Clinical Trial Mapper Proposal

Team 038 - The Real Yellow Jackets

1.

Heilmeier Questions (Expected Innovations)

Introduction (Q1 & Q2)

- *What are we trying to do?*

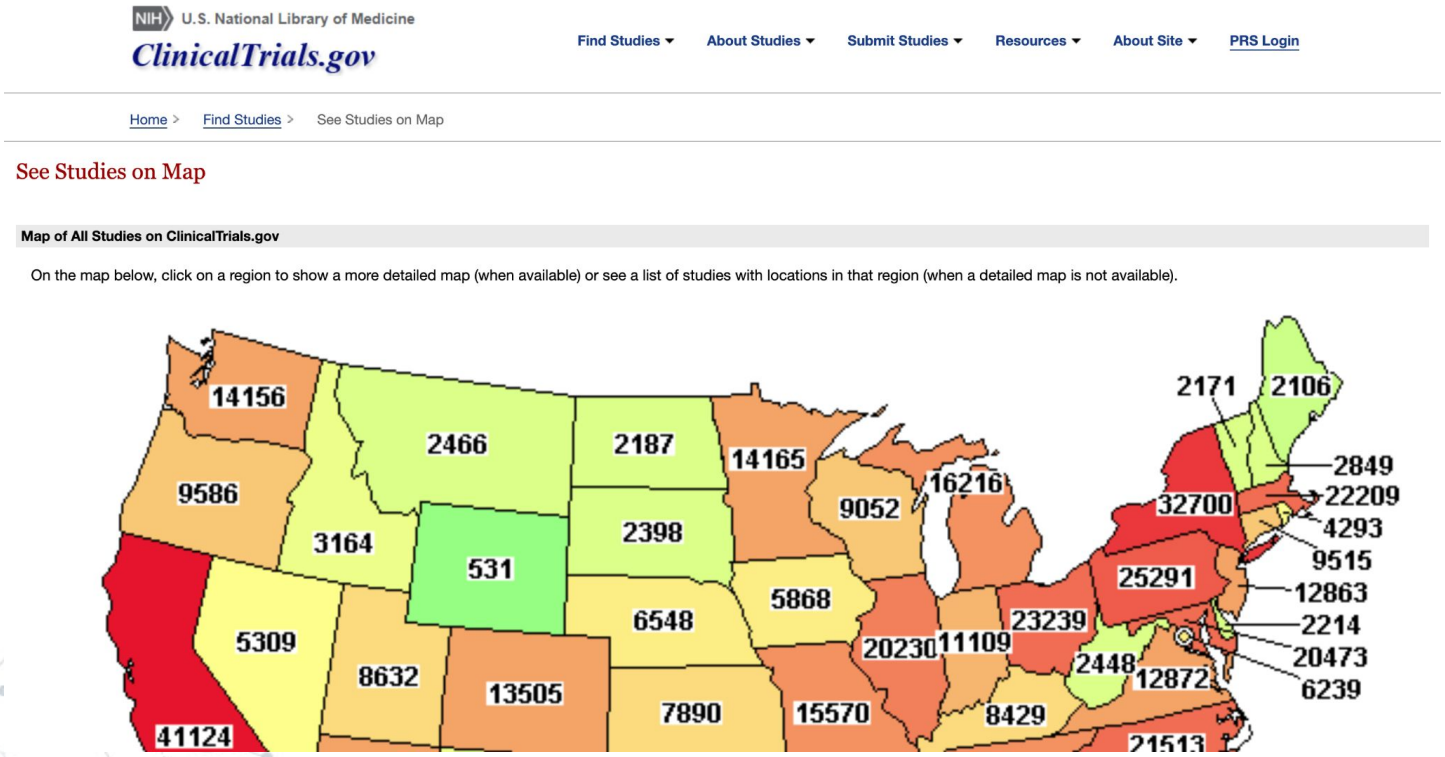
  Develop an innovative and user-friendly visualization tool for the clinicaltrials.gov website

- Increasing volume and complexity of data
- Relationship between clinical trials not emphasized
- Currently visuals on the site are static

