THE NEW YORK METROPOLITAN TRANSPORTATION COUNCIL LAND USE MODEL

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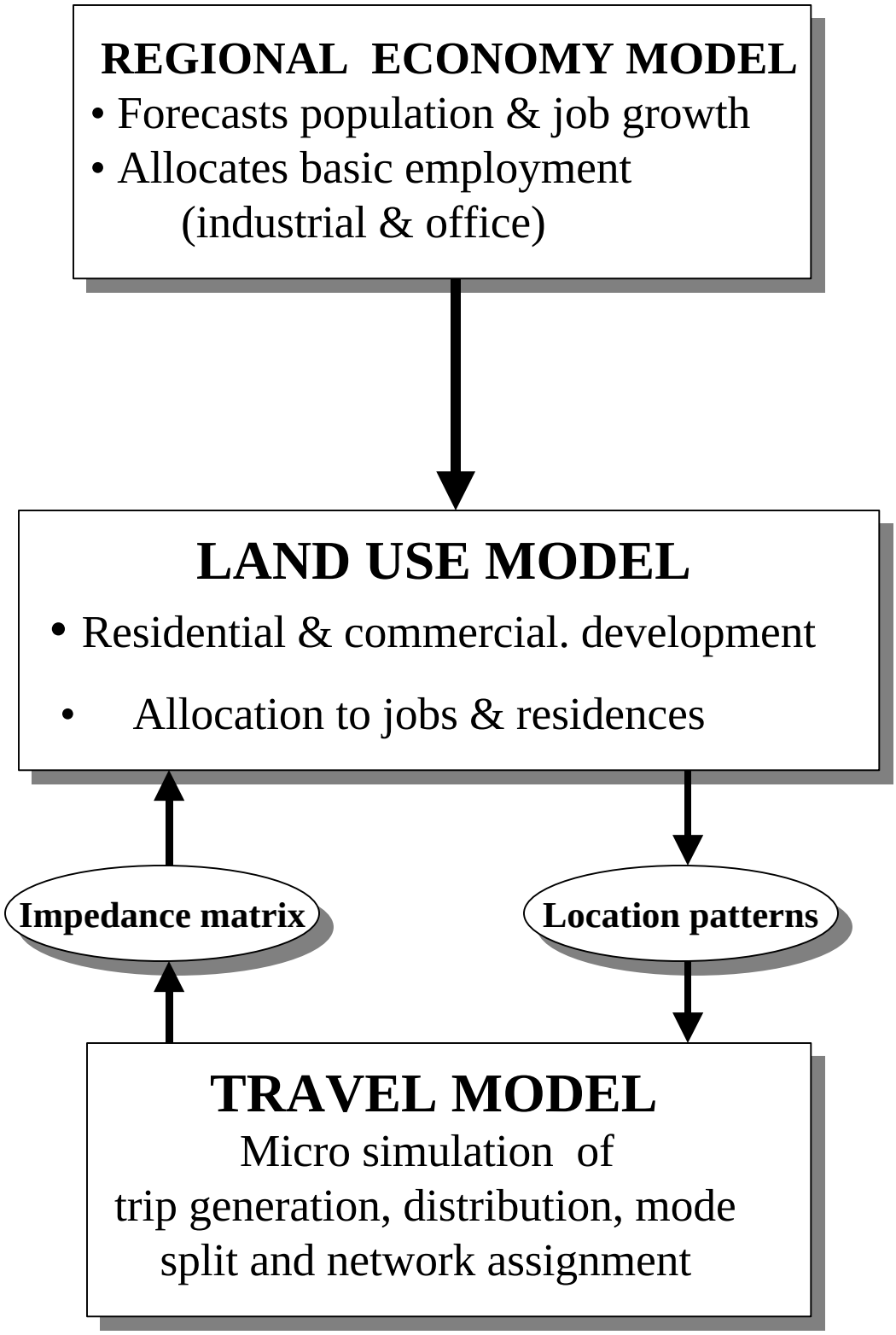
