Never ever use 3D plots unless strictly necesarry

START
You want to draw a 3D plot

Do you really need it?

No → No, I just think it looks nice ⋯⋯▷ Forget it, 3D plots don't look nice

Yes → Yes

Then you don't need a 3D plot!

Do you have more than 2 dimensions in your data

No → No, actually not.

Yes → Yes

Then you should do multiple 2D plots

No

Do you really have three dimensions? Are you sure it's not two dimensions and multiple instances

Yes

Is it really important to show the relation between the three (or more) variables you want to plot? Or do you just want to save space?

Yes

You should consider mapping your 3rd variable to color, shape, area...

No

Yes

No, I'm not sure. I have not thought about it.

No, I don't care about the relationship

No

Yes

Yes

Are you sure there is no other way to represent this data, that does not require 3D?

Yes

Yes

Then you should separate the plots. One plot = one message.

No, It's not that clear, it takes a while to understand it.

No

Okay... Is your plot intuitive to understand, clear, concise and precise? Or do you have to spend 10 minutes trying to decode it?

See? This is why nobody likes 3D plots, they are very hard to understand. Please, go draw several 2D plots.

Yes

Yes