

URBAN FREIGHT
DEVELOPING A FREIGHT
EFFICIENT STRATEGY IN A
BUILT ENVIRONMENT

BACKGROUND

HOW WE ENDED UP AT THE LOADING DOCKS

IN THE EARLY 1990'S SEN. MOYNIHAN'S OFFICE ASKED THE CENTER TO FIND OUT WHY IT WAS SO COSTLY TO SHIP GOODS INTO NEW YORK CITY'S CENTRAL BUSINESS DISTRICT (CBD).

WHO KNEW WHERE THIS JOURNEY WOULD LEAD US?

URBAN GOODS MOVEMENT STUDY(UGMS)-- GOALS

- MAP TIME AND DISTANCE OF GOODS DELIVERY FROM THE LAST NODE ON THE SUPPLY CHAIN BEFORE THE FINAL DROP-OFF POINT IN THE CBD
- IDENTIFY BARRIERS TO THE EFFICIENT MOVEMENT OF GOODS INTO AND THROUGH THE CBD

UGMS -- STAGE I

INDUSTRY SECTOR FOCUS GROUPS

– TOPICS ADDRESSED INCLUDED

- MAJOR BARRIERS TO MOVING GOODS INTO CBD
- MAJOR BARRIERS TO DECREASING TURNAROUND TIME AND LOWERING DELIVERY COSTS
- TIME OF DAY AND AVERAGE DURATION OF DELIVERY

UGMS -- STAGE I CONT'D

- 13 INDUSTRY SECTOR FOCUS GROUPS

SHIPPERs: Apparel, Consumer Products, Cosmetics, Food, Hi-Tech, Hospital Products, Media, Pharmaceuticals, Publishing, Retail

CARRIERs: Truck Load (TL), Less than Truck Load (LTL), Small Package Carriers

UGMS -- STAGE II

INTERVIEW/SURVEYS OF SHIPPERS AND CARRIERS

– INFORMATION COLLECTED

- PRODUCT CATEGORY
- TRANSPORTATION SERVICES USED TO
MOVE PRODUCT INTO CBD
- DISTRIBUTION CHANNELS
- CHARACTERISTICS OF TRUCK TRIP
- BARRIERS TO FREIGHT EFFICIENCY

UGMS-- STAGE II CONT'D

- 74 FREIGHT MOBILITY INTERVIEWS/
SURVEYS

14 Industry Sectors Represented

UGMS

FINDINGS: STAGES I & II

- CONSISTENT ACROSS INDUSTRY SECTORS
- BARRIERS TO FREIGHT MOBILITY
 - USUAL SUSPECTS
 - CONGESTION, THEFT/VANDALISM, STREETS CLOSED TO TRUCK TRAFFIC, PARADES, TICKETS, TOWAWAYS, ETC.
 - VISIBLE PUBLIC SECTOR BARRIERS
 - INSUFFICIENT AND INACCESSIBLE TRUCK ZONES AND CURBSIDE PARKING
 - INVISIBLE PRIVATE SECTOR BARRIERS
 - INADEQUATE LOADING DOCKS/BAYS AND FREIGHT ELEVATORS IN COMMERCIAL OFFICE BLDGS. (COBS)

STAGE III--THE FIRST & LAST MILE

THE PICK UP AND DELIVERY
POINT AT OFF-LOADING
FACILITIES IN COBS

STAGE III--THE FIRST & LAST MILE

- SURVEY OF BUILDING CHARACTERISTICS
 - DATE BUILT, NO. FLOORS, NO. OPERATING BAYS, NO. FREIGHT ELEVATORS, DELIVERY WINDOWS
- TIME AND MOTION STUDY OF VEHICULAR DELIVERIES TO LOADING DOCKS
 - ARRIVAL AND DEPARTURE TIMES
 - DWELL TIMES (IN DOCK AND ON STREET)
- COMPILE NO. OF DAILY DOCK DELIVERIES FOR 4-6 WEEK PERIOD
 - COBS KEEP DAILY LOG OF DOCK DELIVERIES BY TRUCK

STAGE III--THE FIRST & LAST MILE

CHARACTERISTICS BY BUILDING CLASS*

- 59 CLASS A PREMIER COBS
- 21-50 RENTABLE FLOORS FOR MAJORITY
- 47 HAD OPERATING FREIGHT DOCKS
- 12 HAD FREIGHT DOORS
- 30 HAD ONE FREIGHT ELEVATOR
- 12 HAD 2, 12 HAD 3 AND 4 HAD 4 OR MORE FREIGHT ELEVATORS

*DETERMINED BY LOCATION, RENT, AMENITIES,
MARKET PERCEPTION ETC.

STAGE III--THE FIRST & LAST MILE

CHARACTERISTICS BY BUILDING CLASS CONT'D

- 23 CLASS B's
- 6-56 RENTABLE FLOORS
- 2 HAD OPERATING FREIGHT DOCKS
- 21 HAD GROUND FLOOR FREIGHT DOORS,
SIDEWALK FREIGHT DOORS, ETC.
- 16 HAD ONE FREIGHT ELEVATOR
- 6 HAD TWO FREIGHT ELEVATORS

STAGE III--THE FIRST & LAST MILE

TIME & MOTION STUDY: 6 CLASS A'S

- DAILY DELIVERIES RANGED FROM 5.1 TO 171.7 WITH A MEDIAN OF 23.9
- STRONG CORRELATION BETWEEN BLDG. SIZE AND NO. OF DAILY DELIVERIES
- DELIVERIES IN MORNING ABOUT 60% (8:00am to 12:30 pm)
- DELIVERIES IN AFTERNOON ABOUT 40% (12:30pm to 5:00pm)

STAGE III--THE FIRST & LAST MILE

TIME & MOTION STUDY CONT'D.