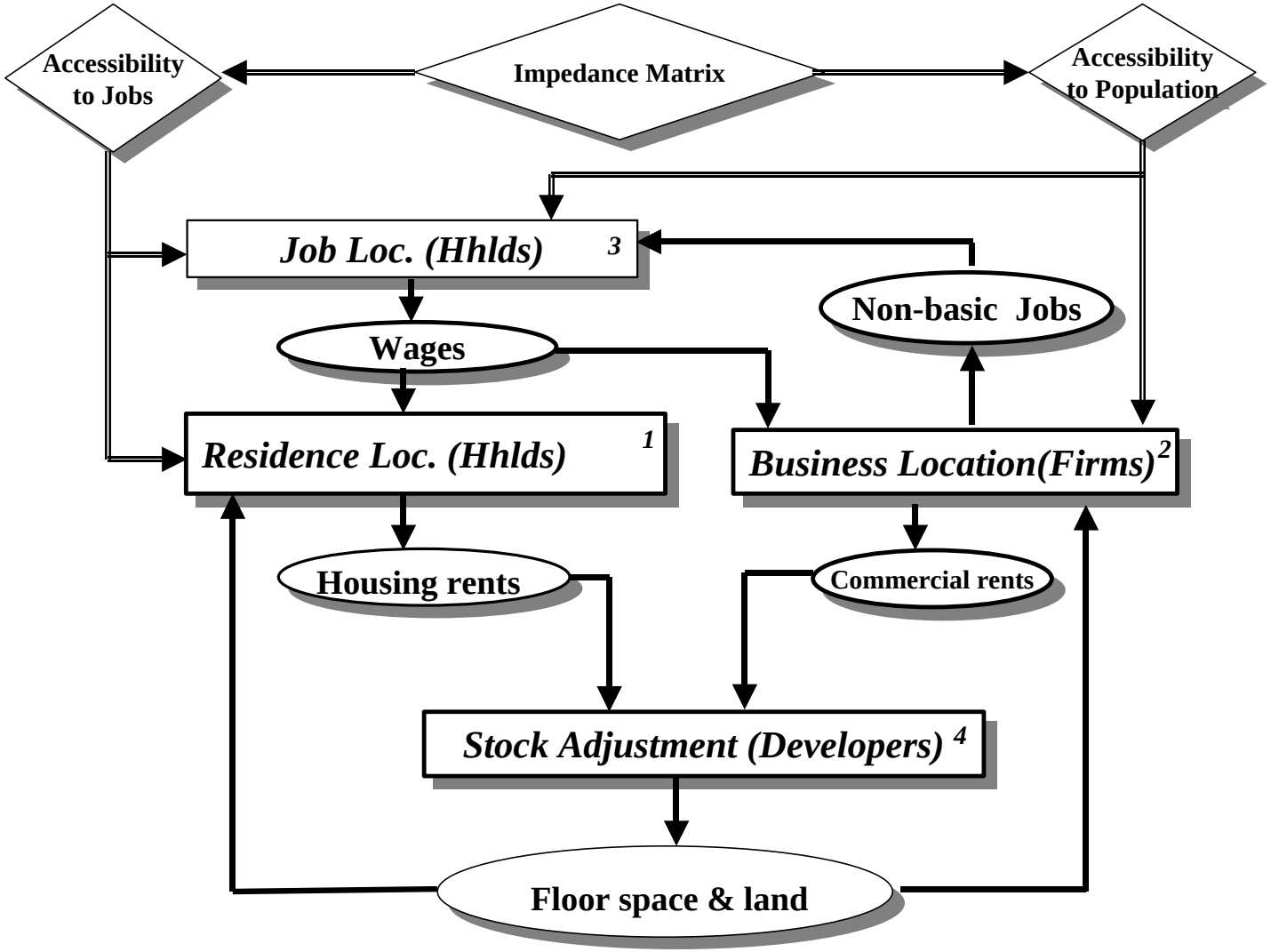
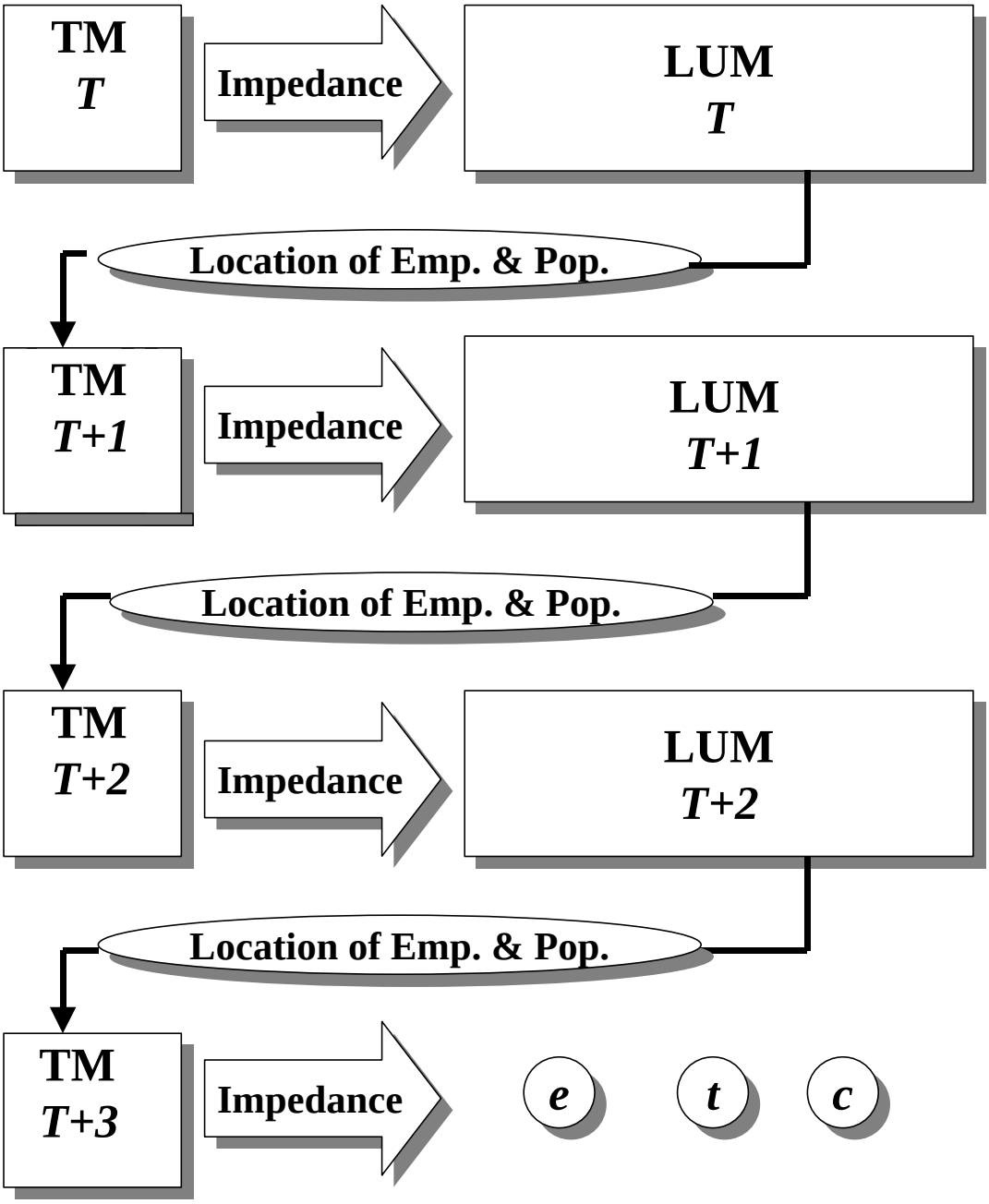

