

Link to project website: <https://mraottth.github.io/>

Project Proposal (10/17)

Week 7 - Project Proposal

Title:

Talibanistan - Afghanistan under the Taliban

Abstract

It has been just over 1 year since the withdrawal of American troops from Afghanistan. In the time since, the Taliban's rapid ascension has caused a humanitarian crisis affecting millions of Afghans. In our project, we will seek to tell the story from the leadup to the Taliban takeover through the first year after American withdrawal. We will use news sources, mobility data, and open datasets from NGOs and IGOs to analyze the evolution of the conflict, the humanitarian disaster, and the Taliban's consolidation of power.

Potential Data Sources:

News scraper

Economic activity

Mobility

Armed conflict datasets

- https://data.humdata.org/dataset/ucdp-data-for-afghanistan?force_layout=desktop

Refugee Data

- Repatriation
 - Yearly datasets from UNHCR
 - <https://data.humdata.org/organization/unhcr-afghanistan>

Datasets from NGOs and IGOs on humanitarian crisis (e.g. internally displaced persons, food security, etc)

Team Agreement & Project Plan (10/24)

Week 8 - Team Agreement & Detailed Project Plan

Basic Info:

- The project title - Talibanistan - Afghanistan under the Taliban
- Names: Tadhg Looram, Matt Roth
- e-mail addresses: tadhglooram@g.harvard.edu, matt_roth@hks.harvard.edu
- team name: LooRoth

Background and Motivation:

- It has been just over 1 year since the withdrawal of American troops from Afghanistan. In the time since, the Taliban's rapid ascension has caused a humanitarian crisis affecting millions of Afghans. In our project, we will seek to tell the story from the leadup to the Taliban takeover through the first year after American withdrawal. We will use news sources, mobility data, and open datasets from NGOs and IGOs to analyze the evolution of the conflict, the humanitarian disaster, and the Taliban's consolidation of power.
- The motivation behind the project stems from a past personal project of mapping the taliban's takeover of afghanistan. Scrapping news articles of a local news agency named Tolo, we were able to create a simple map showing which provinces fell to the Taliban . We plan on expanding this visual and including new graphs and chart that tells the story of Afghanistan prior and post the taliban takeover of 2021.

Related Work:

- Link to original project:
<https://public.tableau.com/app/profile/tadhglooram/viz/TalibanTakeOverofAfghanistan-CaseStudyusingToloNewsReorting/TalibanTakeOver>
- Original motivation:
<https://www.longwarjournal.org/mapping-taliban-control-in-afghanistan>

The FDD Long War journal is an american non-profit news website that reports on the war on terror. Using their own proprietary methodology the FDDLWJ has tracked the Taliban's attempts to gain control of territory since NATO ended its military mission in 2014.

Data Sources:

Theme	Sub-theme	Description / Use	Source	Link
Humanitarian	Funding	Funding data for humanitarian	UN OCHA	LINK

		organizations can reveal 1) trends in the resources being dedicated to the crisis, and 2) whether those resources are sufficient given humanitarian needs at the time		
	Ground presence	Knowing which organizations are operating in which regions over time will tell us about shifts in humanitarian aid	3W	LINK
Refugee Crisis	Internally Displaced Persons	Combined with other refugee datasets, we can get a picture of the influx and efflux of refugees throughout the crisis	UN IOM	LINK
	Voluntary Repatriation	See above	UN HCR	LINK
	Refugees by country	See above		LINK
Socioeconomic	Inflation	Price instability can exacerbate a tenuous situation for millions of Afghans and serve as a source of social instability	FAO	LINK
	Mobility	Phone mobility data can serve as a proxy for economic activity, and in the case of Afghanistan, may also reveal trends about migration and/or shifts from normal movement before/after Taliban control was asserted	Google	LINK
	Social Development Indicators	Different stages of the war and the Taliban takeover are likely to be associated with shifts in quality of life and social development	World Bank	LINK
Taliban Administrative	Taliban Revenue Streams	We will track Taliban revenue sources and look for trends in legitimization/delegitimization (e.g. how are they funding their government given challenges getting	UN ODC	Link

		international aid, taxing Afghanis, etc?)		
	Taliban Budget	Combined with the above data on revenue, we will look at where Taliban money is coming from and what it is being spent on		
	Taliban Org	BBC article laying out the taliban's organizational structure and leadership	BBC	LINK
	Sanctions Imposed on Taliban			
Armed conflict	Incidents	This dataset from the UCDP's covers individual events of organized violence (phenomena of lethal violence occurring at a given time and place). These events are sufficiently fine-grained to be geo-coded down to the level of individual villages, with temporal durations disaggregated to single, individual days.	UN OCHA	LINK
	Taliban takeover of provinces	Local news media company that reported throughout the taliban take over of Afghanistan following the departure of the US troops. Their articles have detailed reports of which cities, provinces succumbed to the Taliban with timestamps.	Tolo News	LINK

Data Cleanup:

Data will be cleaned in Python and outputted to our GitHub repository where it will be picked up by our JS scripts. Most of the datasets in the above table require minimal cleaning, but we expect to need to (1) join like datasets from different years, (2) join different data sets together (e.g. geographic data with administrative data), and (3) clean and reformat data to reduce wrangling in Javascript.

Signatures: TL, MR

Date: 10/24/2022

Week 8 - Team Agreement & Detailed Project Plan

Project Map (10/31)

