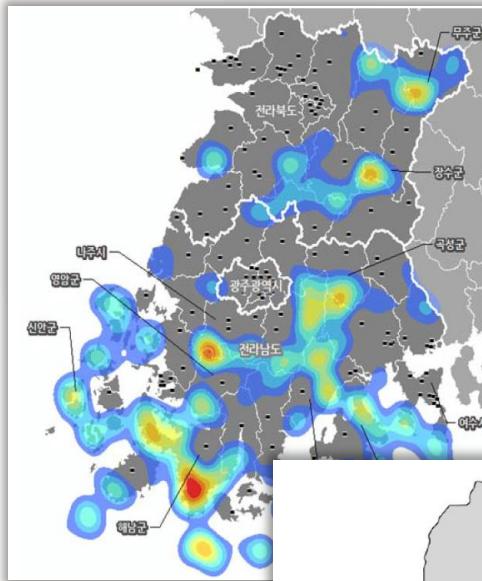
Improvements in Data Accessibility and Analysis



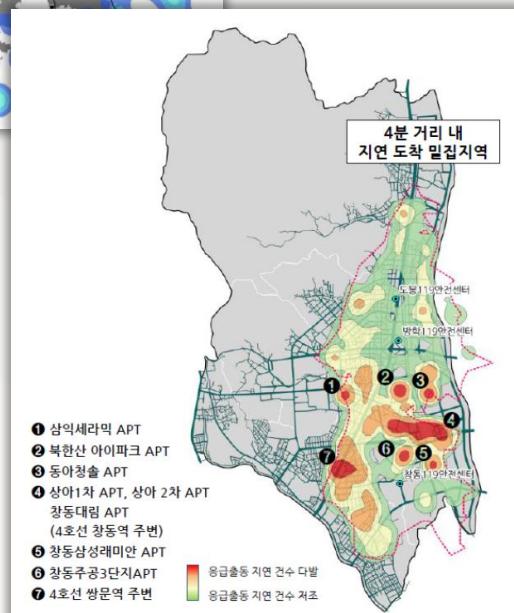
* Source: <http://jameskaskade.com/wp-content/uploads/2014/08/Screen-Shot-2014-08-18-at-1.59.46-PM.png>

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, ...



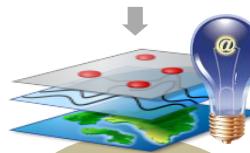
Location-based Information Fusion

Spatiotemporal Analysis



Map Visualization

Maps of Policy Evidence, Directions, Strategies ...



