GIS Charter Amendment Public Hearing Statement of Alan Leidner, President, NYC GISMO

Brief Bio: Alan Leidner has a MS in Urban Planning and had a thirty-five year career in City government working for City Planning, the Mayor's Office, DEP and DOITT. He then worked for ten years at Booz Allen & Hamilton as a consultant to the Department of Homeland Security and the National Geospatial Intelligence Agency. He was the City's first and only Chief Geospatial Information Officer and Directed the Emergency Mapping and Data Center Following the 9/11 attack. He currently serves as President of the NYC Geospatial Information Systems and Mapping Organization (GISMO: www.gismonyc.org)

On the morning of September 11th, 2001 the World Trade Center was destroyed. During the following hours and days maps had to be created to guide rescue workers across the debris field; aerial photography and sensor data had to be collected daily to understand what was happening on and under "the pile"; inspections had to be carried out on all buildings south of Canal Street; underground infrastructure damage needed to assessed and repaired; subsurface fires needed to be located and related to a buried tank of freon gas that could have released phosgene – or mustard gas - across Lower Manhattan; thousands of maps had to be created and distributed to the entire response community to give them situational awareness and a common operating picture. There was only one way to manage all these data products: Through the use of Geospatial Information Systems or GIS at the Emergency Mapping and Data Center (EMDC).

What makes geospatial information systems so special? GIS extends IT by taking the location characteristics found in almost every database and tying them to an accurate, mapped point on the earth. GIS can measure the distances between objects and perform dozens of other geographic analytics. In this way, GIS enables thousands of databases to be used together. Imagine data like a stack of pancakes, or like Lego pieces that fit together in any combination.

Spatial systems are essential to city planning; public safety and health; weather forecasting and climate analysis; and transportation and environmental operations. A significant part of NYC's economy is supported by systems based on location and it is mapping technology that makes Google, Lyft and Uber possible.

New developments in 3D visualization, sensors, artificial intelligence, IoT and crowd sourcing all make spatial systems more powerful and valuable.

NYC has been a world leader in the use of GIS since the 1980s due to the pioneering work of the Department of City Planning. New capabilities were added by the Departments of Environmental Protection (DEP) and Information Technology and Telecommunications (DOITT). Besides being a critical tool during the response to 9/11, GIS was fundamental to dealing with West Nile Virus and Hurricane Sandy. 9-1-1, CompStat, the 3-1-1 system, and hundreds of other uses depend on GIS. Most of the City's open data sets are spatially enabled.

To be fully effective, GIS needs special attention to achieve completeness, accuracy, currency and interoperability. However, New York City is currently going through an extended period when its technology leaders have not fully grasped the importance of GIS and what needs to be done to maximize its benefits. Today we have no Citywide GIS Officer, collaboration between agencies is not encouraged, and we have no plan to take advantage of the latest spatial technologies and methods. We seem to have forgotten that GIS is an essential tool to prevent, prepare for, respond to and recover from a disaster.

Consequently, GISMO, the City's GIS user group with more than 400 members is leading an initiative in league with more than thirty other organizations and institutions, to add provisions into the City Charter to permanently provide for proper management of GIS. We aim to bring standards of GIS governance to the level of best practices found in cities across the U.S. and around the world.

Focusing on Chapter 48 of the City Charter, which covers DOITT we propose:

- The appointment of a Deputy Commissioner who serves as the City's Chief Geospatial Information Officer
- The establishment of a GIS Steering committee made up of agency GIS leaders and other experts
- A requirement that the City produce and maintain a GIS strategic plan
- A requirement that the spatial data found in almost all of the City's open data be standardized to promote interoperability and ease of use.
- The creation of an underground infrastructure committee made up of representatives from City agencies and private utilities.