REGIONAL ECONOMY MODEL
• Forecasts population & job growth
• Allocates basic employment
(industrial & office)
LAND USE MODEL
• Residential & commercial. development
• Allocation to jobs & residences
Impedance matrix
Location patterns
TRAVEL MODEL
Micro simulation of
trip generation, distribution, mode
split and network assignment



NYMTC LAND USE MODEL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Impedance
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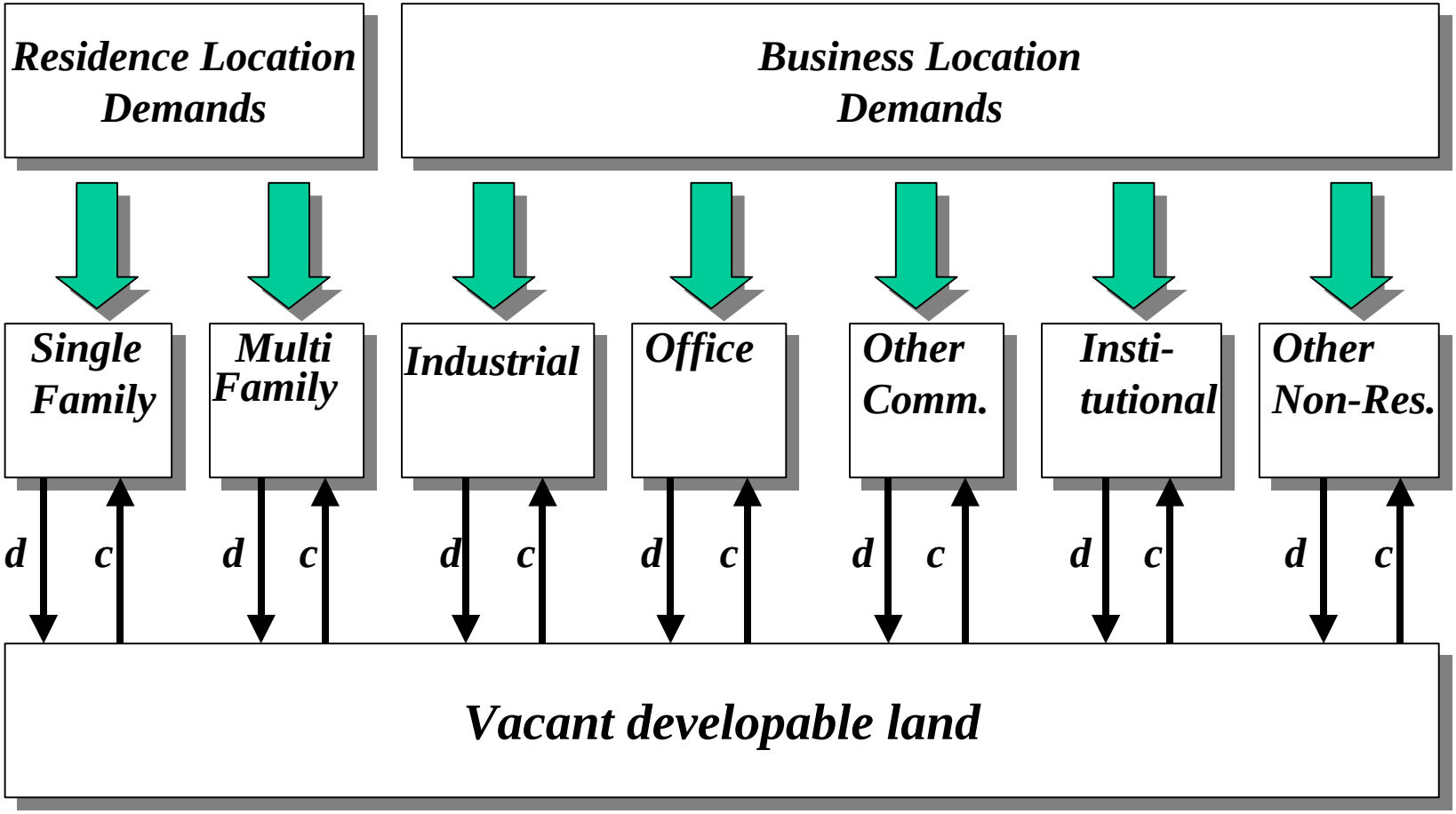
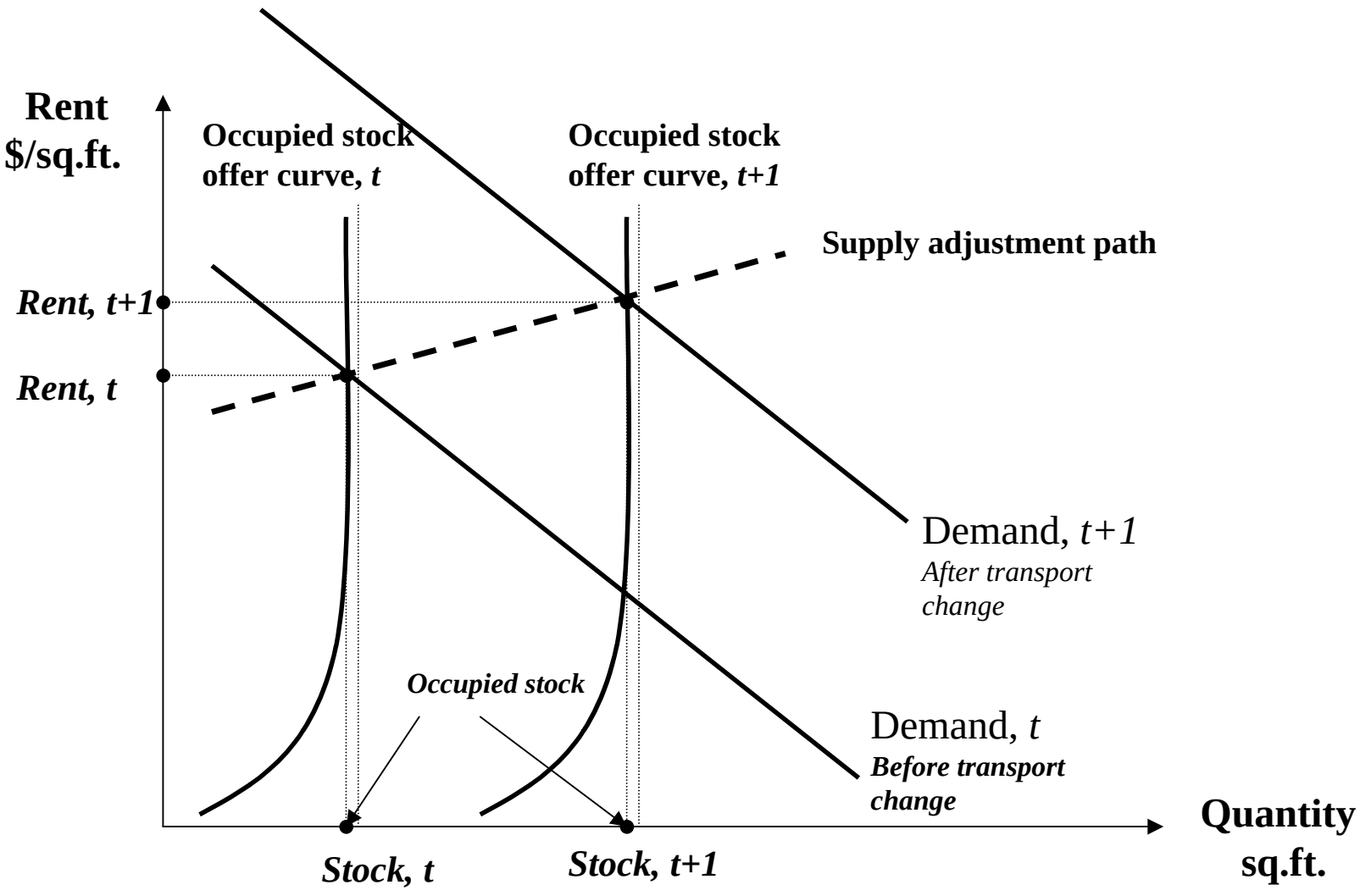
Disaggregation in the LAND USE MODEL

