

# The NYC GIS Utility



GIS: A Key Integrating  
Component of IT

# INFORMATION technology

Human Beings and Human Society Depend Upon  
Information For EVERYTHING They Think and  
Do

The Value of and Need For Information Drives The  
Creation of New Technology

The Higher Quality The Information The Greater the  
Potential For Doing Things Better

# technology

- Processing Power
- Telecommunications speed and bandwidth
- Wireless
- Miniaturization
- Web
- RDBMS and other software tools and apps

=====Equals

**Information Anytime, Anywhere, Anyhow**

# Information Hierarchy

- Data (isolated/paper)
- Information (report)
- Information (analysis)
- Intelligence (stovepipe)
- Knowledge (integrated agency)
- Knowledge (integrated enterprise)
- Insight (interpretive)
- Insight (predictive)
- Wisdom (human)

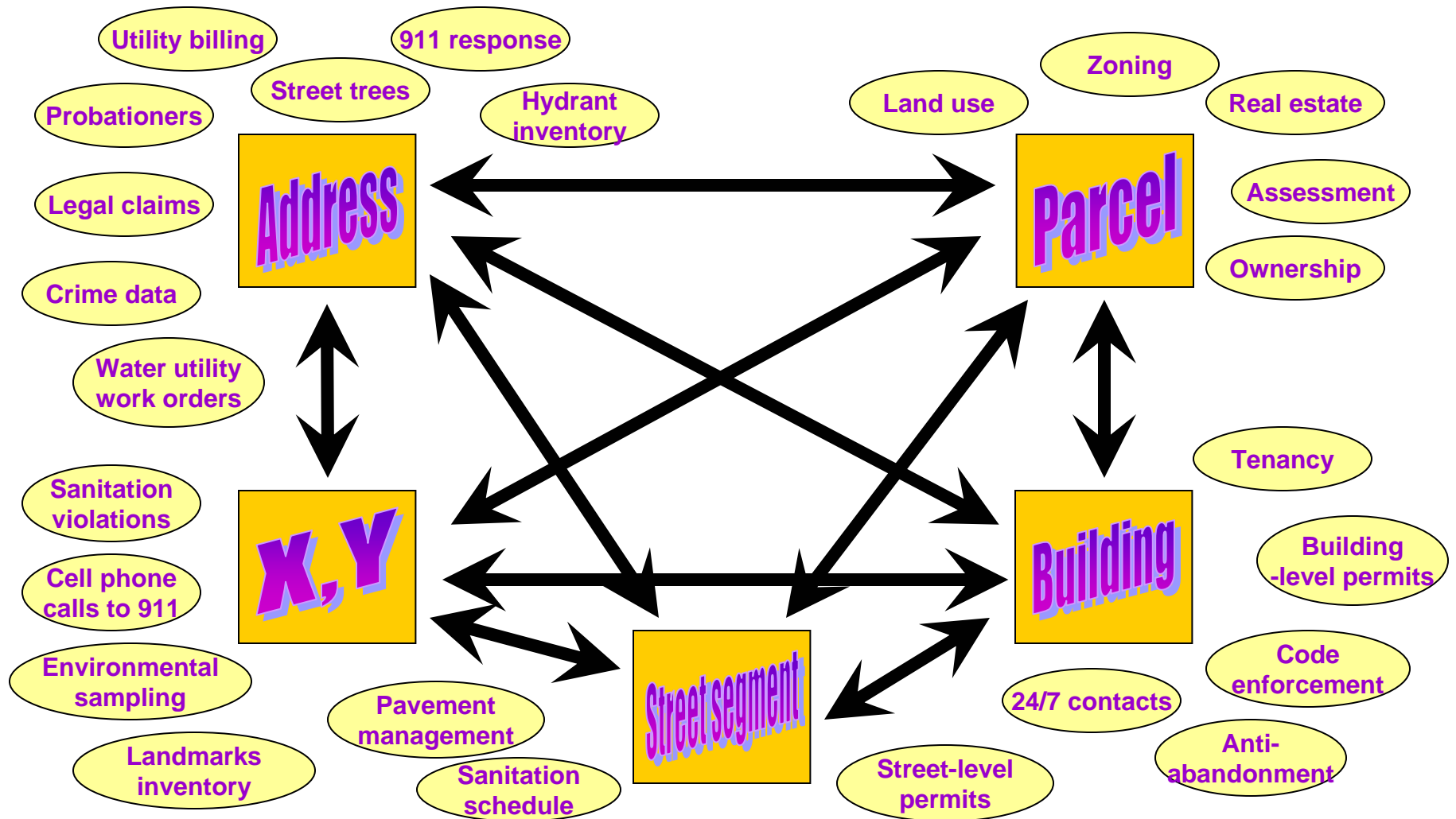
# Information Types

- **Who:** Name, ID, Object, Entity, Subject
- **What:** Facts, Figures, Event, Description
- **When:** Time
- **Where:** Address, Parcel, Building #, Coordinate, Street Segment, Street Intersection, Street Segment, Floor
- **Why? How?** explanations

