

Mid-Semester Project Presentation

TCNJ Vehicle Fleet Management

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Web interface: Economic impact

Economic impact analysis form

Economic Budget:
\$5000/year

Filter option
cost/year

- annual cost/yr total
- cost of repairs, insurance

☒ ascending
☐ descending

Sign In

User Name:
johndoe

Password:

SIGN IN

[Forgot Password?](#)

New User

SIGN UP

Submit

Must be signed in to view data

[illegible]

Web interface: Environmental impact

Environmental impact analysis form

Emissions Budget:
50 lb/year

Filter option
emissions/year ▼

- ascending
- descending

Sign In

User Name:
johndoe

Password:

SIGN IN

[Forgot Password?](#)

New User

SIGN UP

Submit

Must be signed in to view data

Example options:
• annual emissions per yr total

[illegible]

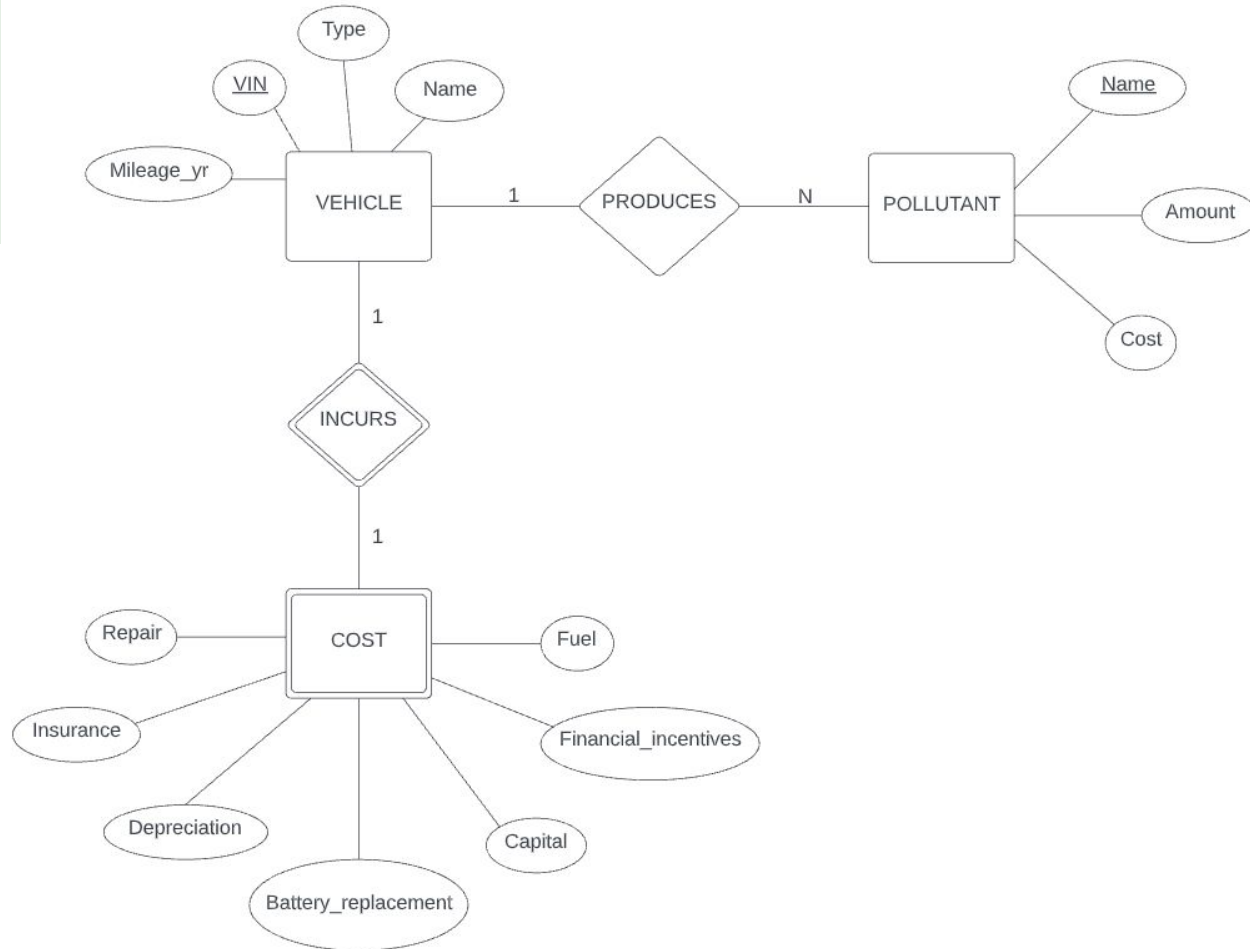
Financial Variables Considered



- **Direct, Fixed, and Indirect Costs**
 - Direct: Depreciation exp., monthly payments, significant maintenance (tires, brakes, batteries, etc.)
 - Indirect: Unexpected breakdowns, insurance, routine maintenance (oil changes)
 - Fixed: Insurance, depreciation exp., monthly payments, expected routine maintenance
 - Variable: Gasoline, unexpected (significant) maintenance
- **Cost Drivers**
 - Type of fuel determines how much is spent
 - Size/weight of each vehicle drives up fuel costs
 - Miles driven→ the more miles driven leads to more repair/maintenance costs
- **Cost Objectives**
 - Annual and total cost of vehicle ownership per year
 - Annual and lifetime pollutants emitted per year



ER DIAGRAM



RELATIONAL SCHEMA

VEHICLE

<u>VIN</u>	Name	Type	Mileage_yr
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COST

<u>VType</u>	Capitall	Financial_incentives	Battery	Insurance	Depreciation	Repair	Fuel
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POLLUTANT

PVIN	<u>Name</u>	Amount	Cost
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