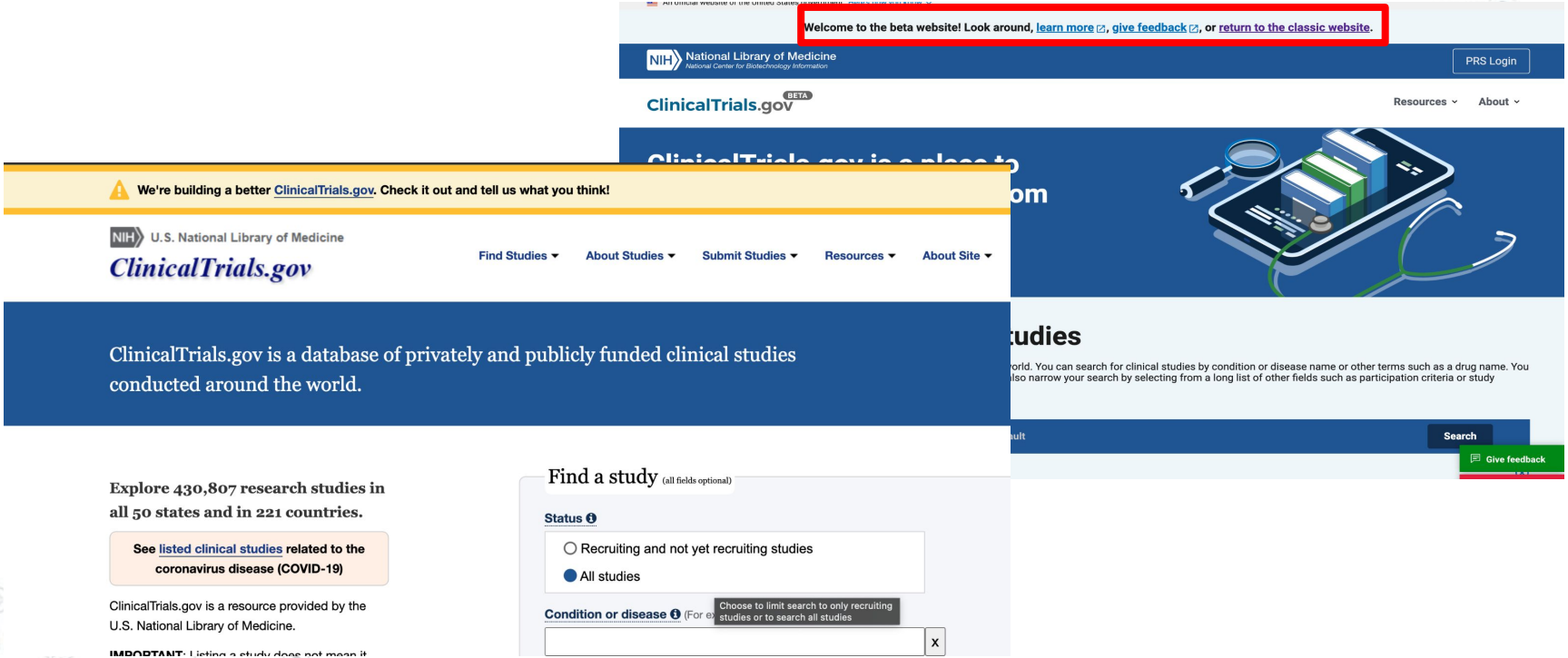
What's new in our approach? (Q3)

- Visualization of interconnecting map of clinical trials

Limited visual interaction



ClinicalTrials.gov recognizes the need to improve



Beneficiary profile and the difference it will make (Q4 / Q5)

- Health care professionals and Researchers
- Patients involved in trials and Interested public
- ClinicalTrials.org

Risk Involved (Q6)