Week 9- Map

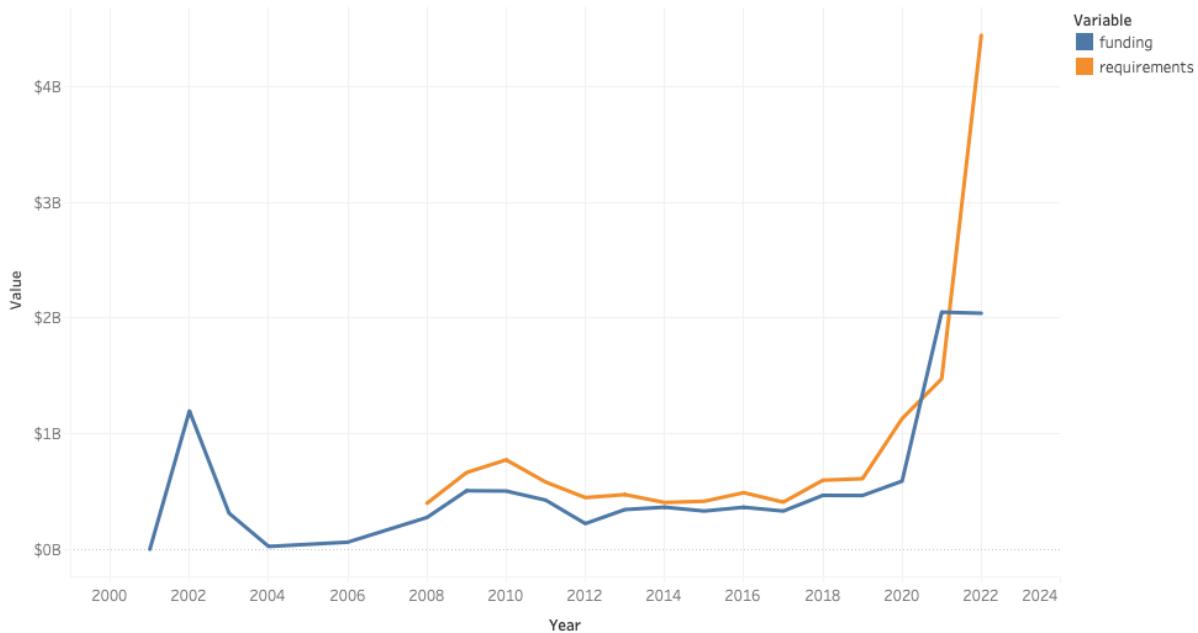
1. Who is your audience? Come up with **at least three** options and pick one target audience.
 - NGOs and organizations who could make a direct impact
 - Our project will aim to build a narrative around the humanitarian crisis in Afghanistan, using visualizations and storytelling to highlight important trends, insight, and context. This information could be useful to people at aid organizations who have an interest in making a direct impact (e.g. by directing aid to the areas of greatest need).
 - Information presented to this audience should be detailed and actionable. We can assume a high degree of familiarity with the general background and context. We can also probably assume a high visualization literacy - people who work for aid organizations likely make frequent use data visualizations. Given these facts, we will need to present data at a high level of detail to this audience. Our visualizations will need to tell them something they don't already know which can be used to make a direct impact
 - USG policymakers (re)evaluating foreign policies
 - Following the takeover, new stringent economic sanctions were levied against the country and its leadership. See US Treasury [website](#) for detailed sanction programs. A better understanding of these developments in the country can help better understand the motivations behind such sanctions.
 - Some difficult and divisive policies followed the rise of the Taliban; one of them concerns the fate of Afghanistan's \$7Bil of frozen foreign reserves. About half of the reserves currently sit in a trust fund in Switzerland, intended to support the Afghan people. The other half is subject to ongoing lawsuits filed by victims of the 9/11 attacks and their relatives. [source](#)
 - General public lacking detailed understanding of the crisis
 - People in this category may or may not have background knowledge about the situation in Afghanistan and the aftermath of the US withdrawal in 2021. Most, however, probably lack detailed and up-to-the-moment information about the crisis. They may have an interest in learning more and/or finding out how they can help

- This audience also has a wide range of visualization literacy. We will need to present information in a way that takes into account the spectrum of familiarity with the topic and varying levels of visualization literacy.
2. What questions about your data will be interesting for your audience? Come up with a list of interesting questions that your audience may have about your data. The more, the better, but your team should come up with **at least ten questions**.
 1. How quickly did the Taliban seize Afghanistan following the withdrawal of US troops?
 2. Any noticeable patterns in the Taliban's advances and take over of local provinces?
 - a. Does this correlate with violence, need for humanitarian aid, refugee efflux?
 3. How much funding is needed for different types of humanitarian aid? How much funding has been secured? Where is the difference largest?
 4. How has the humanitarian response (in terms of on-the-ground presence) grown relative to the scale of the crisis?
 - a. How have economic sanctions worsen the crisis?
 5. What is the composition of the Taliban leadership ?
 6. How has the Taliban adapted to the task of governing given their lack of experience, resources, and support?
 7. How has the net movement of refugees changed over time? Where are people leaving from and going to? Who is repatriating?
 8. How has public opinion about the war, American and Afghan leadership, and the humanitarian crisis changed over time among Afghans and Americans? Do viewers have a solid intuition about these trends?
 9. How has day to day mobility changed since the Taliban's takeover? Using google mobility data we can get a sense for daily movements in the kabul.
 3. What data do you have? Download the data you picked from the website linked in the PDF that describes the data (available on Canvas, week 2). Take a look at it in Excel or Google spreadsheet and give a brief description of each attribute and its data type (categorical, ordinal, or quantitative) in your process book. It's OK if you are not sure about the data type for some attributes - you can simply describe them (e.g., geographic location).
 - a. Taliban take over of Afghanistan - reported by tolo news
 - i. We scrapped news article from tolo news a local news agency in afghanistan that reported districts taken over by the taliban

- ii. The data is in a CSV file where the rows are afghanistan districts and the rows are dates (late may to august). The values are binary a 1 indicating under the taliban control.
- b. Taliban org chart:
 - i. Sourced from the BBC it shows the current taliban administration and it's structure.
- c. [Humanitarian Aid Funding and Requirements](#)
 - i. countryCode (Categorical)
 - ii. id (Categorical)
 - iii. name (Categorical)
 - iv. code (Categorical)
 - v. typeId (Categorical)
 - vi. typeName (Categorical)
 - vii. startDate (Ordinal)
 - viii. endDate (Ordinal)
 - ix. year (Categorical)
 - x. requirements (Quantitative)
 - xi. funding (Quantitative)
 - xii. percentFunded (Quantitative)

