



**WASHINGTON METROPOLITAN AREA TRANSIT  
AUTHORITY**

# **PARKING REVENUE ANALYSIS MODEL**

**Rail~Volution 2005**



# WMATA Parking Revenue Analysis Model

## Model Components

### 1. Parking Revenue Reduction

Impact of eliminated parking at target station

### 2. Ridership Revenue Reduction

Impact of eliminated parking at target station

### 3. Revenue Recapture (Displaced Parkers)

System impact of displaced patrons (Parking + Ridership Revenue)

### 4. Ridership Revenue (Joint Development)

Impact of new Joint Development project

### 5. Rent/Sale Proceeds (Joint Development)

Real estate income from Joint Development project

Annual  
Parking / Ridership  
Revenue Impact

Annual Revenue or NPV  
Parking/Ridership

Annual Revenue or NPV  
Joint Development

Annual  
Joint Development  
Revenue Impact

## GOAL

Determine impact of parking change on WMATA revenue stream

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Annual Revenue (or NPV)  $\geq$  \$0?



FIGURE 1: TARGET STATION PARKING REVENUE REDUCTION METHODOLOGY

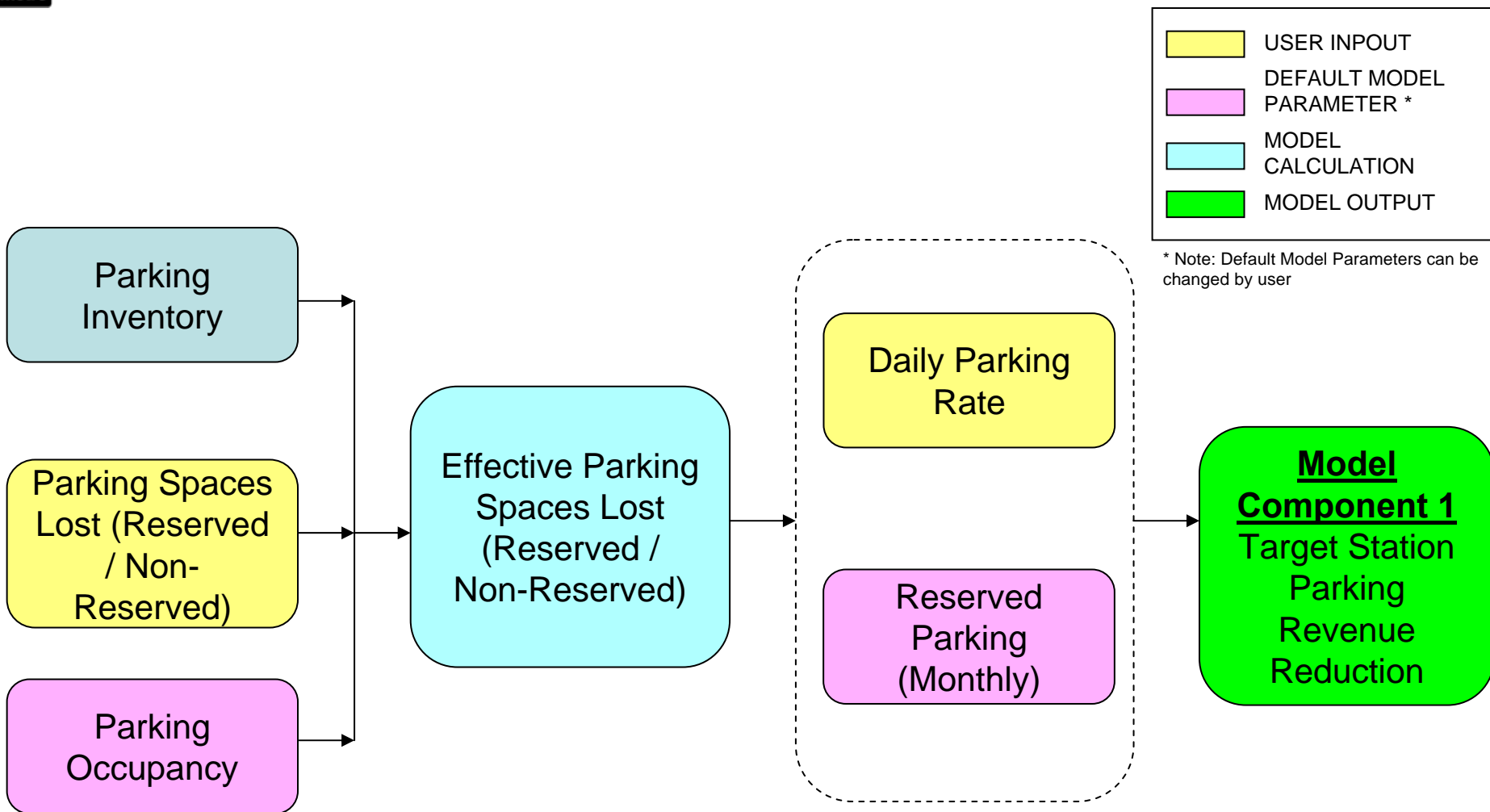




FIGURE 2: TARGET STATION RIDERSHIP REVENUE REDUCTION METHODOLOGY

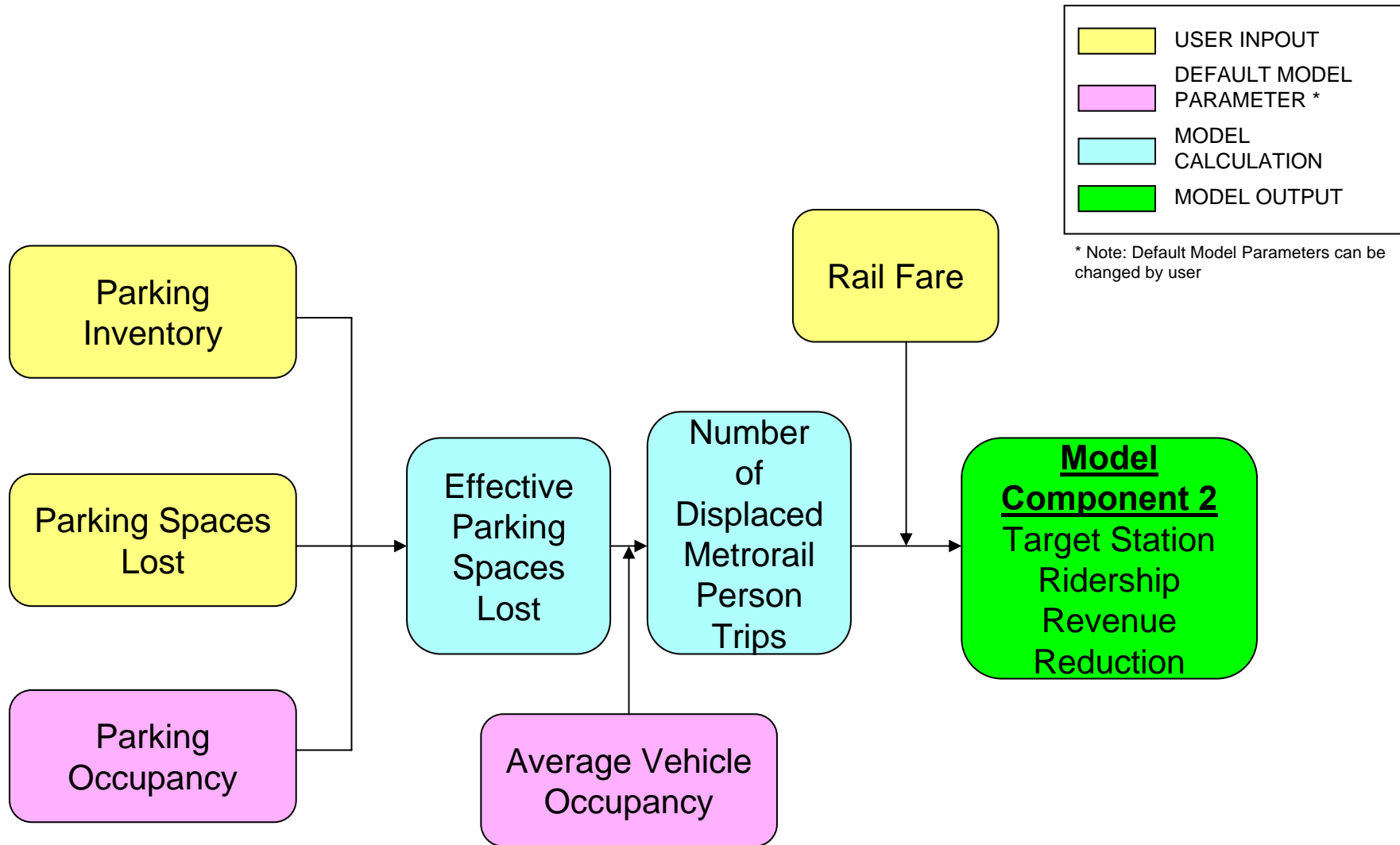
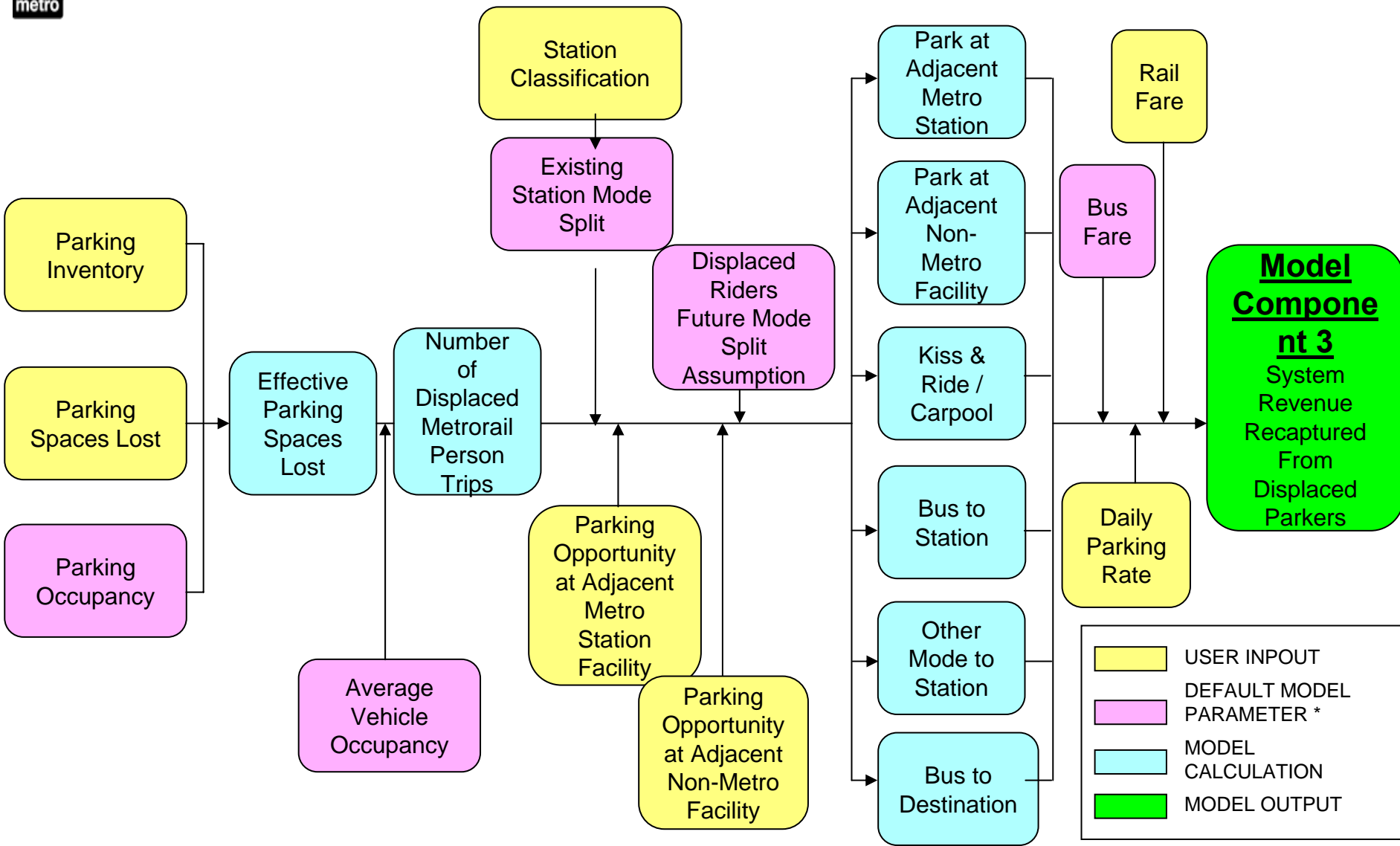