Background, Outcomes, Ideas of Policies

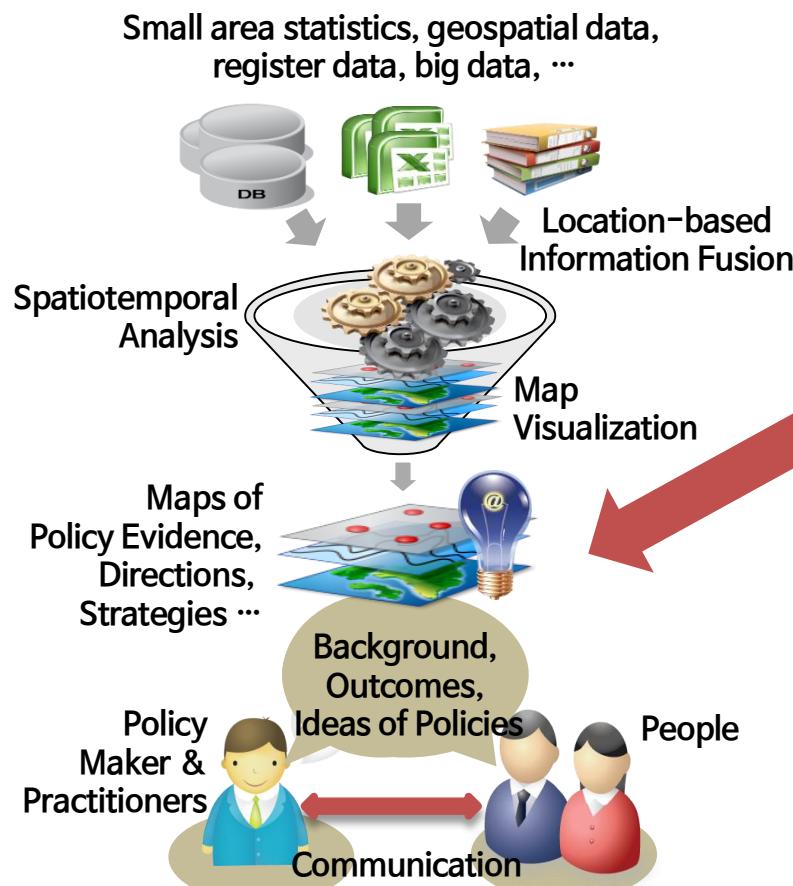
Policy Maker & Practitioners



People

Communication

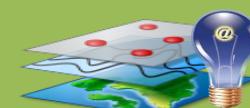
Research Question & Objective



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

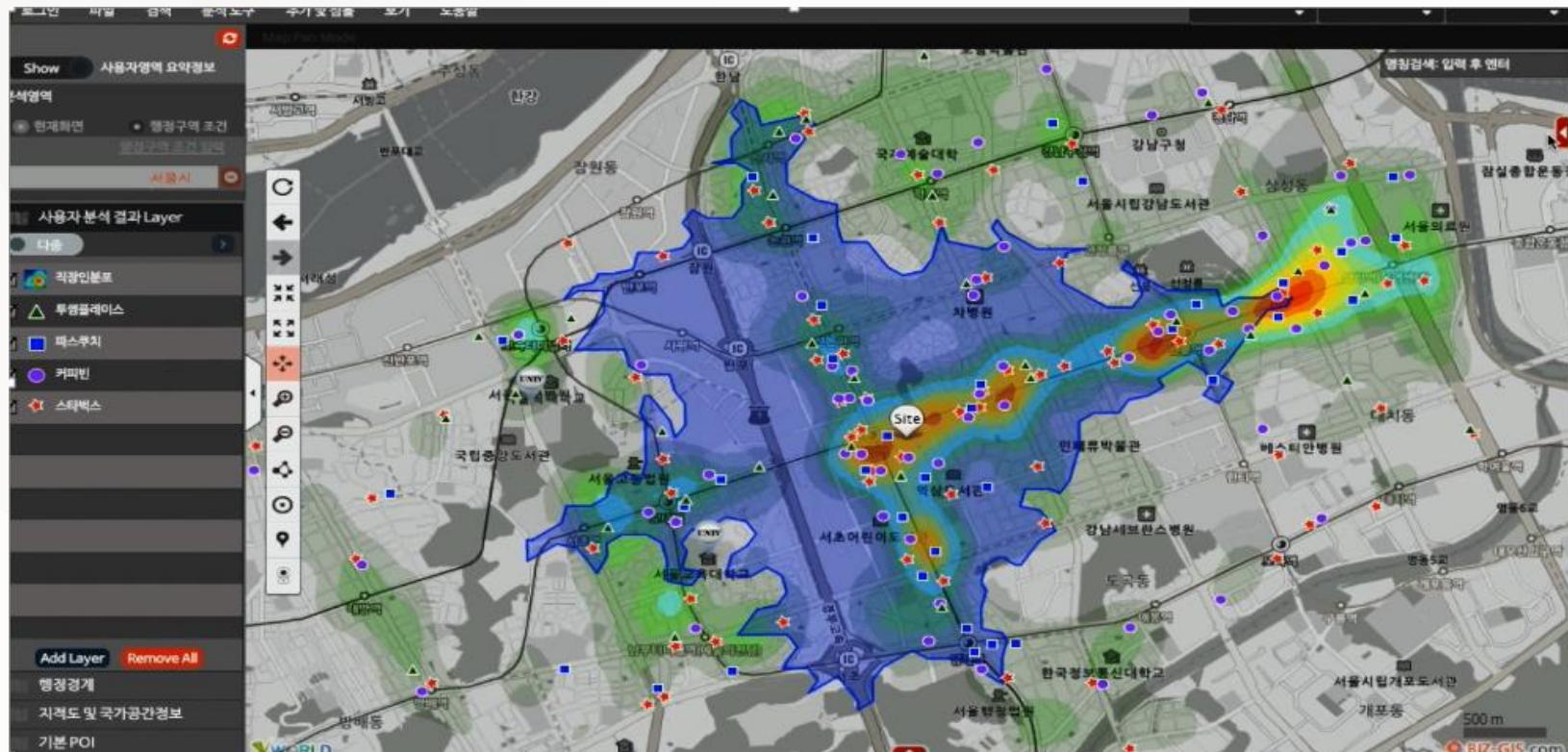
Korean Cases of Policy Support Mapping - A List-up

- 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
Metropoli- tan 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
...			