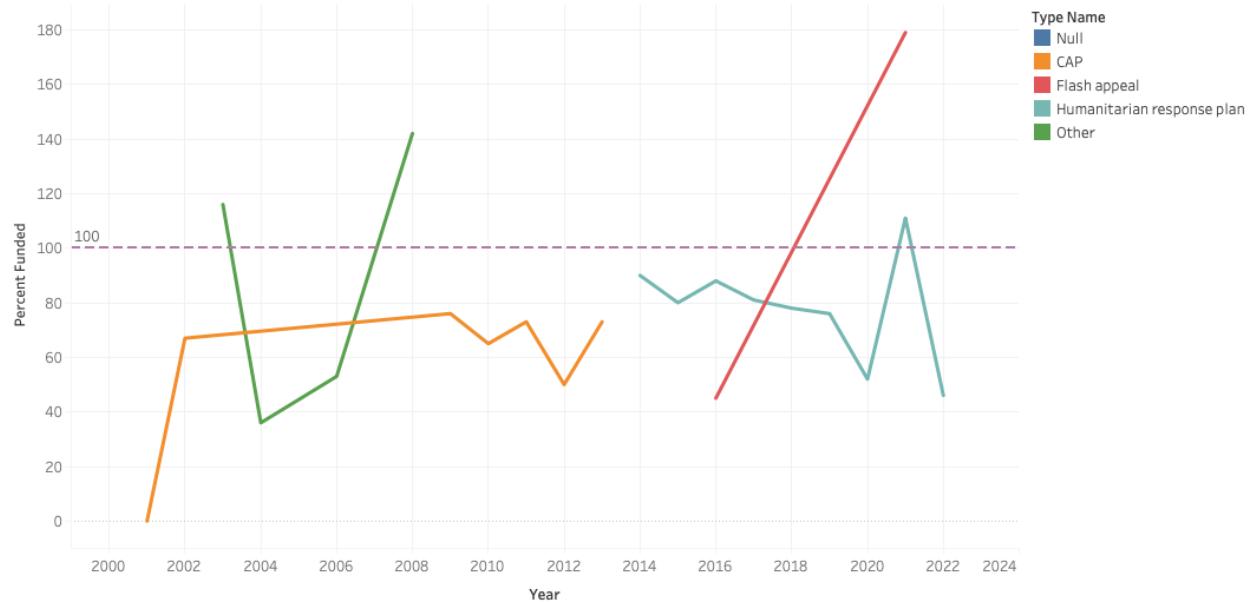
Matt 1

Aid requirements skyrocketed after U.S. withdrawal, but funding plateaued



Matt 2

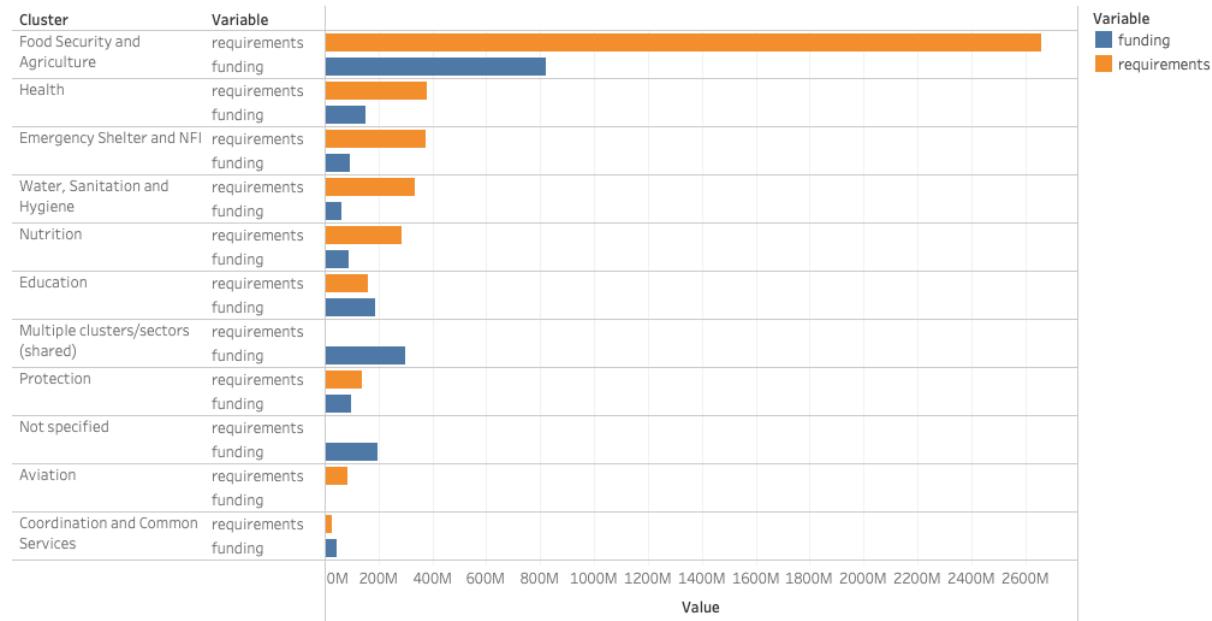
Humanitarian response funding has fallen below 50% of funding requirements



The trend of sum of Percent Funded for Year. Color shows details about Type Name.

Matt 3

Critical categories are facing shortages in 2022

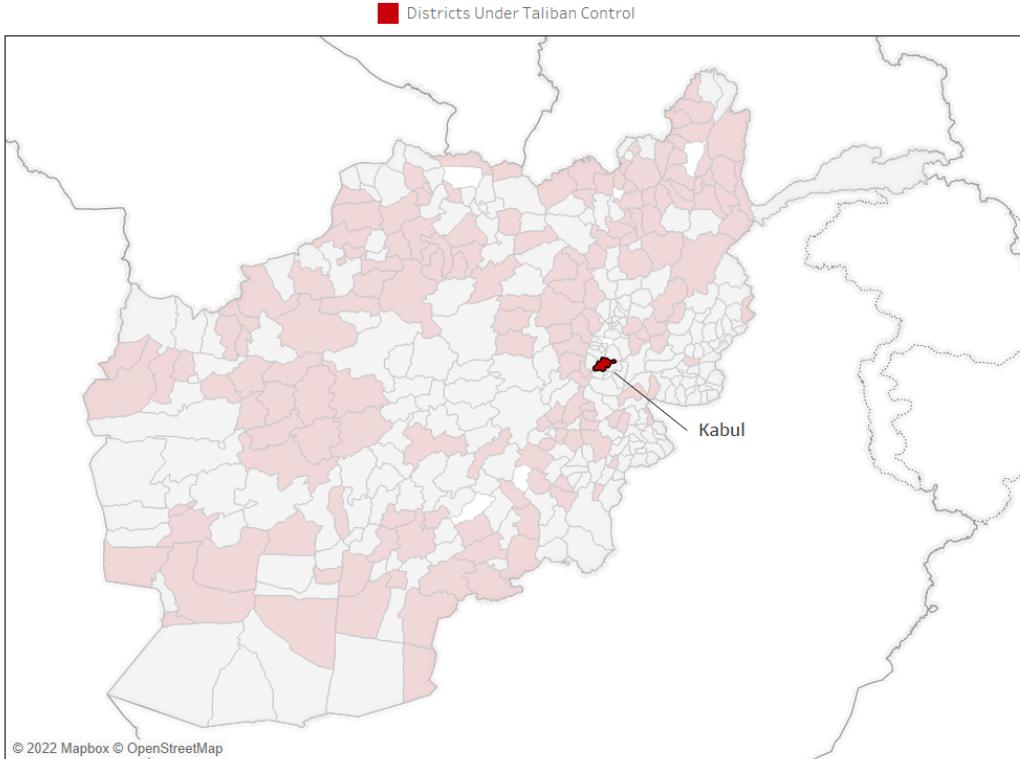


Sum of Value for each Variable broken down by Cluster. Color shows details about Variable. The data is filtered on Year, which ranges from 2022 to 2022.