FIGURE 3: SYSTEM REVENUE RECAPTURED FROM DISPLACED PARKERS METHODOLOGY



\* Note: Default Model Parameters can be changed by user



# FIGURE 4: RIDERSHIP REVENUE FROM JOINT DEVELOPMENT METHODOLOGY

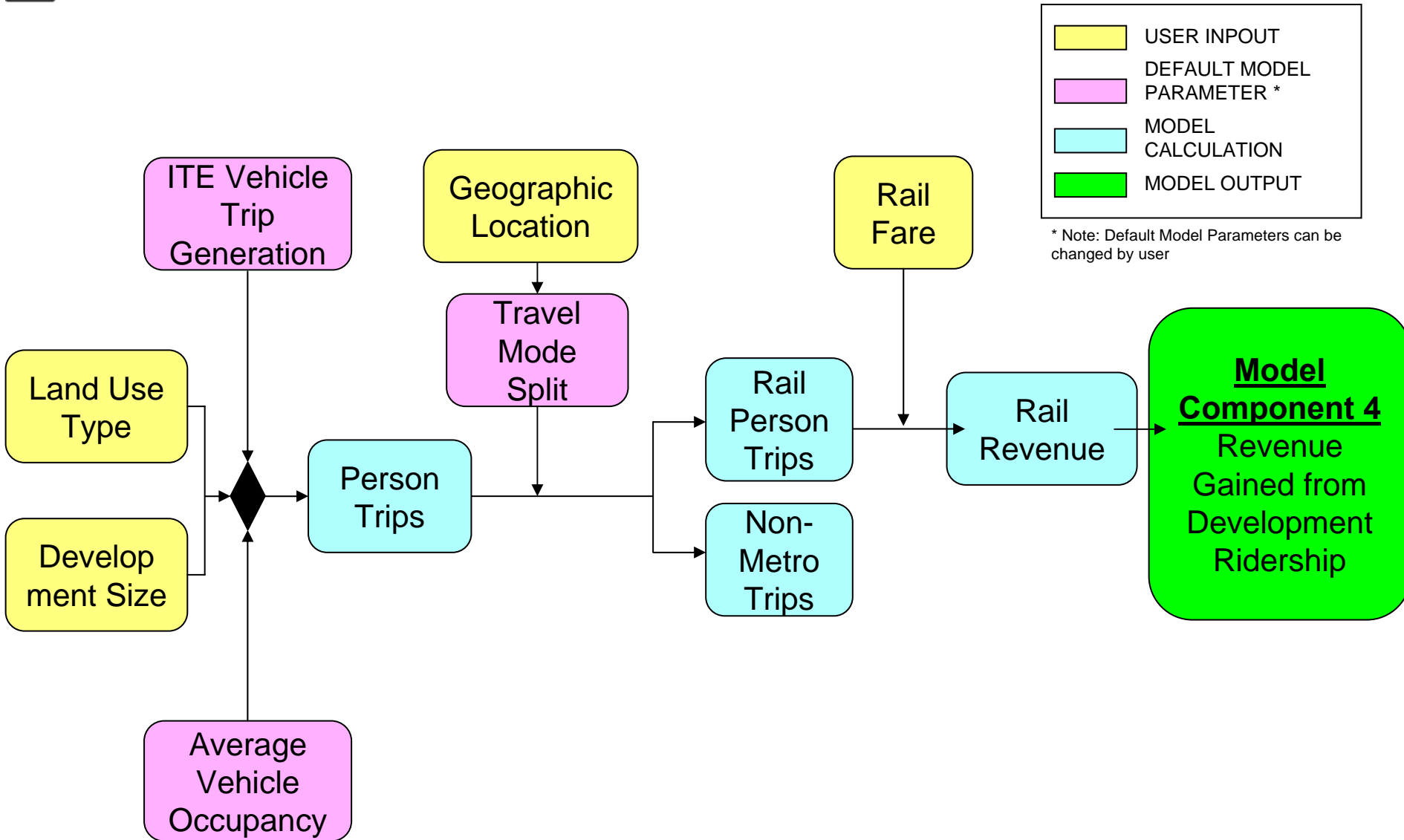
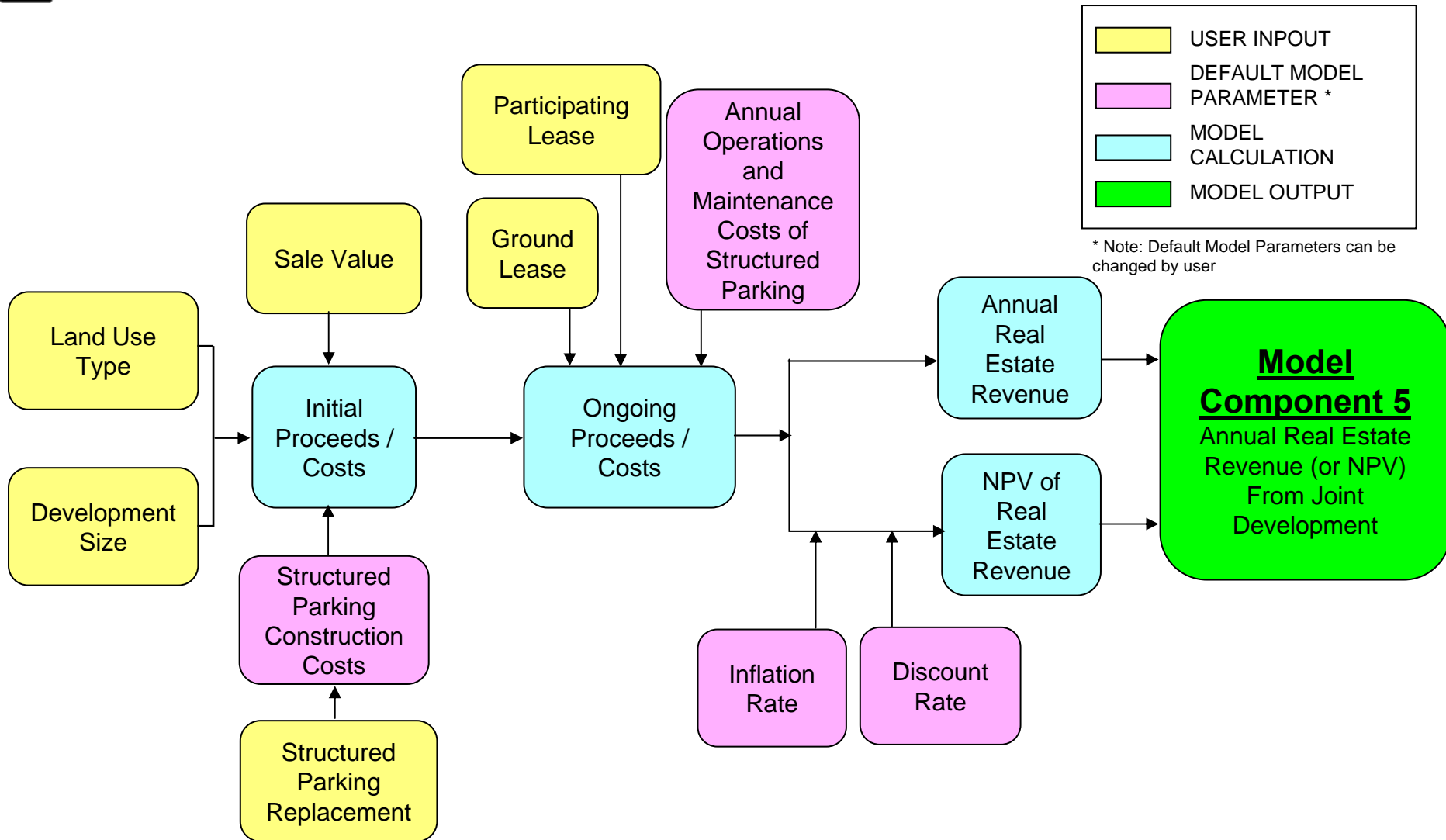