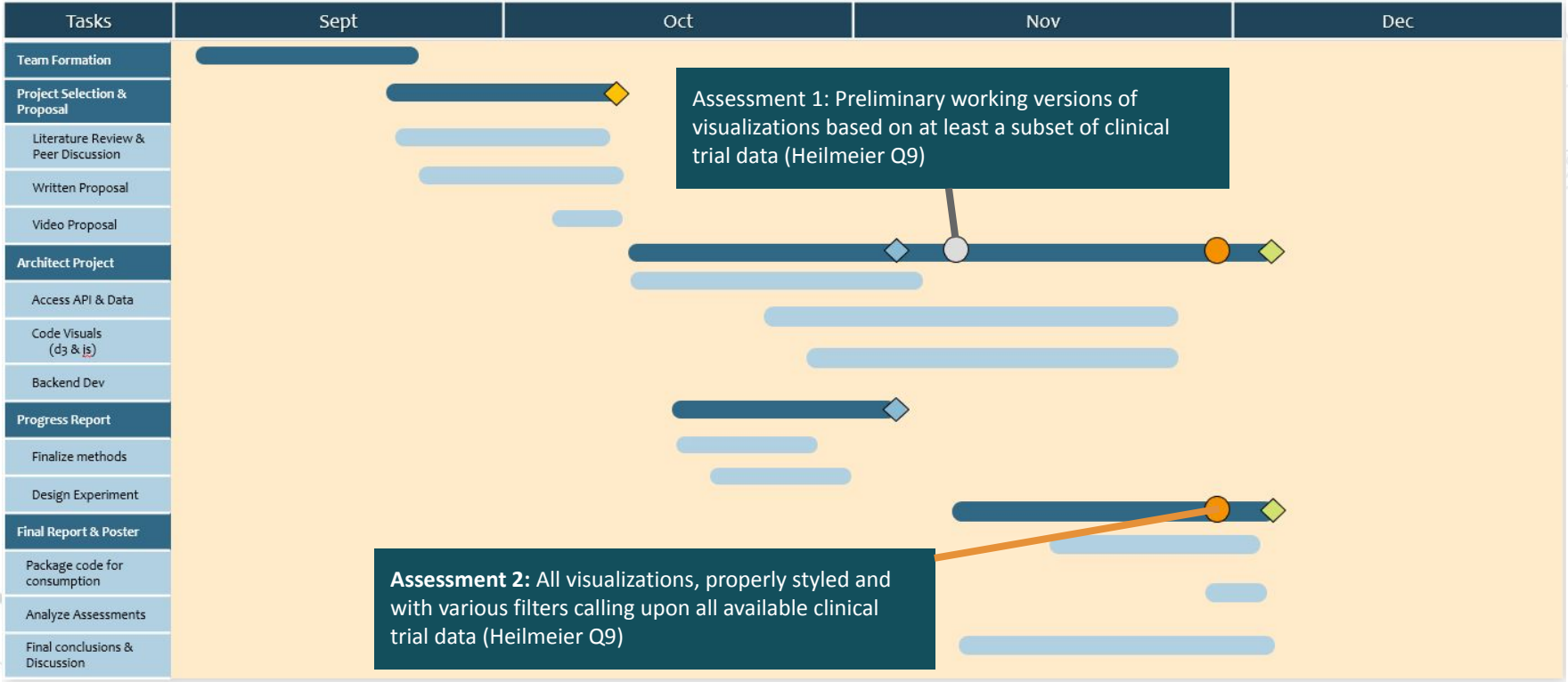
- Increasing complexity and size of data

2.
Plan of Activities

All team members contributed a similar amount.

Cost: Hosting fee = Max $100

Project Schedule and Cost (Q7 & Q8 & Q9)



3.

Brief Literature Survey

- Visuals highlighting changes in trials over time. (2&3)

2.Denworth, L. (2019, October 1). *The significant problem of P values*. Scientific American. Retrieved October 4, 2022, from https://www.scientificamerican.com/article/the-significant-problem-of-p-values/

3.Golchi, S., Willard, J. J., Pullenayegum, E., Bassani, D. G., Pell, L. G., Thorlund, K., & Roth, D. E. (2022). A bayesian adaptive design for clinical trials of rare efficacy outcomes with multiple definitions. *Clinical Trials*, 174077452211183. https://doi.org/10.1177/17407745221118366

- Inclusion of aggregate functions, filtering capabilities, exporting the results in a PDF format (6)

Graves, A., & Hendler, J. (2013). Visualization tools for open government data. *Proceedings of the 14th Annual International Conference on Digital Government Research*. https://doi.org/10.1145/2479724.2479746

- Delivering and relating visuals of past clinical trial results to currently employed program (15)

15. Llewellyn-Thomas, H. A., Thiel, E. C., Sem, F. W. C., & Harrison Woermke, D. E. (1995). Presenting clinical trial information: A comparison of methods. *Patient Education and Counseling*, *25*(2), 97–107. https://doi.org/10.1016/0738-3991(94)00705-q

- Improve the network representation by combining multiple methods.(19)

19. McGee, F., Choniem, M., Melancon, G., Otjacques, B., Pinaud, B. (2019). The State of the Art in Multilayer Network Visualization. *Computer Graphics Forum,* https://doi.org/10.1111/cgf.13610

- Tool to navigate through the historic as well as the ongoing trials (5)

5.Tong, M., Hsu, W., & Taira, R. (2017, February 10). Evaluating a novel summary visualization for clinical trial reports: A usability study. Retrieved October 10, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5333215/

Thanks!

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