- **Geographic:** 3586 Land Use Zones same as Travel Analysis Zones
- **Housing:** Single Family & Multiple Family Residential Buildings
- **Basic Employment:** Industrial, Office, some Major Commercial
- **Non-Basic Employment:** “Other commercial”, “Institutional”, “Other non-residential”



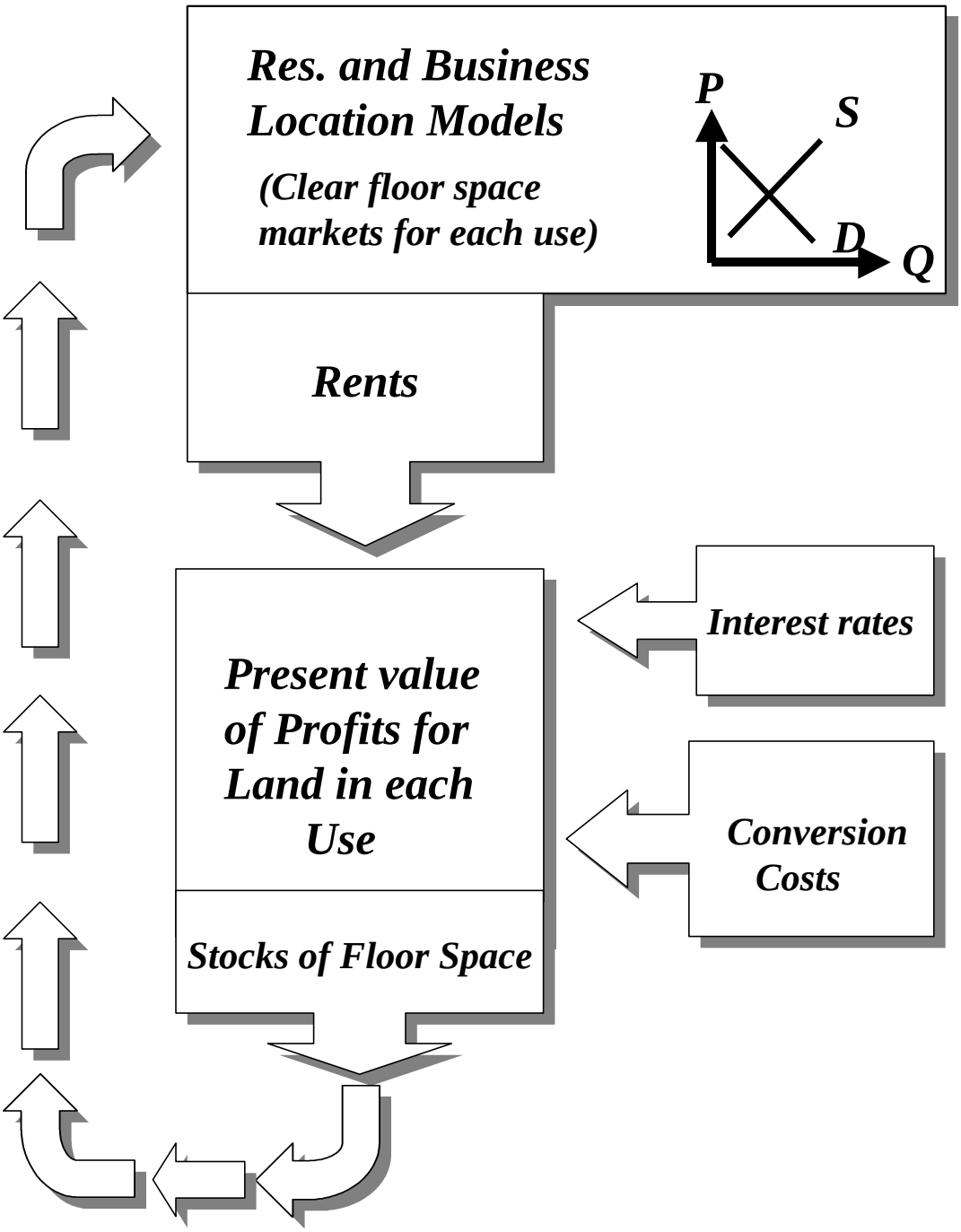
The stock conversion process

d: *demolition*
c: *construction*



The market for floor space in a particular land use

The Stock Adjustment Submodel



Submodel	Market	Equations
Residence Location	Single family	3586
	Multi family	3586
Business Location	Office	3586
	Industrial	3586
	Other commercial	3586
	Institutional	3586
	Other non-residential	3586
Job Location	All	3586
Development	Single family	3586
	Multi family	3586
	Office	3586
	Industrial	3586
	Other commercial	3586
	Institutional	3586
	Other non-residential	3586
		53790

Operating Options

- ***Unconstrained allocation*****:** *Allocates regional totals of employment and population among all zones.*

- ***Constrained allocation*****:** *Allocates county totals of employment and population among the zones of that county.*

- ***Development constraints*****:** *Local planners impose minimum and maximum development constraints for any use of land in some zones.*