The questions answered in the above visualizations differ slightly from the questions we came up with as a team due to the nature of the dataset. In some areas, such as the geographic regions most in need of aid, the data did not get as granular as we had hoped. In other areas, there was missing data that prevented us from drawing out insights about trends over time.

Tadhg 1

Taliban Take Over of Afghanistan - Case Study using ToloNews Reporting



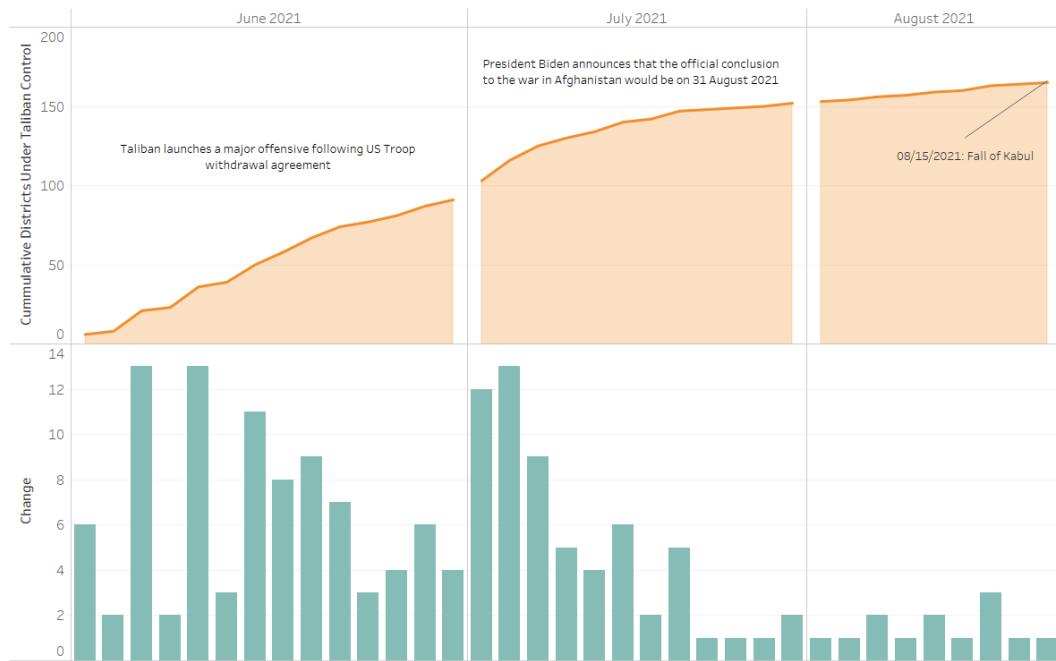
This Visualization shows the end state of Afghanistan as of August 16th 2022 when they took over the capital, kabul. This can turned into a story showing the gradual take over from may to august. These districts were important economic centers and trade routes and were gradually taken over by the taliban in june and july.

One pattern that emerged is the frontiers and major border crossing captured by the taliban, shown by the red districts bordering Pakistan, tajikistan, uzbekistan and turkmenistan.

A small caveat with the visual; we started collecting data in may so a lot of the districts that are grey were already under taliban control. In addition this is information from one news agency which did not capture every single district. The assumption is that as of august 15th all of afghanistan is under the control of the taliban.

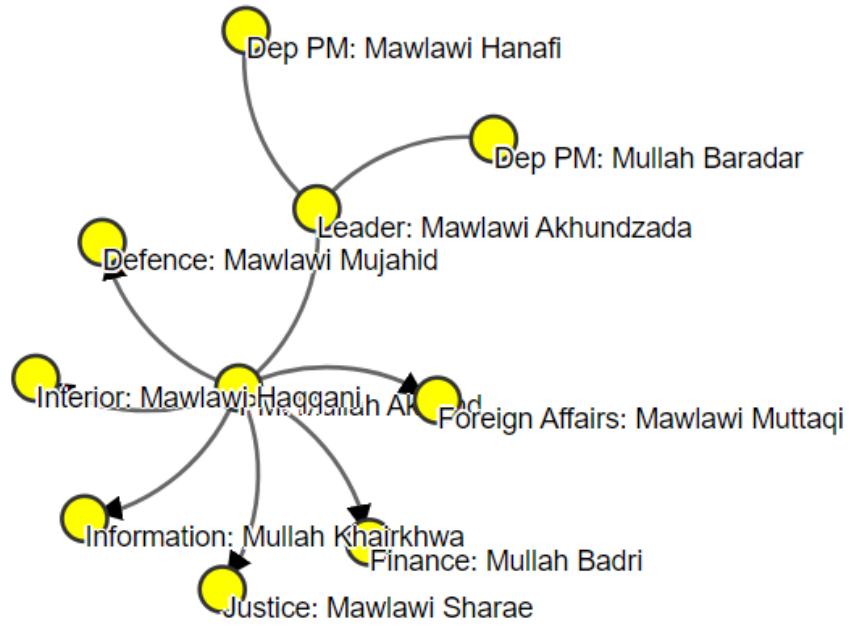
Tadhg 2

Taliban's gradual control of Afghanistan's districts following the US troop withdrawal agreement



Looking at the rate of which the taliban took over the country, it was concentrated in june and july. This coincides with several geopolitical developments we will discuss in more details. The key event being the US and Taliban reaching an agreement in April that the US will withdraw its troops september.