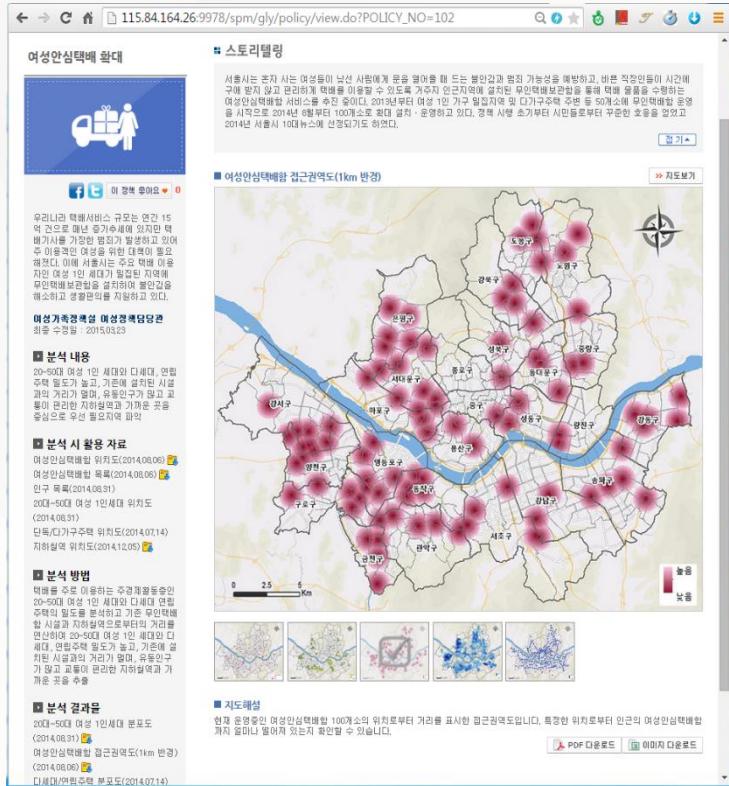
Cases of Central Governments

MOLIT, Dept. of Green Construction

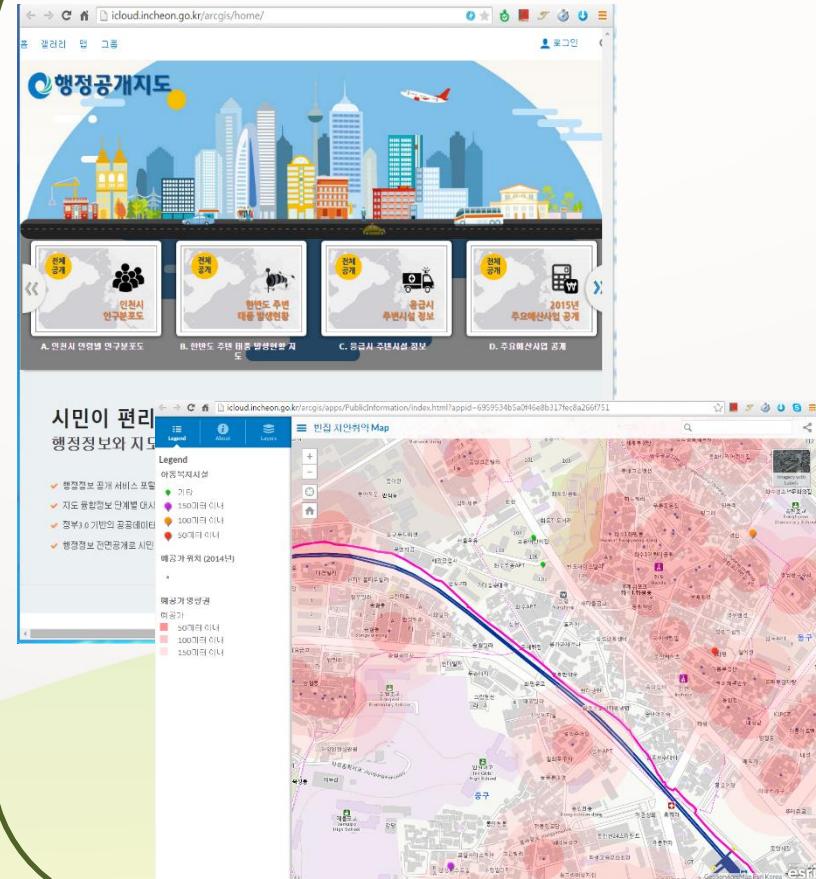


Cases of Metropolitan City Governments

Seoul



Inchon



Cases of Other Local Governments

Kwangsan-Gu



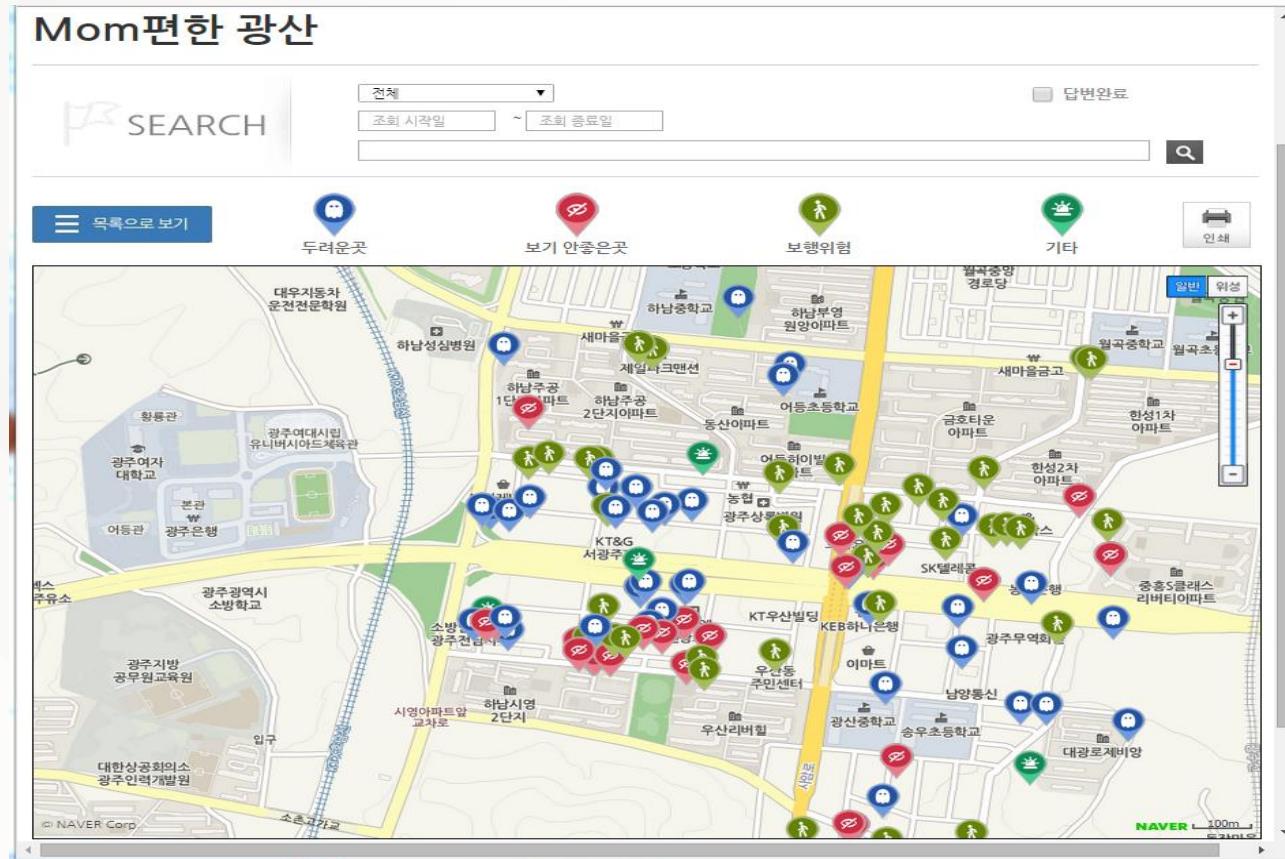
지역	인구(명)	각 구역을 지나는 버스노선 수
A	44,405	15개
B	34,880	15개
C	40,433	10개
D	61,710	17개
E	51,510	12개
F	25,618	14개

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, 주요 복지시설을 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.

