Systems Matrix

Dimensions truck (IC) operation Name of System Elements	Fundamental: structural characteristics – who, what, when, where, how,	Values: Goals, Motivation, global desires, moral matters.	Measures: performance (criteria, worth), Objectives (quantity, timing, rates, specs)	Control: Evaluation and modification of elements or system in operation	Interface: relation of all dimensions to other systems or elements Relations of note	Future: planned changes and research for all dimensions.
Purpose: mission, aim, primary concern	To carry itself and cargo, passengers to destination by its own power	Efficiency, capacity, speed, reliability, durability, traction,	towing tons, bed size (ft), cab size (passengers/leg room), cupholders Mpg, engine wear (hours/mileage) -higher is better	SEE: driving matrix		Flying, engine types, efficiency various capacity upgrades
Inputs: people, things, information to start the sequence	SEE: truck construction matrix Driver, key consumables(tires, brakes, fuel + fluids, battery)	Readily available on accessible roadways. Stays where you left it(so it is there when you need it.)	Fuel (gallons) Oil,gear oil (quarts) Coolant (quarts) Blinker fluid (oz) washer fluid (quarts) Trans fluid (quarts)	SEE: auto parts store		new fuel, better tire compounds,
Outputs: desired (achieves purpose) and undesired outcomes from the sequence	desired: distance heat, exhaust, brake dust, 6PPD (tire chemical), old batteries, wreck (all parts)	Healthy emissions for environment, manageable heat, increase distance	Miles, temp(gauge), grams of: CO_2, Nitric oxide, CO, benzene, formaldehyde, NMOG,	SEE: catalytic converter	SEE: Alternative fuels SEE: Alternative materials	Engine design, exhaust management systems
Sequence: steps for processing inputs, flow, layout, unit operations	Turn key,systems on, ignition, nominal engine function, idle, shift to drive gears, drive (turns nominal), brake functional, shift to parking gear, turn key off, engine + systems off, exit	Reliable, easy		Accelerator pedal, clutch, brake, steering wheel, turn signal, climate controls, radio, windshield wipers, lights, seat controls	SEE: Inputs	Simple electric car sequence, Self driving
Environment: physical and attitudinal, organization, setting, etc.	Drivetrain, traction, styling, lift/clearance, paint, tint, lights, location, theft prevention system	Truck is able to traverse environment in style	Drivetrain:4x4,rwd Tire ratings: speed, size, tread, compound Tint (%),Paint(code) Light (lumens)	Off Road mode, variable height selector	SEE: auto body shop, mechanic	Upgrades and change of qualities
Human agents: skills, personnel, responsibilities, rewards, etc.	Driver, passengers, mechanic, dealer, thief	Good driving ability, skilled mechanic, skilled thief		driver	SEE: auto body shop, mechanic	Learn how to work on your own vehicle
Physical catalysts: equipment, facilities, resources	Key, garage, roadway, path/trail	Reliable key, garage. Smooth and clear roadway	User experience	SEE: Hotwiring a vehicle	SEE: DOT (Department of Transportation)	Upgrade garage, car lift, gravel/pave driveway
Information aids: books, instructions, etc.	Owners manual, youtube videos, internet forums, mechanic	Step by step directions and depictions, Specifications, Advice	Did it help?	Web search query		Upkeep advice, relevant maintenance posts