Comparison of the two available solutions

	Zoom + Flowex Software	Colab Notebook
Solution Description	6 students attend a zoom meeting started with the TA, one of the students controls the computer which has the Flowex software running and conducts the analysis while others watch, TA is attending the zoom meeting and can answer any questions that students may have	The link to the colab notebook is sent to all students and they can go through it and do the analysis on their own time. Clear instructions on how to run the program are integrated into the notebook. If they have additional questions the TA is available at specific office hours.
Pedagogical Value	Limited, given the large number of students attending the meeting most of the students are going to passively watch the meeting and just write a report	Interactive and expansive learning, the students will run the analysis individually and investigate the effects of changing each setting, the whole code base is also available to them and the enthusiastic students have the option to look into the process as deep as they want. They can Learn Python programming, PIV and CFD analysis.
Scheduling	Problematic busy schedule, Only three licenses are available and students should be organized into groups to do the analysis. This leads to problems as some of the students have to do the lab work in the beginning of the semester when they know nothing about fluid dynamics. They usually cannot complete the lab work as a consequence.	No scheduling required, There is no limits on the number of students doing the analysis at the same time. Students can do the analysis individually whenever they have time.
Licensing	Heavily licensed, The flowex software is licencsed and requires a usb key for installation so it cannot be installed on any computer without physical access. We currently have three usb keys available.	Free, Completely free without any software installation required
Dependencies	Physical system, depends on a physical system that should be maintained. According to the development of the current COVID-19 pandemic, this can become a problem.	No dependency, the code runs on the cloud and it's accessible by anyone at any time
User Interface	Graphic User Interface, the students are used to work with graphic applications on their computers. The software however has some short comings and limitations that we have to live with.	Interactive online notebook, students read the online notebook, specify settings for the analysis, run and see the results. The user experience can be improved as we work on the notebook.
Scalability	Not scalable, At max three instances can run at any given time no matter the number of students.	Completely scalable, Runs on the cloud using free google services
TA time	2 full time TAs, requires at least two TAs to conduct lab sessions (possibly more if we have more students taking the course)	1 TA available on nffice hours, requires some technical software development (40% complete) from the current TA but once complete, only some limited office hours for possible questions should suffice.
Accuracy of the results	Blackbox, the accuracy is not known but it's tested and it is sufficient for a Laboratory course	Completely transparent, the code running behind the Notebook is an improved version of OpenPIV for the PIV analysis and pure OpenFOAM implementation for CFD analysis. The accuracy should be verified, but it should be as accurate as any other software. It is completely adequate for a Laboratory course.