Tadhg 3



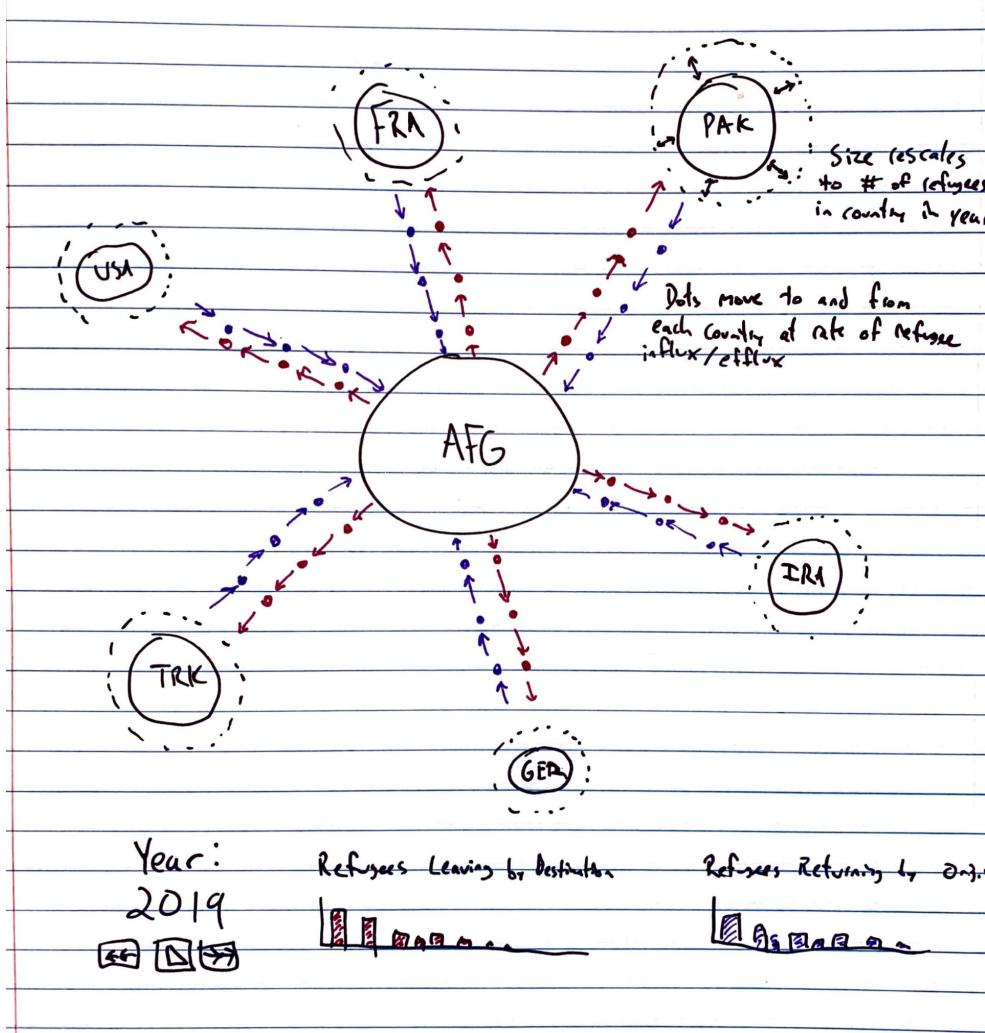
This org chart shows the current taliban leader, an idea would be to create network graph showing the key groups involved in the collapse of the country and their relationships.

Source: <https://www.bbc.com/news/world-asia-58235639>

Data, Sketches, Storyboard, Decide (11/7)

Sketch Step

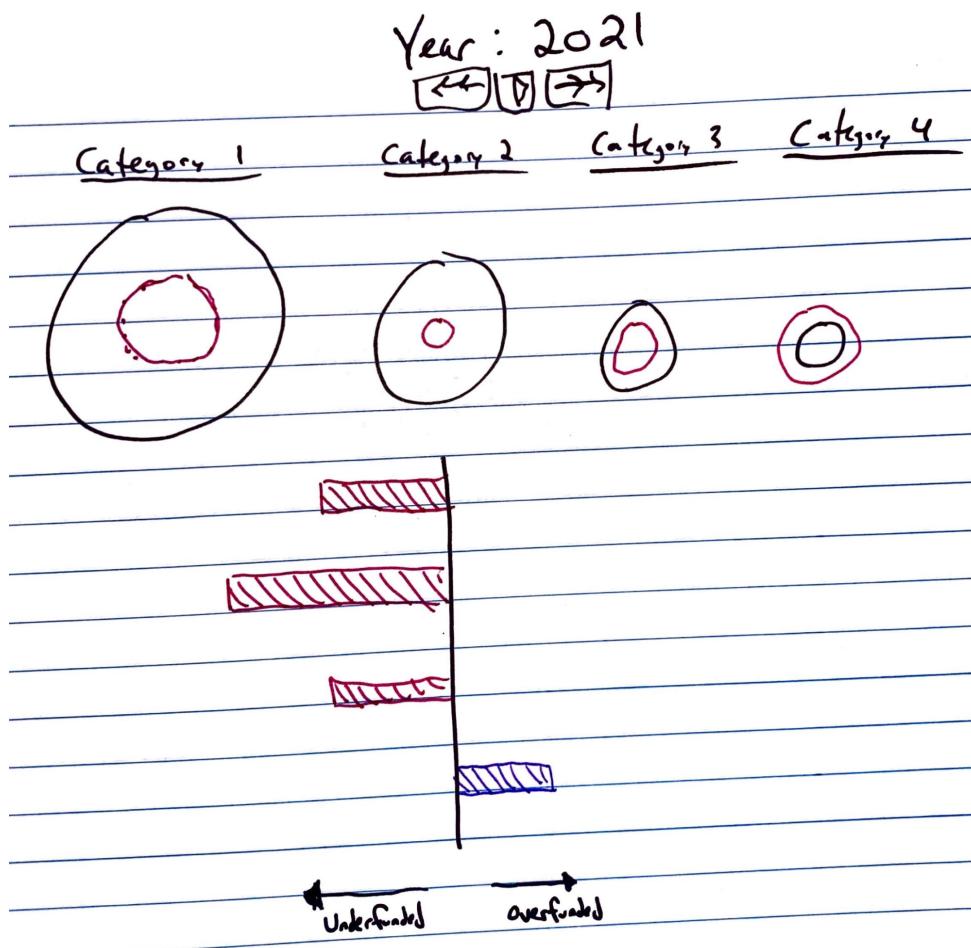
Matt 1 (Refugee influx & efflux)



Question(s):

- How has the flow of refugees into and out of the country changed after the U.S. exit?
- Which countries are taking in the most refugees and asylum seekers? How has that changed over time?

