

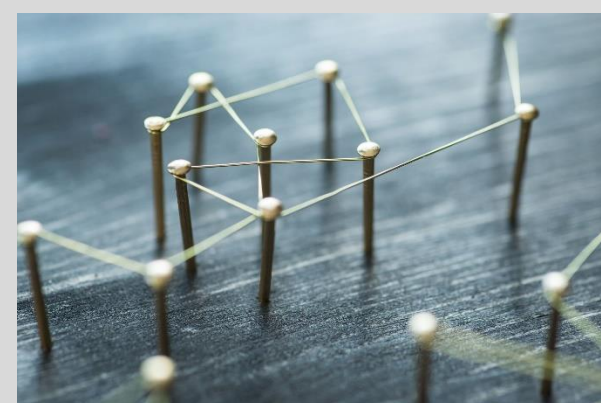
## 1. CORE RESEARCH GOALS:

Developing a visual indicator for the MFRI Team

- Displaying military demographic information in an easily digestible format.
- Providing interactivity with demographic information to allow easy access to important data and resources.
- Allow organizations seeking demographic information to specify specific parts of information they want to display.
- Limit view to more local levels to allow for more useful access to organizations.

## 2. OBJECTIVE:

Create an indicator that fulfills all the core research goals of our corporate partner while also delivering on creating a smooth aesthetic that will make information easy to attain and be appealing for organizations to use.



## 4: RESULTS

Our final indicator achieved our objective, that is, it created a demographic indicator that integrated all the individual indicators that displayed smaller amounts of information into a single indicator that could be changed on a wider scale.

### Achievements:

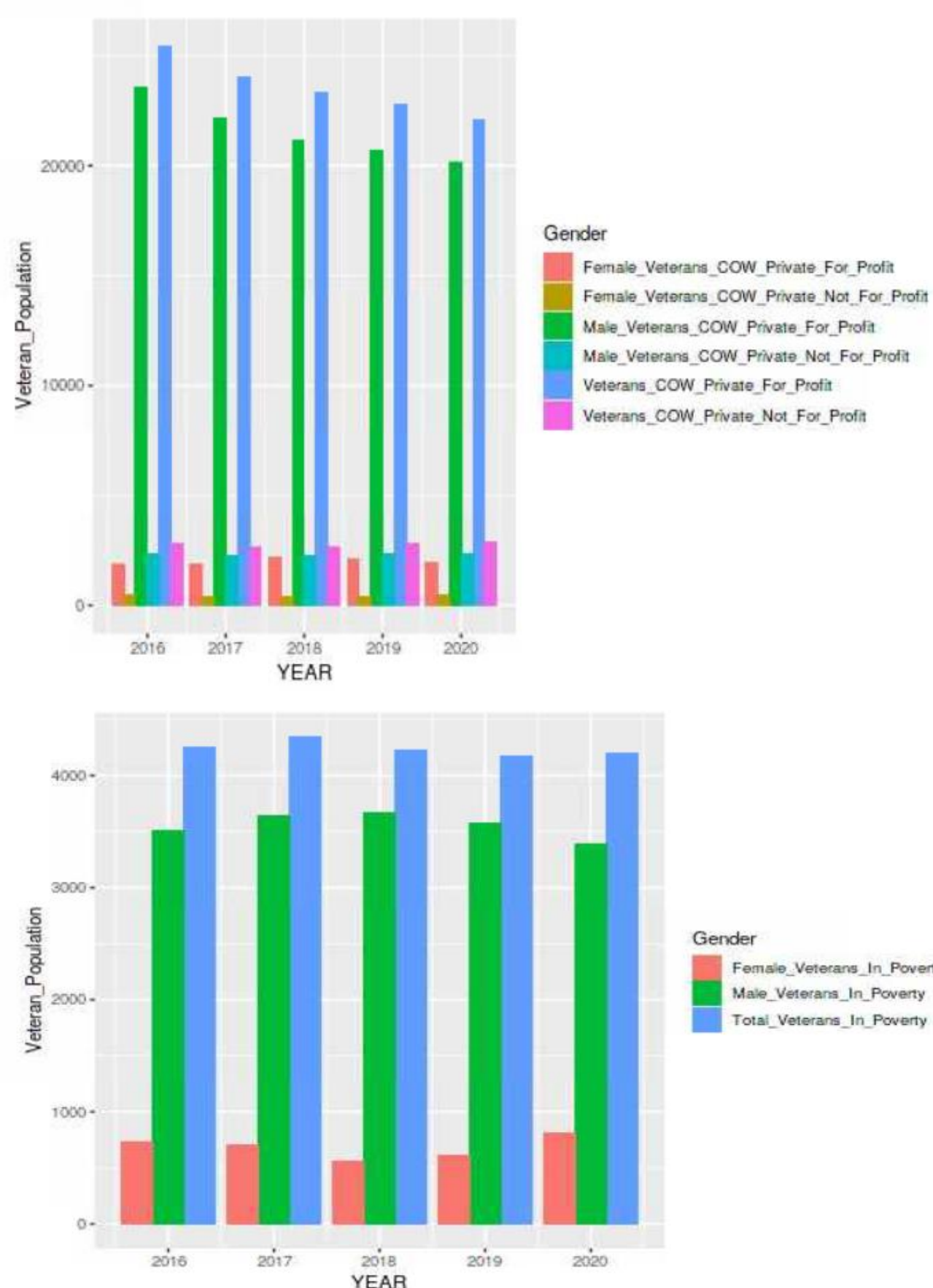
- An indicator that measures employment and is broken down by state, gender, and military status; allowing MFRI to display information about employment in novel and informative ways.
- A poverty indicator that shows the same types of breakdowns but for poverty statistics, allowing MFRI to display important poverty metrics.
- Various other similar displays that allow for the same types of informative breakdowns.