Cases of Other Local Governments

Kwangsan-Gu

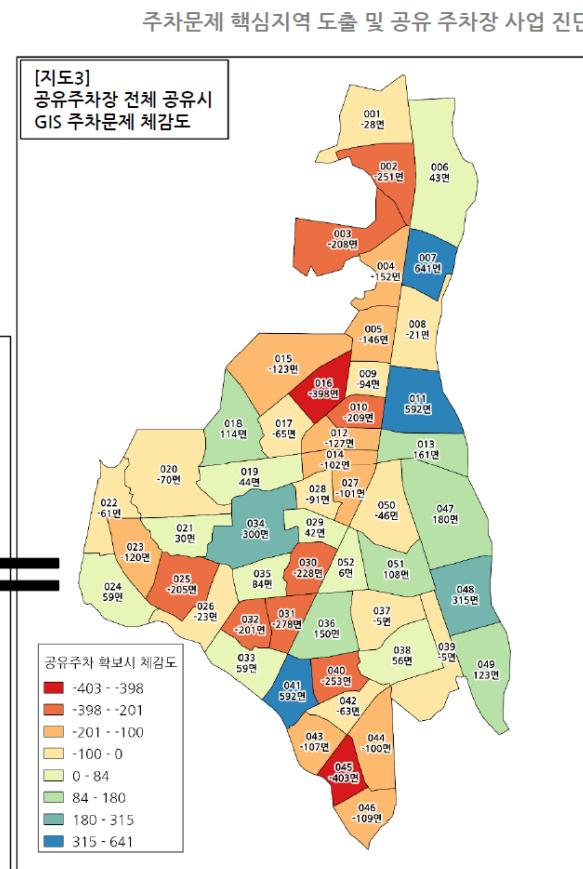
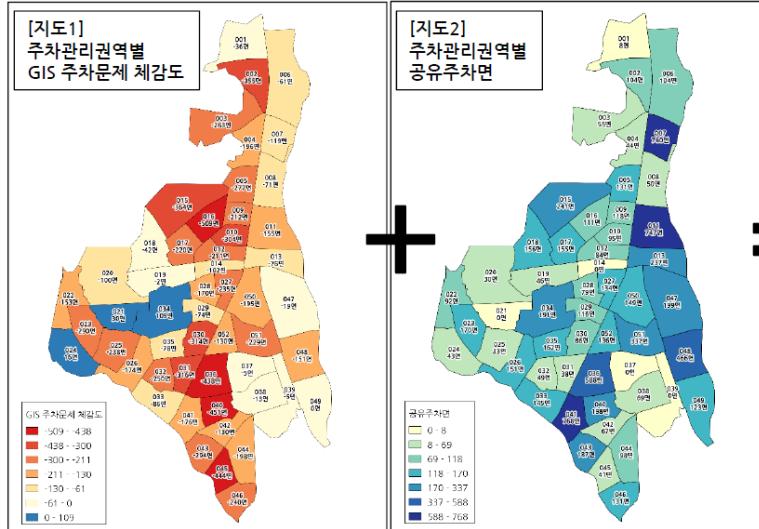


Cases of Other Local Governments

Dobong-Gu

I 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



Cases of Other Local Governments

Dobong-Gu

| 위험 인식

방학초등학교 어린이 통학안전지도 시범구축

대체로 사람이 적은 지역, 어둡거나 가로등이 없는 지역, 골목길, 청소년들이 모이는 지역, 차가 많은 곳, 유흥가 등을 응답한 자녀가 다니는 등굣길 위주로 그린 경우가 있어 방학초등학교 인근이 두드러짐



유형	응답 수	응답비율
총합계	897	100%
사람 적음	155	17.3%
어두움	138	15.4%
골목길	109	12.2%
가로등	60	6.7%
불량청소년	57	6.4%
차 많음	54	6.0%
유흥가	42	4.7%
신호등	28	3.1%
기타시설	24	2.7%
신호위반	19	2.1%
CCTV	18	2.0%

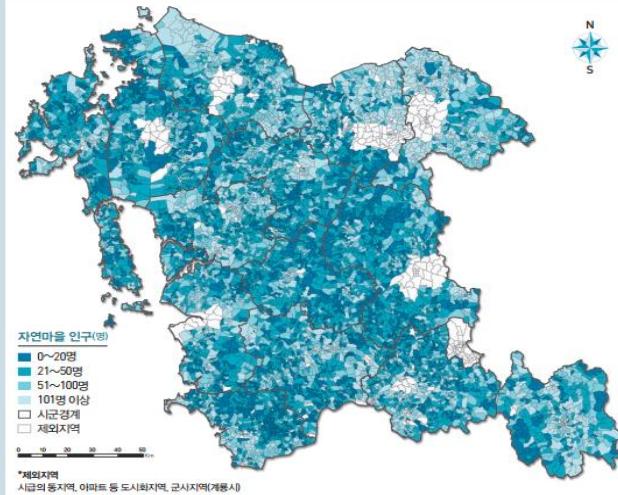
Cases of Research Institutes

KRIHS



Chungnam Research Ins.

01 자연마을 Chungcheongnam-do 인구 현황



- 전국 최초로 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 (%)

0~20명 자연마을 비율

32.4%

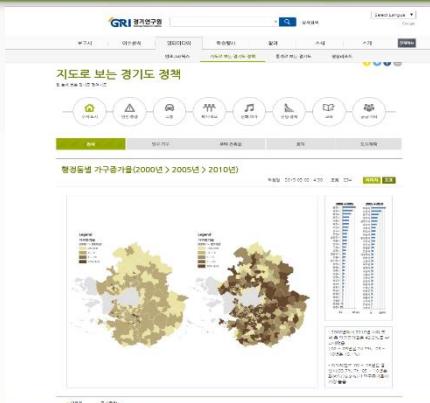
21~50명 자연마을 비율

36.5%

51~100명 자연마을 비율

18.7%

Kyunggi Research Ins.