FIGURE 5: REAL ESTATE REVENUE FROM JOINT DEVELOPMENT METHODOLOGY





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**WMATA Joint Development Parking Analysis  
User Input Sheet**

<b>Station</b>	Example Station	(Mark one "x")	<b>Classification</b>	(Mark one "x")	<b>Location</b>
<b>Class</b>	Auto Commuter	<input checked="" type="checkbox"/>	Auto Commuter	<input type="checkbox"/>	CBD
<b>Location</b>	Outside Beltway	<input type="checkbox"/>	Auto/Pedestrian	<input type="checkbox"/>	Inside Beltway
		<input type="checkbox"/>	High Bus	<input checked="" type="checkbox"/>	Outside Beltway
		<input type="checkbox"/>	High Ped/Bike	<input type="checkbox"/>	
		<input type="checkbox"/>	Multimodal	<input type="checkbox"/>	

**STATION INFORMATION**

**Parking Information**

	Reserved	Non-Reserved	Total
Existing Long Term Parking Spaces	0	400	400
Proposed Long Term Spaces to be removed	150	0	150
Remaining Long Term Parking Spaces	-150	400	250

Opportunity for parking at Nearby Metro Stations (Mark one "x")

<input type="checkbox"/> Ample	<input type="checkbox"/> Some	<input checked="" type="checkbox"/> None
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Opportunity for nearby parking in non-WMATA lots (Mark one "x")

<input type="checkbox"/> Ample	<input type="checkbox"/> Some	<input checked="" type="checkbox"/> None
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**Parking Rate and Fare Information**

	Weekday Peak Period	Weekday Off-Peak Period	Weekend-day
Parking Rate (Daily)	\$3.50	\$3.50	\$0.00
Reserved Parking Rate (Monthly)	\$35.00		
Average Metro Fare (One-Way Trip)	\$1.55	\$0.00	\$0.00
Average Metrobus Fare (One-Way Trip)	\$1.20	\$1.20	\$1.20

**JOINT DEVELOPMENT INFORMATION**

Development Land Use Type	Size	Units
<b>Residential</b>		
Apartment	300	Dwelling Units
Condominium/Townhouse	0	Dwelling Units
<b>Lodging</b>		
Hotel	0	Rooms
<b>Recreational</b>		
Movie Theater	0	Movie Screens
<b>Office</b>		
General Office Building	100,000	Square Feet Gross Floor Area
<b>Retail</b>		
Shopping Center (Neighborhood Retail)	175,000	Square Feet Gross Floor Area
Shopping Center (Destination Retail)	0	Square Feet Gross Floor Area

## JOINT DEVELOPMENT REVENUE

### User Inputs

Ground Lease Base Rent	\$2.00	per Sq Ft
Sale Value	\$0.00	per Sq Ft
Residual Value Increase	\$0.00	per Sq Ft
Participating Rent	\$0.00	per Sq Ft
Other Rent	\$0.00	per Sq Ft
Structured Parking Replacement	250	Number of Spaces

Annual Impact of  
Joint Dev., O&M **\$1,150,000**

### Assumptions

All-in Construction Cost	\$15,000	per Parking Space
Annual O&M	\$300	per Parking Space
Preventive Maintenance Cost	\$400	per Parking Space
Preventive Maintenance Frequency	5	Years
Structural Rehab Cost	\$5,500	per Parking Space
Structural Rehab Frequency	20	Years

Discount Rate **9%**  
Inflation Rate **3%**