# Combinations of Information

- Enable and encourage collaboration and cooperation
- Solve problems
- Increase efficiency, effectiveness, productivity
- Enable predictive and preventive analysis
- Lead to new solutions and new services
- Results in higher value answers and uses

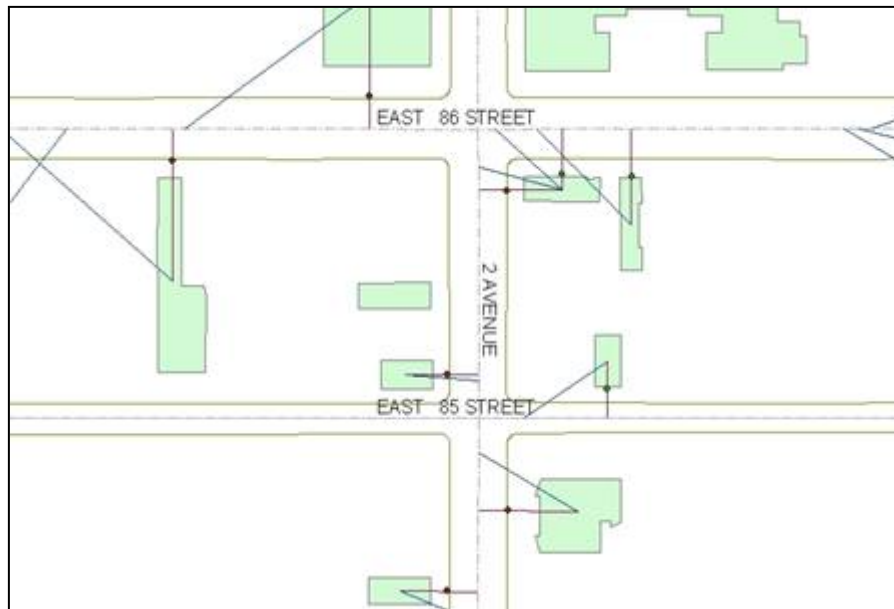
# NYC Geographic Identifiers & Geosupport







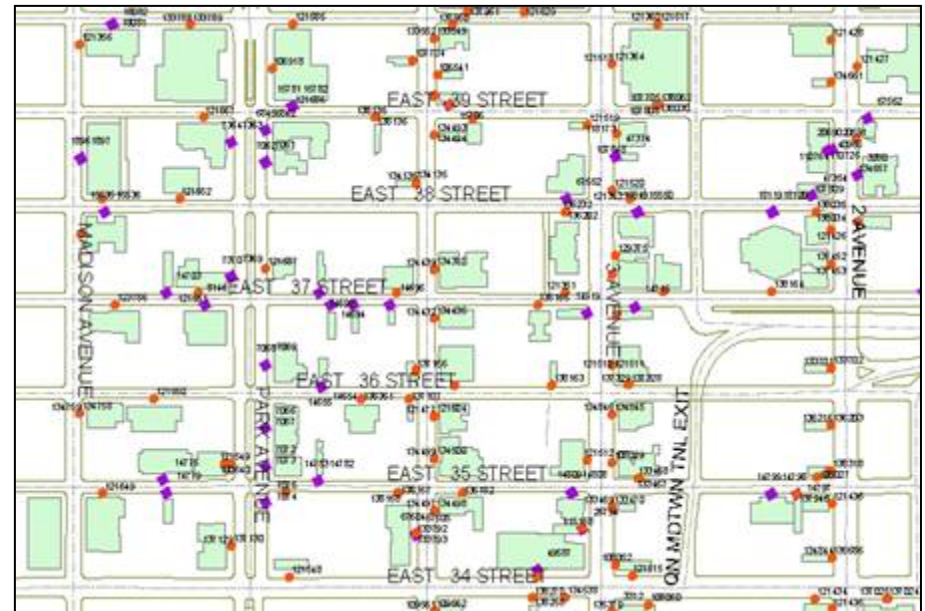
# Automated Mapping Application



**Sample process for public pay telephones:**

- 1) Validate & normalize street address
- 2) Convert from address to building centroid
- 3) Move to curb or building frontage
- 4) Offset by user defined distance