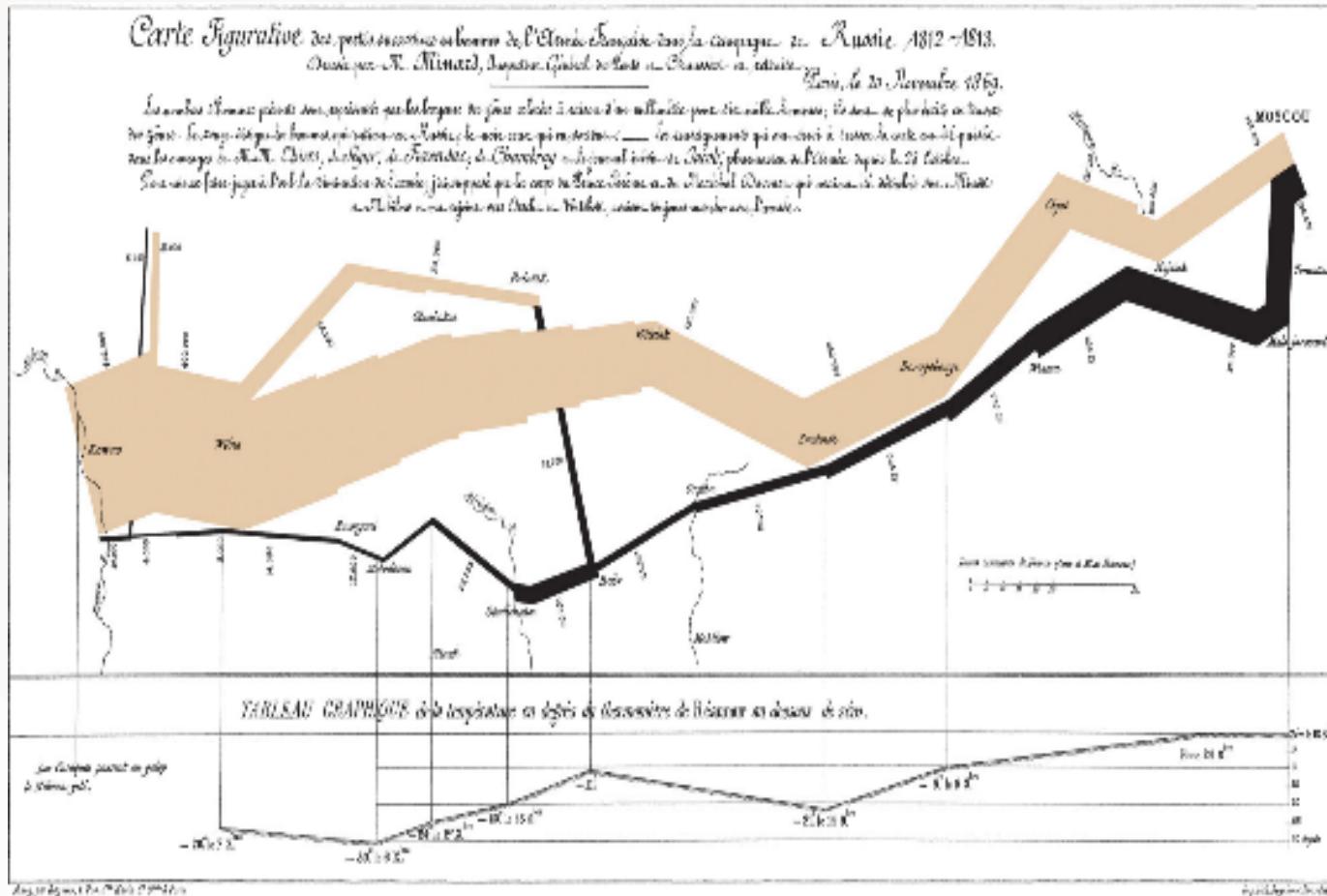


Implications

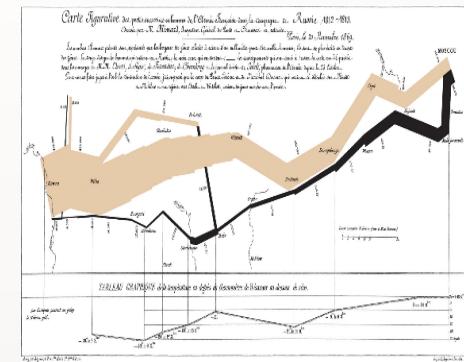
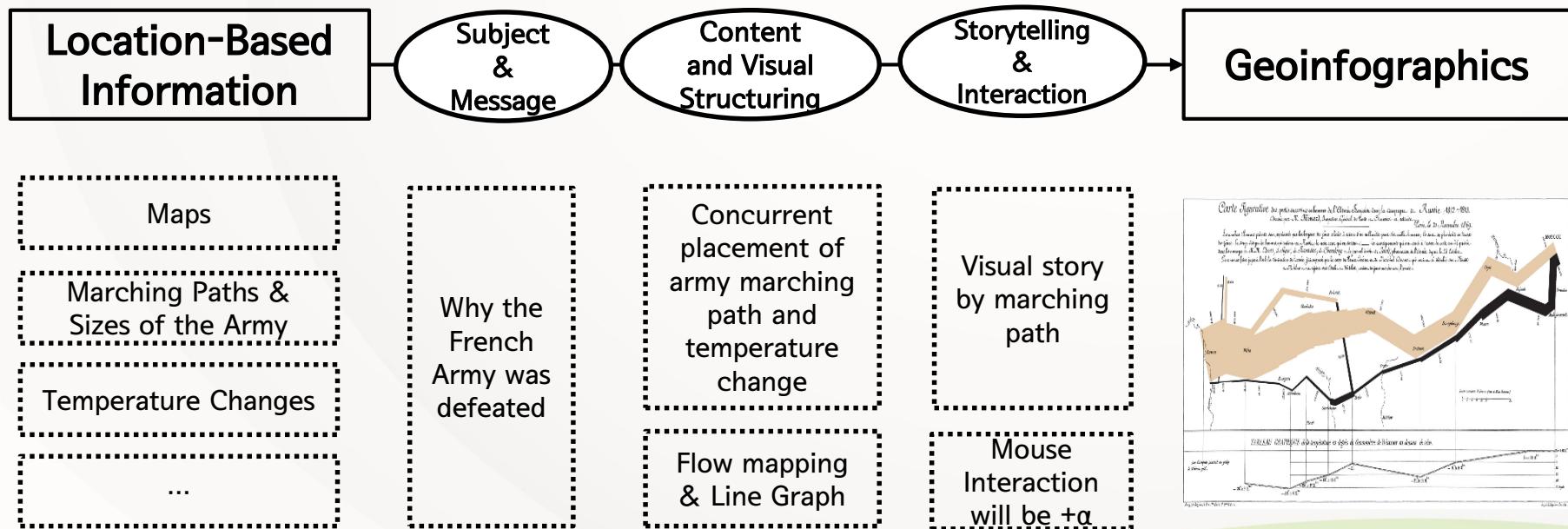
- At present, policy support mapping in Korea aims at
 - Sharing of data from administrative businesses
 - Providing data-based evidence for policy development
 - Serving as a tool for policy evaluation
 - Becoming an open data channel and a tool for communicating with citizen
- Current projects can 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 APPROAHC