- AVERAGE DWELL TIME (DT) IN DOCK ABOUT 31-1/2 MINUTES
 - DT AVERAGES AT INDIVIDUAL BUILDINGS
22 TO 48 MINUTES
- AVERAGE DT ON STREET ABOUT 20-1/2 MINUTES
 - DT AVERAGES AT INDIVIDUAL BUILDINGS
14 TO 36 MINUTES
- DT IN DOCK AND ON STREET LONGER IN MORNING THAN IN AFTERNOON

TO SUSTAIN AND GROW EFFICIENT URBAN FREIGHT OPERATIONS REQUIRES

- ACCESSIBLE STREETS
- AVAILABLE CURB SPACE
- SUFFICIENT NO. OF LOADING BAYS
- ADEQUATE NO. OF FREIGHT
ELEVATORS

FROM THE LAST MILE TO AN URBAN FREIGHT CONCEPT

- URBAN FREIGHT (UF), ANOTHER DIMENSION OF GOODS MOVEMENT, IS SHAPED BY DIFFERENT FACTORS THAN HIGHWAY FREIGHT
- UF OPERATES IN A COMMERCIAL CENTER/CBD WITH A MATURE INFRASTRUCTURE AND A LIMITED PHYSICAL CAPACITY
- FREIGHT MOBILITY IS RESTRICTED IN A BUILT ENVIRONMENT SINCE THERE ARE FEW OPTIONS FOR CHANGE

APPLY UF CONCEPT TO DOWNTOWN FUTURE GROUP

- ARCHITECTS, DEMOGRAPHERS,
ECONOMISTS, REAL ESTATE
ANALYSTS, TRANSPORTATION
PLANNERS
- VISIONARY DOWNTOWN 2020 PLAN
TO REVITALIZE LOWER MANHATTAN

PHYSICAL LIMITATIONS SOUTH OF CANAL STREET POST 9/11

- SHORTER AND NARROWER STREETS IN OLDEST PART OF CITY CONTRIBUTE TO IMMOBILITY
- ENDEMIC GRIDLOCK AND CONGESTION INTERFERE WITH BUSINESS
- WIDESPREAD CONSTRUCTION INTERFERES WITH TRAFFIC FLOW AND PEDESTRIAN MOVEMENT

PHYSICAL LIMITATIONS CONT'D

- **INACCESSIBLE CURB SPACE**
 - EXCESSIVE USE OF LEGAL AND UNAUTHORIZED PLACARDS ALTHOUGH MOST OF DOWNTOWN A “NO PERMIT AREA”
- **STREET CLOSINGS AND LACK OF ACCESS**
 - DUE TO UPGRADING SEWER AND ELECTRICAL SYSTEMS DOWNTOWN
- **INADEQUATE OFF-LOADING FACILITIES IN COMMERCIAL PROPERTIES**
 - INSUFFICIENT LOADING BAYS AND FREIGHT ELEVATORS

MANAGEMENT AND POLICY RECOMMENDATIONS

- ENFORCE REGULATIONS FOR PLACARDS AND TRUCK PARKING ZONES
- REDUCE NUMBER OF PLACARDS ISSUED
- INSTALL ADDITIONAL MUNI-METERS
 - RESERVE CURB SPACE FOR COMMERCIAL PARKING DURING WORK DAY
 - THREE HOUR TIME LIMIT
 - RATES INCREASE EACH HOUR
FROM \$2 TO \$5 TO \$9
LEADING TO FASTER TURNAROUND

MANAGEMENT AND POLICY RECOMMENDATIONS CONT'D

- OFFER INCENTIVES TO REDUCE DRIVE TO WORK
 - EXTEND TRANSIT RIDE TO FINAL DESTINATION WITH NO-FARE MINI E/W-N/S BUS LOOPS
 - PARKING GARAGES WITH SUBSIDIZED JITNEYS TO TRANSPORT WORKERS TO OFFICES
- MANAGE, MONITOR AND COORDINATE ON-STREET CONSTRUCTION SCHEDULES
 - AUTOMATIC NOTIFICATION OF STREET CLOSURES

PRIVATE/PUBLIC SECTORS MANAGEMENT AND POLICY RECOMMENDATIONS

- DEVELOP STANDARDS FOR SUFFICIENT LOADING BAYS AND FREIGHT ELEVATORS IN NEW COBS
- OFFER BUILDING OWNERS TAX ABATEMENTS TO MODIFY/RETROFIT EXISTING OFF-LOADING FACILITIES
- EXPAND OFF-PEAK DELIVERIES
 - START WITH BULK AND LTL CARRIERS

CONCLUSIONS

- FREIGHT DOES NOT WALK
- DELIVERIES AND PICK-UPS IN THE LAST MILE ARE BY TRUCK
- BRICK AND MORTAR SOLUTIONS CANNOT OVERCOME PHYSICAL LIMITATIONS THAT BREED CONGESTION IN CBDS
- INADEQUATE OFF-LOADING FACILITIES ARE A NATIONAL PROBLEM --ITS NOT JUST NEW YORK CITY