**Sample product: Mapping of public pay telephones**



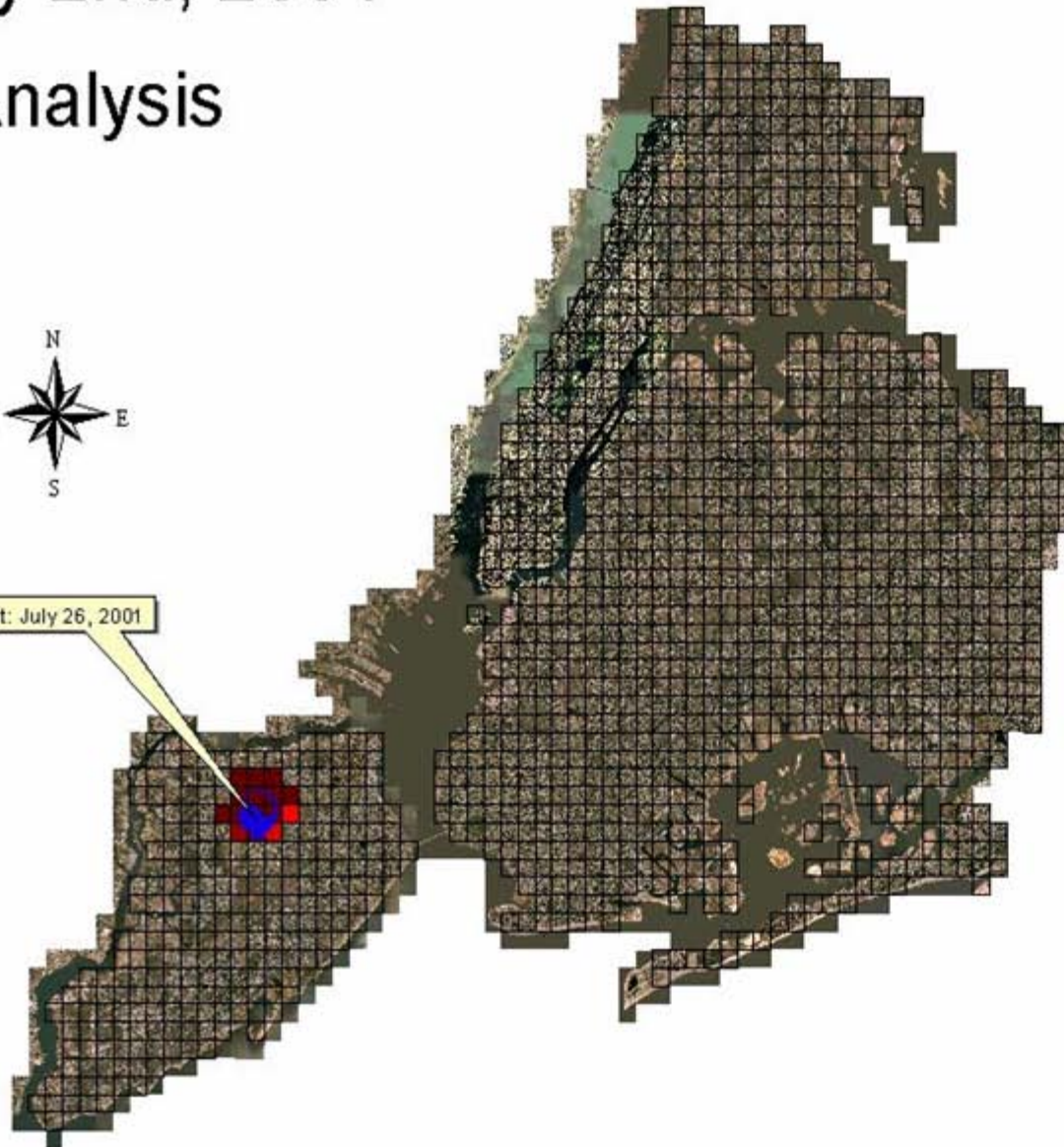
# GIS In Action

- With A Critical Mass of Registered Data and Fully Aligned Spatial Indicators, The Applications Keep Coming!