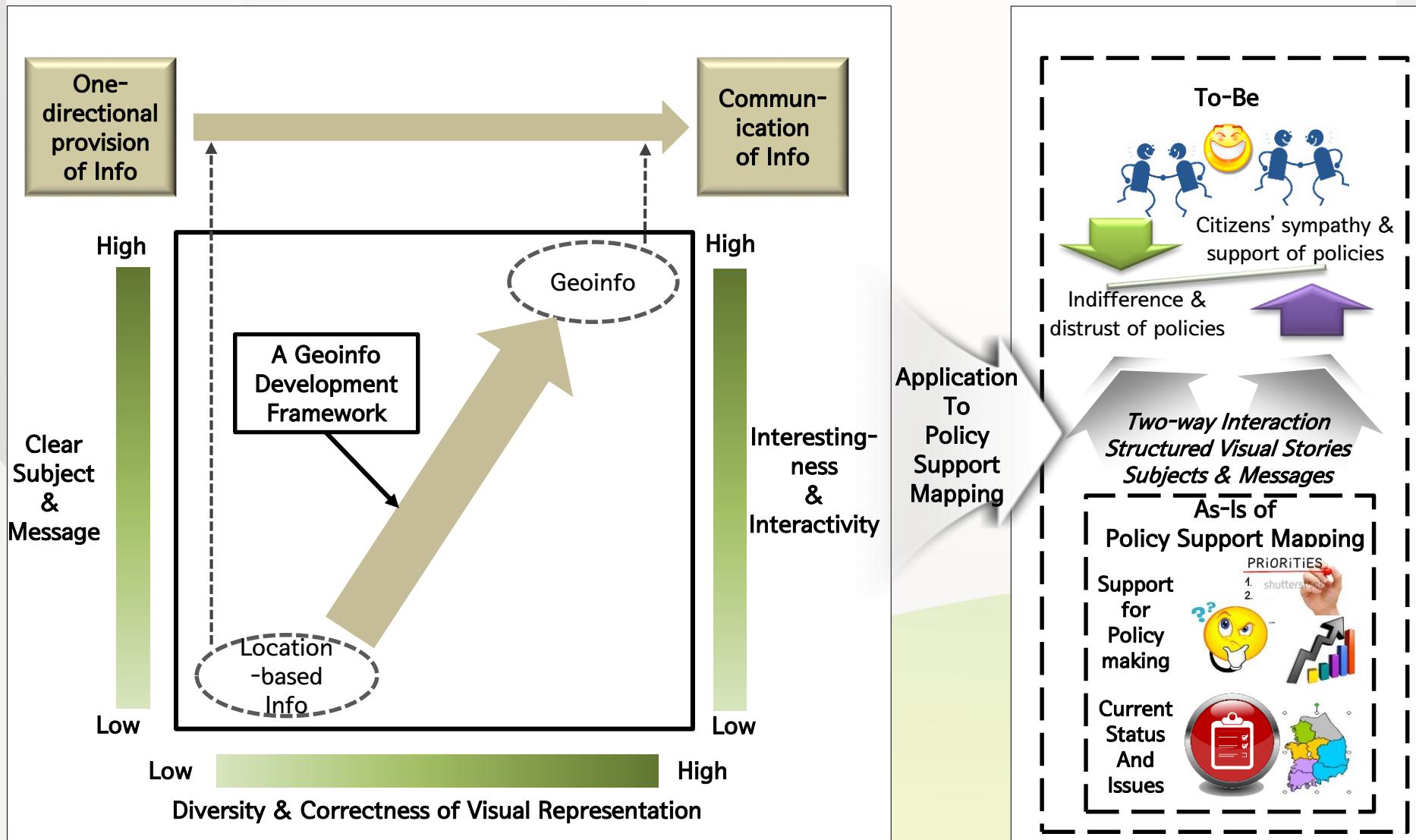
An Inspiring Example



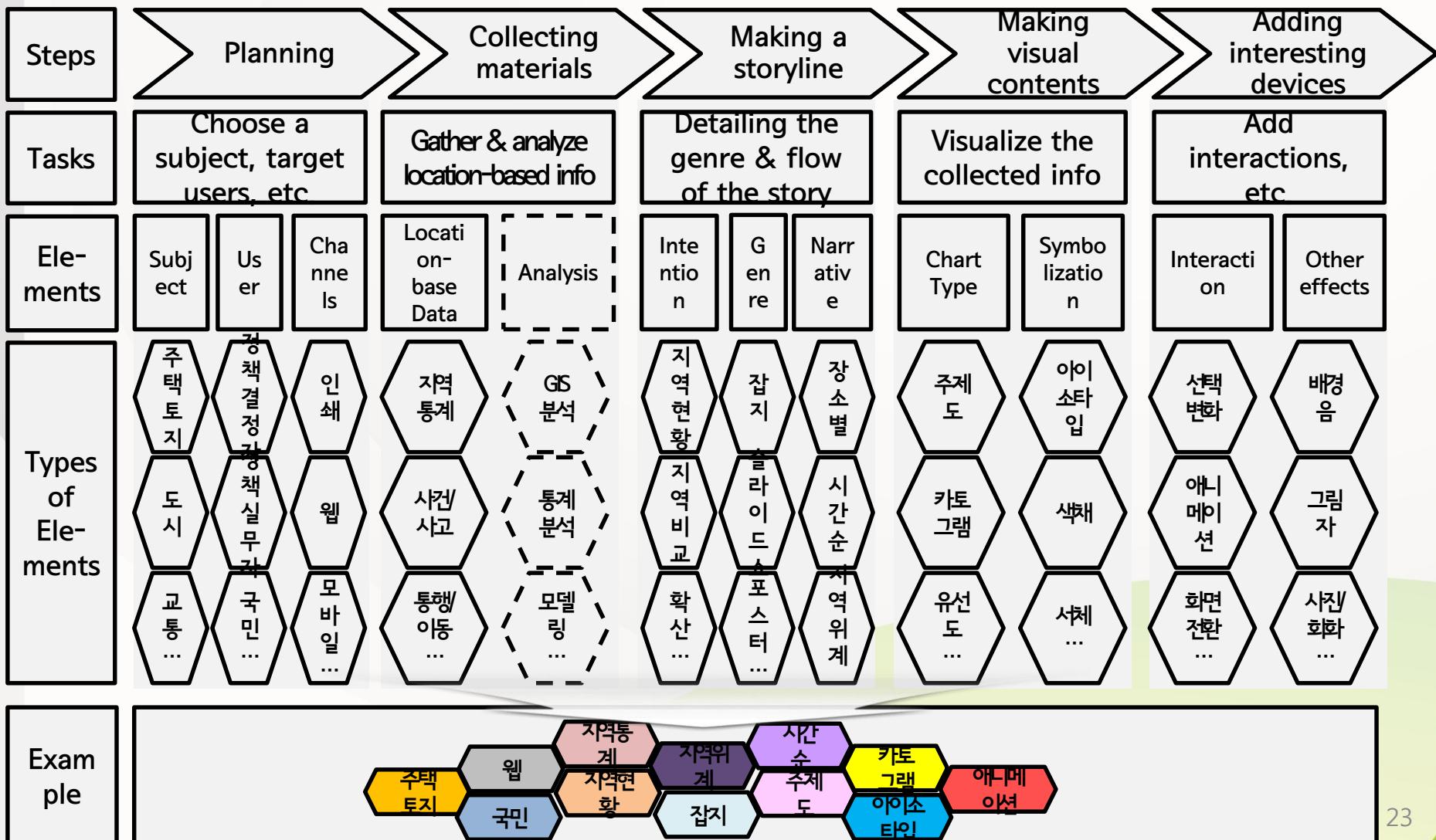
Concept of Geoinfographics