### Lessons Learned:

- More collaborative efforts accelerate progress
- Work with each team members strengths to utilize their unique skills in an effective manner..
- Broad brainstorming with the whole team is an effective strategy to solve complex problems.



Figure 3: Approximate display of the final indicator.



Figures 1 and 2: Integrated Indicators present in final product

## 3. METHODS:

To achieve our objective, we employed several methods and strategies to create our final product:

- We worked on an individual basis to create the types of indicators and displays that would become the core features of the final indicator.
- We used several R shiny based libraries and coding methods to shape these individual indicators into valid displays that could be used on an interactive basis with the user.
- We created a broad display as a team that integrated all the individual displays into one common indicator.
- We created broad selective filters that would limit the data that was displayed on each individual indicator.
- We harmonized the indicators so that they worked with the selective criteria that users could select.

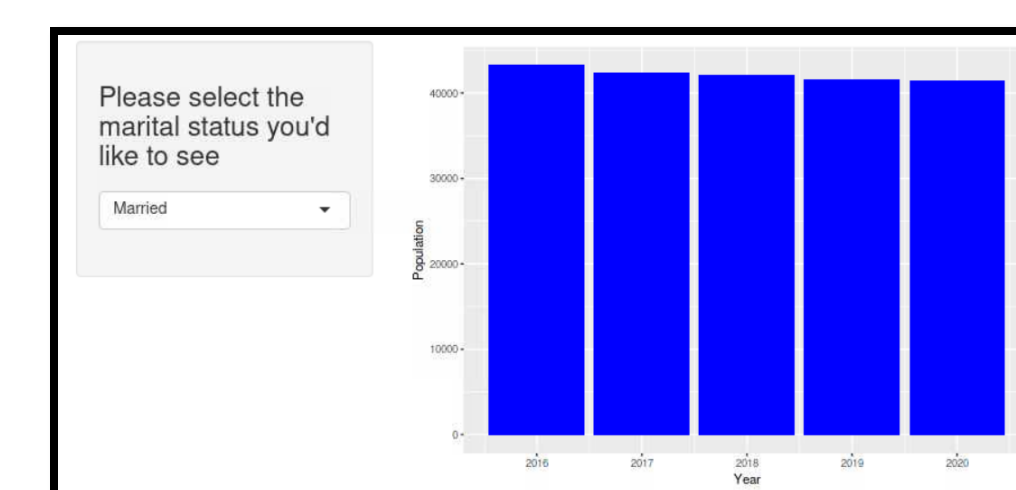


Figure 4: More Indicators

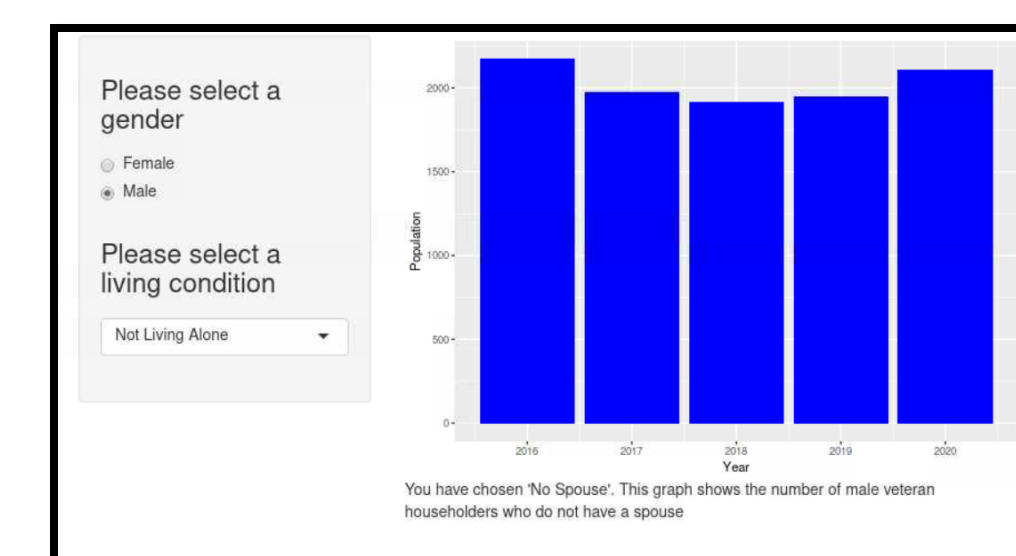


Figure 5: Indicators

## CONCLUSIONS

We were able to achieve our final goal and create a fully integrated display that was able to fulfill our objective requirements.

While there were initial challenges working with the formats of raw data that would need to be filtered, issues regarding data formatting were overcome with the integration and harmonization of the individual indicators.

### Future Goals:

Improvement could occur in reaching aesthetic goals for the indicator but more work on R shiny implementation is required to perfect aesthetic requirements.

### Acknowledgments:

The MFRI Team was extremely helpful in getting the necessary resources and technical assistance to achieve our core research goals. We want to thank the MFRI Team for the incredible support they offered through the development process.