(please answer in complete sentences - do not answer with a simple yes or no)

**Use case 1: Explosion of Molecular Structures:**what does the three dimensional structure of the virus and its inner compartments actually look like and how do they relate to each other hierarchically?  
<https://www.youtube.com/watch?v=FRyS-tffwNY>

1) do you feel, the presented transition could answer the posed questions adequately? if not, how could it be improved?

The presentation makes it clear what structures reside within others. One possible improvement is to zoom in to smaller structures so that they are more visible. If the focus is on the virus and its compartments, there is too much focus on the blood plasma proteins, which really aren't part of the virus at all. These could be decreased or eliminated to give more focus on the virus itself.

1b) what do you like/dislike about the transition?

Overall, I like the clarity of this "fracturing" type of transition. I'm not sure, however, why there are molecules that do not move with the upper or lower sections, and float around in the middle.

2) what kind of additional information could you infer from the transition that you were not able to infer from the target representation (final image) alone?

Simply looking at the final image would make it far less clear what the relationships between the different compartments are.

3) what do you like/dislike about the final representation?

Overall, it looks nice (color, rendering style), but again, it would be nice if the smaller viral structures, which probably should be the focus of the animation, were bigger so that the detail could be more readily seen.

4) can you estimate how long it would take you to manually create such a rep/trans with the tools that you commonly use?

Assuming I had all of the structures/geometry for the model, it would probably take me a day or two to create this type of visualization and render it.

**Use case 2: Schematization of Molecular Structures:**what types of molecules are contained in which compartment of virus, what do they look like, and in which approximate quantity are they present?  
<https://www.youtube.com/watch?v=vvCqX3nnyOk>

1) do you feel, the presented transition could answer the posed questions adequately? if not, how could it be improved?

Again, there is a lot of screen space here that's dedicated to the blood plasma and less for the virus. Many of the proteins that are most presented most clearly are not part of the virus itself, but are outside of the virus, and many molecules that exist in the virus (such as integrase, envelope protein, other viral factors) are not shown at all or are not shown clearly. The membrane surrounding the virus is also not clearly shown.

1b) what do you like/dislike about the transition?

I like the painting style (Goodsell-like).

2) what kind of additional information could you infer from the transition that you were not able to infer from the target representation (final image) alone?

The starting point gives an indication of crowdedness and relative abundance of protein, while the final image does not.

3) what do you like/dislike about the final representation?

The final representation only shows a small subset of viral proteins.

4) can you estimate how long it would take you to manually create such a rep/trans with the tools that you commonly use?

If I already had all of the geometry, I would guess that this type of visualization would take up to a week to create.

**Use case 3: Representation of Quantitative Relations:**how large is the volume of each compartment and the molecules contained within in respect to each other?  
<https://www.youtube.com/watch?v=oo4n78bY8ZE>

1) do you feel, the presented transition could answer the posed questions adequately? if not, how could it be improved?

I thought this animation was very unclear. It could be improved by labeling (why are there so many blue-ish columns, orange-ish columns, etc, and what protein does each column represent?).

1b) what do you like/dislike about the transition?

It's not clear to me what purpose this animation would serve. It might be more useful to think about proteins in quantity rather than volume (how many of each protein is there?)

2) what kind of additional information could you infer from the transition that you were not able to infer from the target representation (final image) alone?

Without labels, the final representation is almost impossible to interpret on its own. With the transition, it’s a bit more clear what the representation is meant to show, but it is still very difficult to interpret.

3) what do you like/dislike about the final representation?

4) can you estimate how long it would take you to manually create such a rep/trans with the tools that you commonly use?

A week or less, provided I already had the geometry.