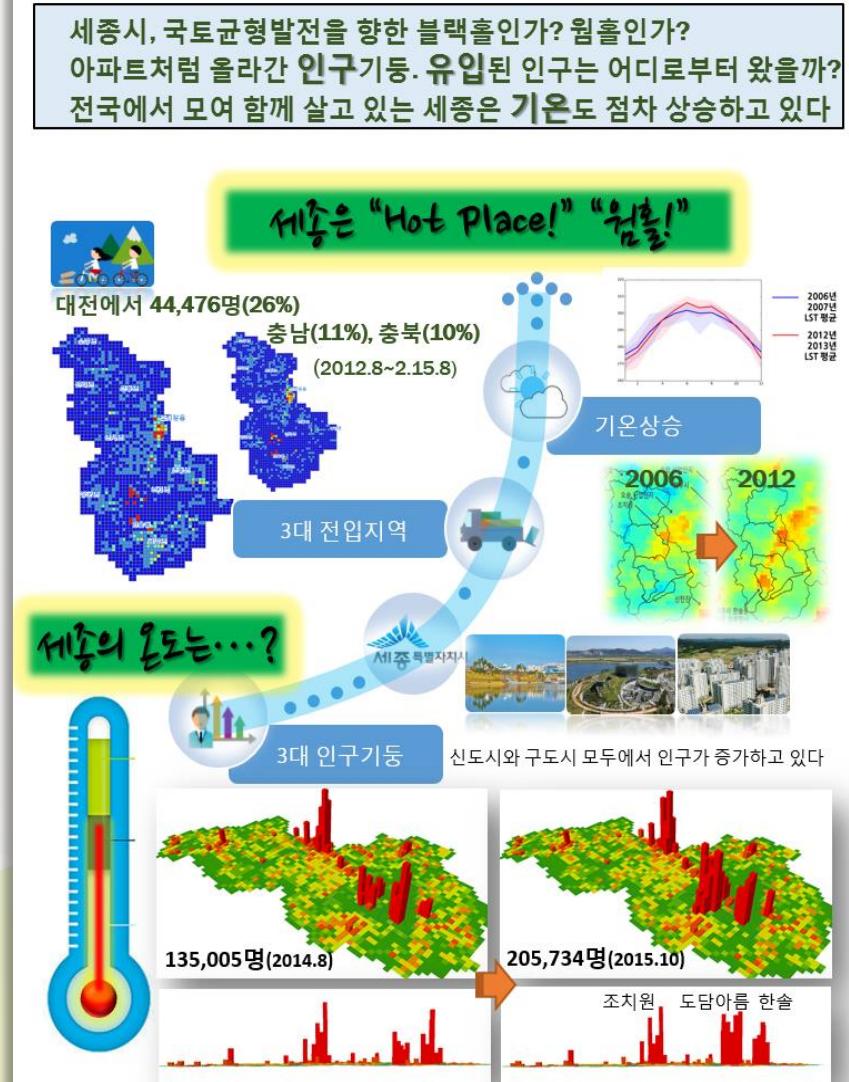
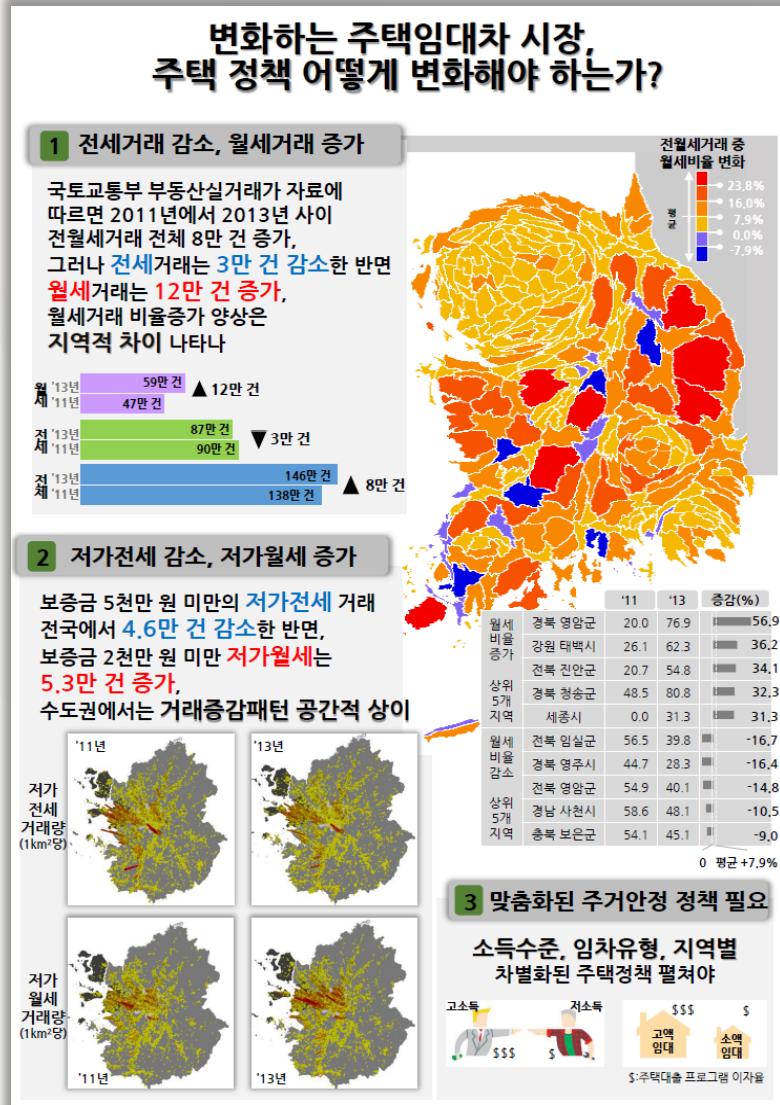
Goals in Developing Geoinfographics



