

OPRE 6398.001 Prescriptive Analytics

Reading 12*

New York City (NYC) suffered a horrid backup in its judicial system. In 1988, arrestees were in custody waiting to be arraigned for an average of 40 hours, occasionally for more than 70 hours. They were held in crowded, noisy conditions that were emotionally stressful, unhealthy, and often physically dangerous. The Legal Aid Society brought a federal suit against the city in 1985 for unreasonably long delays in the arrest-to-arraignment (ATA) system.

The ATA process began with an arrest. The arrested individual was taken to a police precinct for searching and fingerprinting. Upon the completion of an arrest report, the arrestee was escorted to a central booking facility, where the arresting officer swore out a complaint and other paperwork was processed. The arrestee was eventually transferred to the borough courthouse. Historical data showed that the procedure took an average of 44 hours to complete partially because of the enormous number of arrests made, which was over 300,000 in 1988.

The city competitively awarded a contract to a consulting firm to address the problem of arraignment delays and the staggering associated costs of operating the ATA system. The project team mounted an extensive two-year effort to develop comprehensive computerized models for evaluating alternative policies for NYC's four using Monte Carlo simulation of queuing problems.

With the new tool in place, the overall system, including the steps of arrest, precinct processing, central booking, fingerprint identification, complaint generation, precinct lodging, courthouse holding, and arraignment could be displayed on the computer screen in the form of a flow chart. Users could examine and modify model parameters and assess the impact of these changes.

The recommendations implemented since 1990 have helped to lower the average arraignment time in NYC to 24 hours or less. The past practice of adding fully staffed arraignment courtrooms was eliminated, and the number of courtrooms dedicated to arraignments were reduced. Annual savings were projected to be \$3.5 million for the city and \$6 million for the state of New York.

* Adapted from Larson, R., Cahn, M., & Shell, M. Improving the New York City arrest-to-arraignment system. *Interfaces*, 1993, January-February, 76-96.