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### Assignment A04 User Needs

Ease of Use- Should be the same or as easy to operate as a modern car.

Fast Commute- Commute times need to decrease.

Safe- Should be safer than a modern car.

Private- Everyone should have their own vehicle.

Always Ready- Can get around anytime the user desires, not at scheduled times like a train or bus.

Reliable- Vehicle and any related systems always need to work .

Low cost- Cost of ownership including purchasing, maintenance, fuel, licensing, etc. should not be more than a modern car.

Internet Connectivity- Vehicle connects to the internet to share travel status with family, run diagnostics, track the vehicle, etc.

Customizable- User should have a similar range of choices to the modern car market.

Environmentally Friendly- Vehicle should be carbon neutral.

### User Needs

User Need	Score(1-5)
Ease of Use	5
Fast Commute	5
Safe	5
Private	4
Always ready	4
Reliable	4
Low Cost	3
Internet connectivity	1
Customizable	2
Environmentally Friendly	2

The needs chart will be an essential piece of information when finalizing a project design. If a product does not need a user's needs, then he or she will be unlikely to purchase the project. The problem is that often times the end user does not know what their needs are, or how they would rank those needs if they conflict. A car buyer for example may put a high emphasis on having an expensive car that is a status symbol, but also have a need for a low cost of ownership due to budgetary restraints. The pairwise comparison allows to compare numerous needs at once and see how the user values each one over each other. This can yield very different results than simply asking people to give importance to each individual need without consideration of the others. This can yield surprising results such as ease of use, which users rank as an important need, only being normalized to a five.

## Pairwise Comparison

	Ease of Use	Fast Commute	Safe	Private	Always Ready	Reliable	Low Cost	Internet Connectivity	Customizable	Environmentally Friendly	Total	Normalized	Original
Ease of Use		0	0	0	1	1	0	1	1	1	5	3.7	5
Fast Commute	1		1	0	1	1	0	1	1	1	7	5.0	5
Safe	1	0		1	1	1	0	1	1	1	7	5.0	5
Private	1	1	0		1	0	0	1	1	1	6	4.3	4
Always Ready	0	0	0	0		0	0	1	1	1	3	2.3	4
Reliable	0	0	0	1	1		1	1	1	1	6	4.3	4
Low Cost	1	1	1	1	1	0		1	0	1	7	5.0	3
Internet Connectivity	0	0	0	0	0	0	0		0	1	1	1.0	1
Customizable	0	0	0	0	0	0	1	1		1	3	2.3	2
Environmentally Friendly	0	0	0	0	0	0	0	0	0		0	-	2



## Ashley

- 34, Married with 3 children
- Nurse
- Columbus, OH



## Profile

- Commutes 45 minutes to OSU Medical Center
- Vice-President of the PTA
- Volunteers at Franklin County Animal Shelter

## Technology

- iPhone XR and iPad owner
- Drives Infiniti QX80
- Extensive PC usage at work
- Keeps family calendar electronically



## Hobbies

- Coaches Her Daughter's Soccer Team
- Rocking Climbing with her Husband