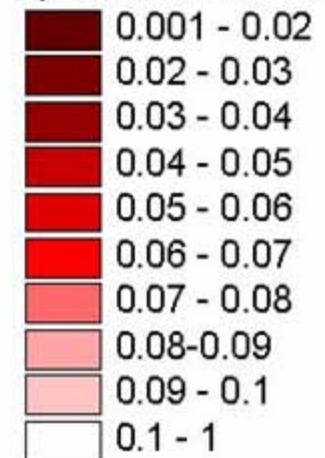
# July 2nd, 2001 Analysis



Onset: July 26, 2001



Probability of random  
space-time interaction



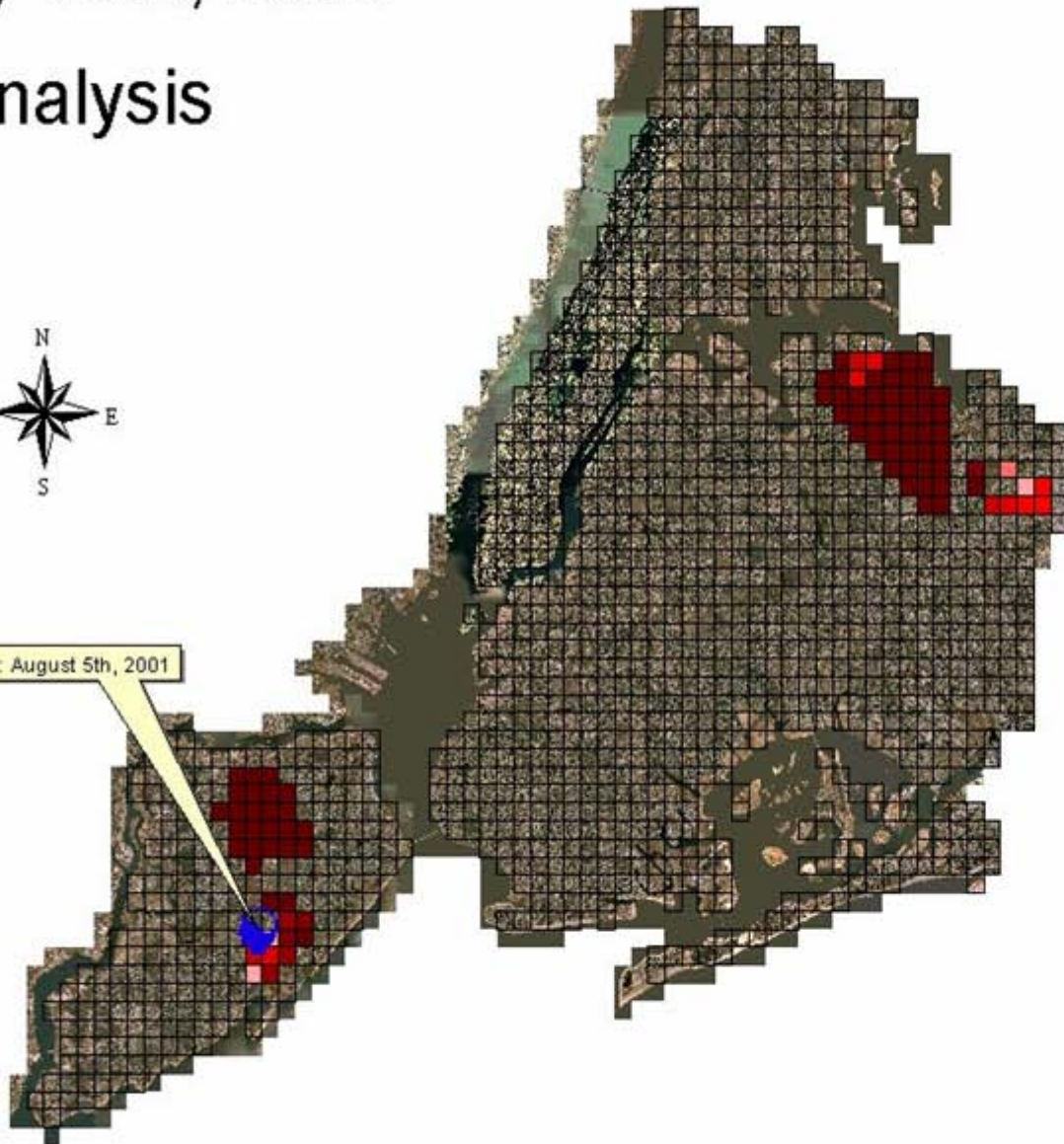
Localized Knox Test Analysis  
Buffer 1.5 miles  
Temporal Window 21 days  
Close in Space 0.25 miles  
Close in Time 3 days  
25 Birds Threshold  
Data Source: NYC DOH and NYCMAP  
Analysis: CARSI Lab, Hunter College



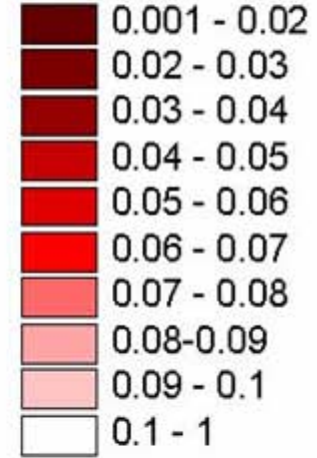
# July 19th, 2001 Analysis



Onset: August 5th, 2001



Probability of random space-time interaction



Localized Knox Test Analysis  
Buffer 1.5 miles  
Temporal Window 21 days  
Close in Space 0.25 miles  
Close in Time 3 days  
25 Birds Threshold  
Data Source: NYC DOH and NYCMAP  
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