Matt 2 & 3 (Humanitarian funding vs requirements by category)



Question(s):

- How have humanitarian funding needs changed since the US exit?
- Which needs are most under/over funded?

Matt 4 (Humanitarian aid by country over time)

Year: 2020

↔ ▷ ➔

Donor Country

Aid Category

Country 1

Category 1

Country 2

Category 2

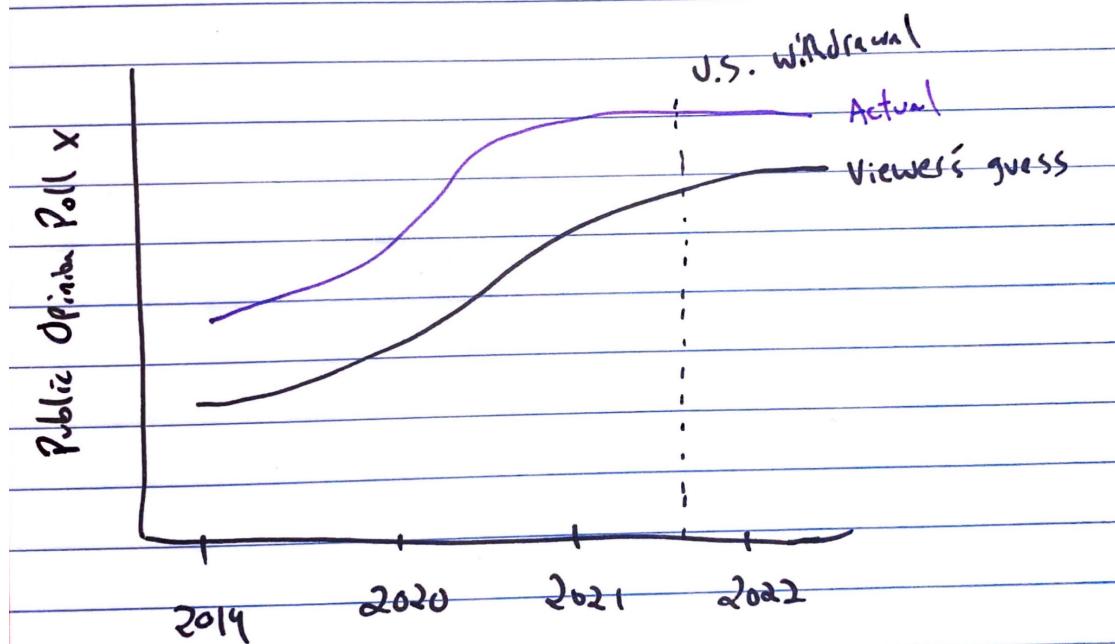
Country 3

Category ...

Question(s):

- Where is foreign humanitarian aid coming from and what is it being used for?
- Which countries' giving is responsive to on-the-ground needs after the US withdrawal?

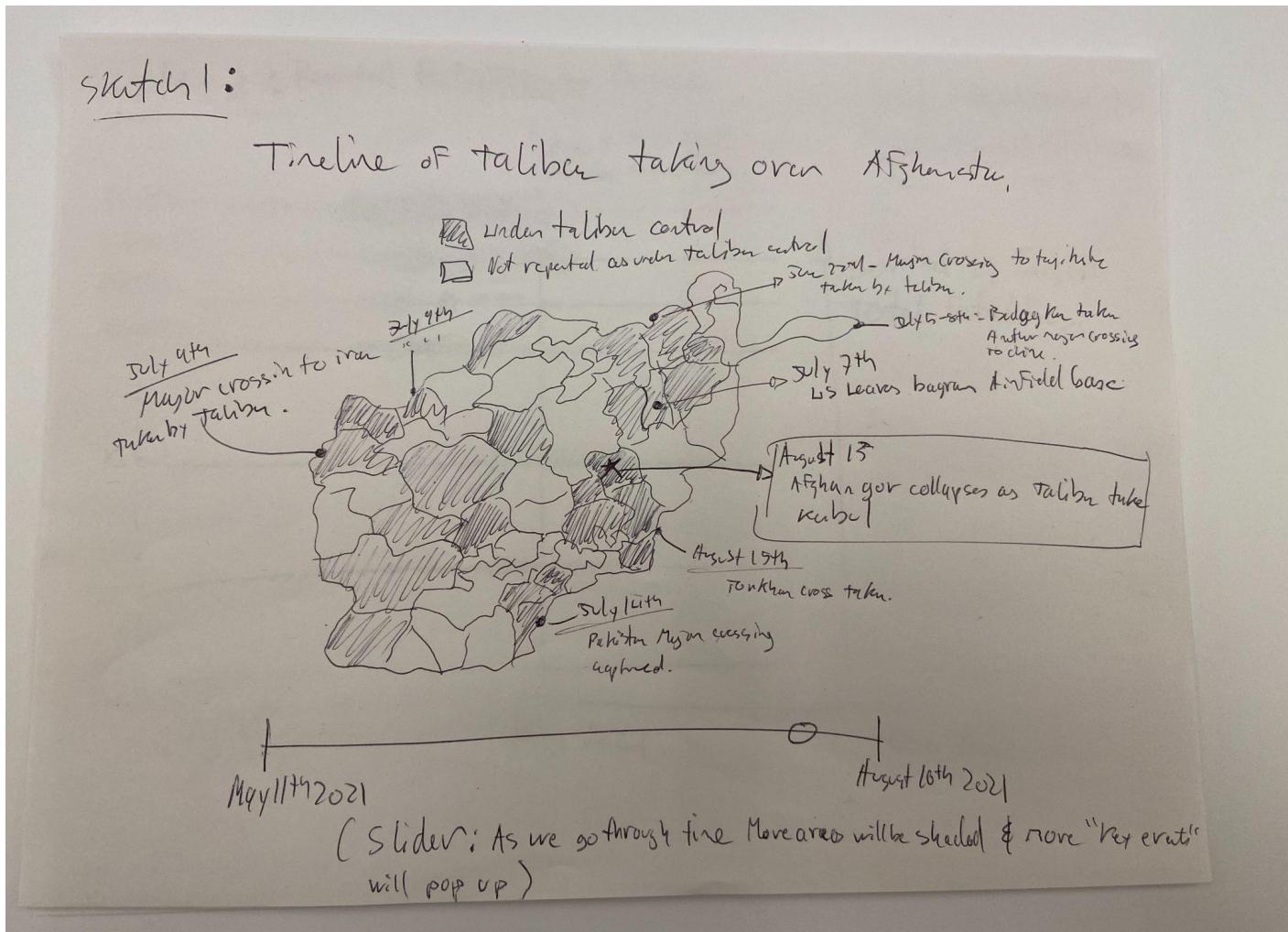
Matt 5 (How well does the viewer understand Afghan public opinion?)