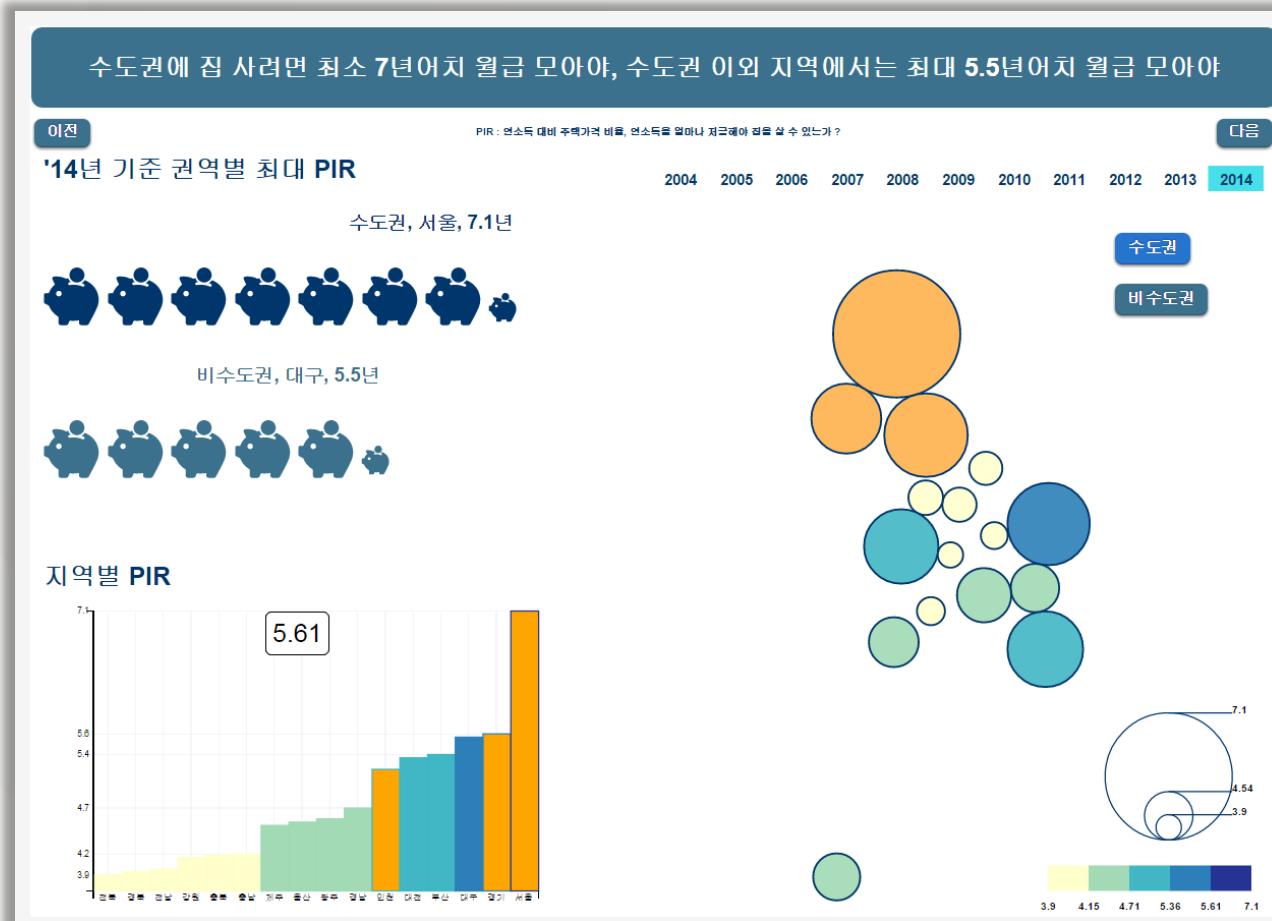
The Proposed Framework for Geoinfographics Development



Examples (Under Development)



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!