Question(s):

- Does our audience have an accurate understanding of how recent developments have affected Afghans' wellbeing? (they will draw their guess for a trend from public opinion polling and then the real trend will be revealed to them)

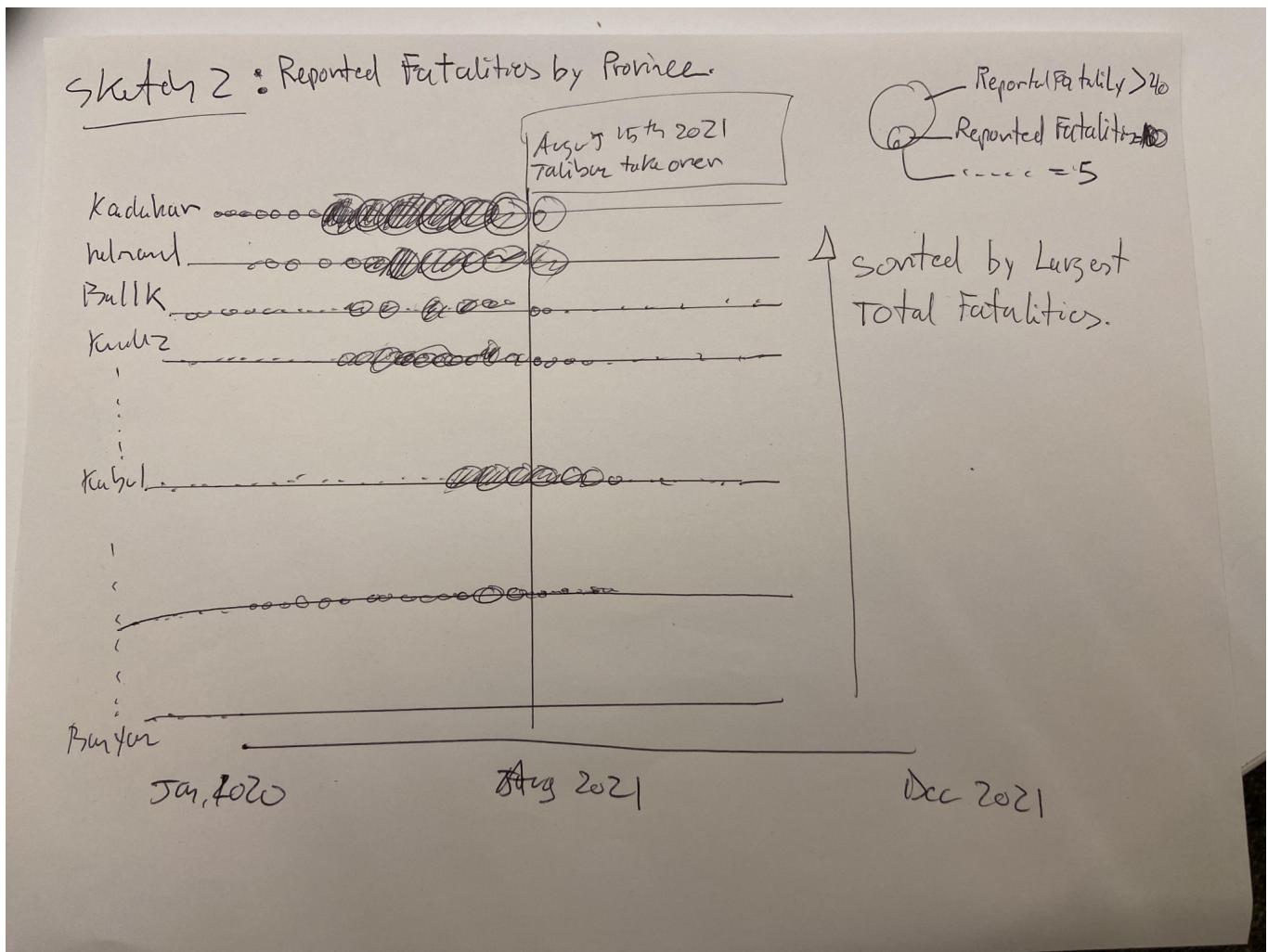
Tadhg 1



Question(s):

- How quickly did the Taliban seize Afghanistan following the withdrawal of US troops?
- Any noticeable patterns in the Taliban's advances and take over of local provinces?

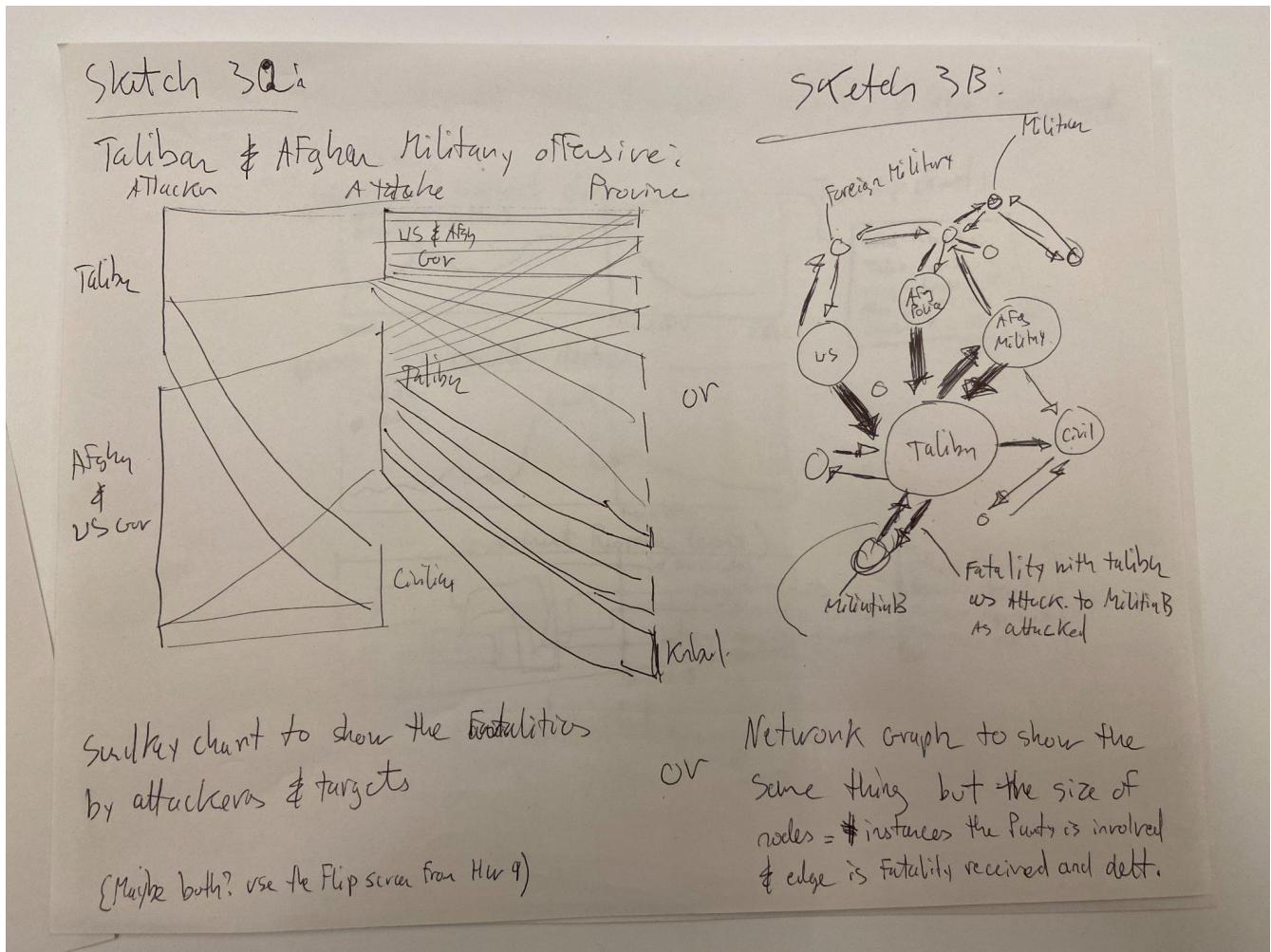
Tadhg 2



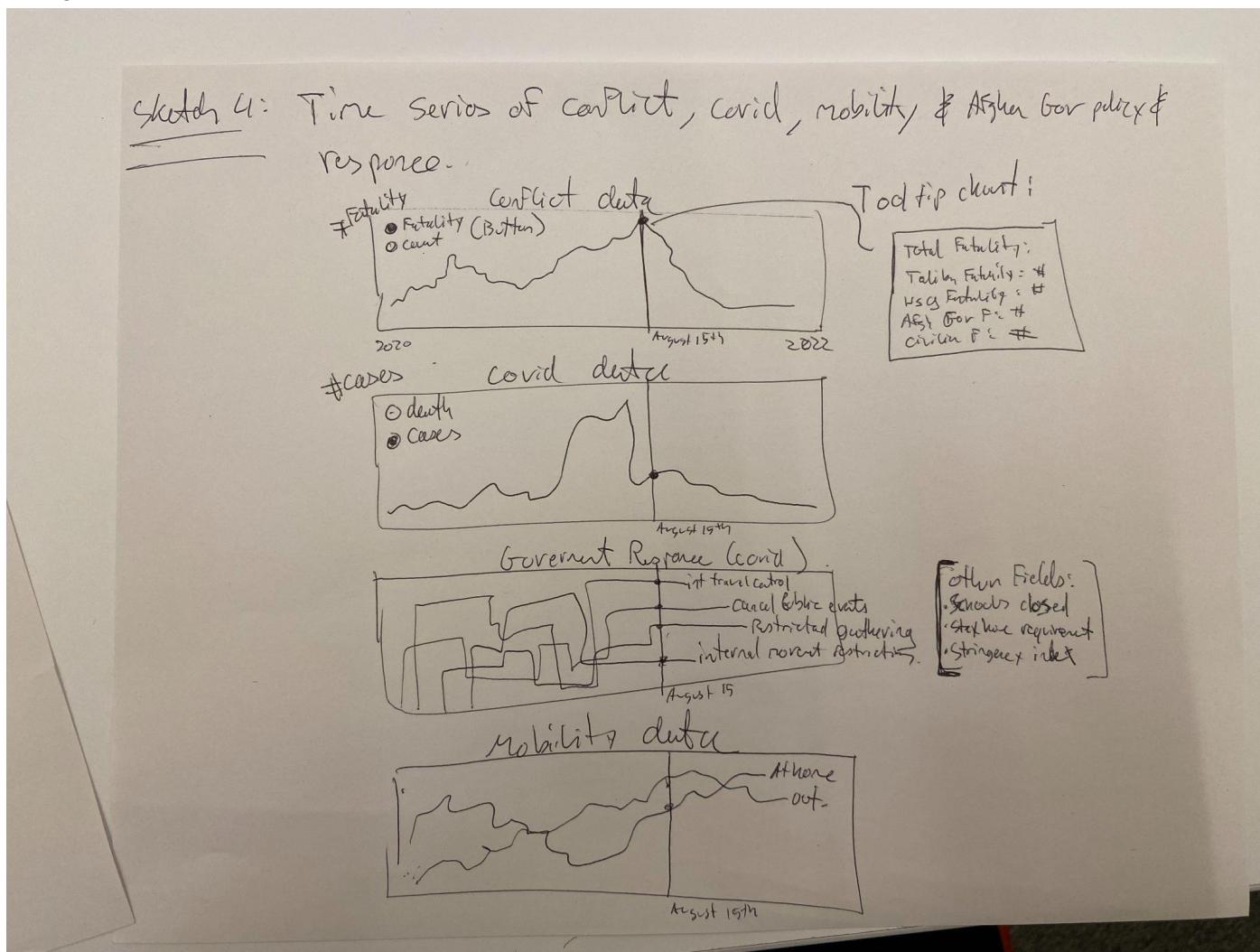
Question(s):

- How much violence was there leading up to the fall of kabul? How many deaths followed ?
- Have certain provinces been more greatly affected by the Taliban resurgence ?

Tadhg 3 & 4



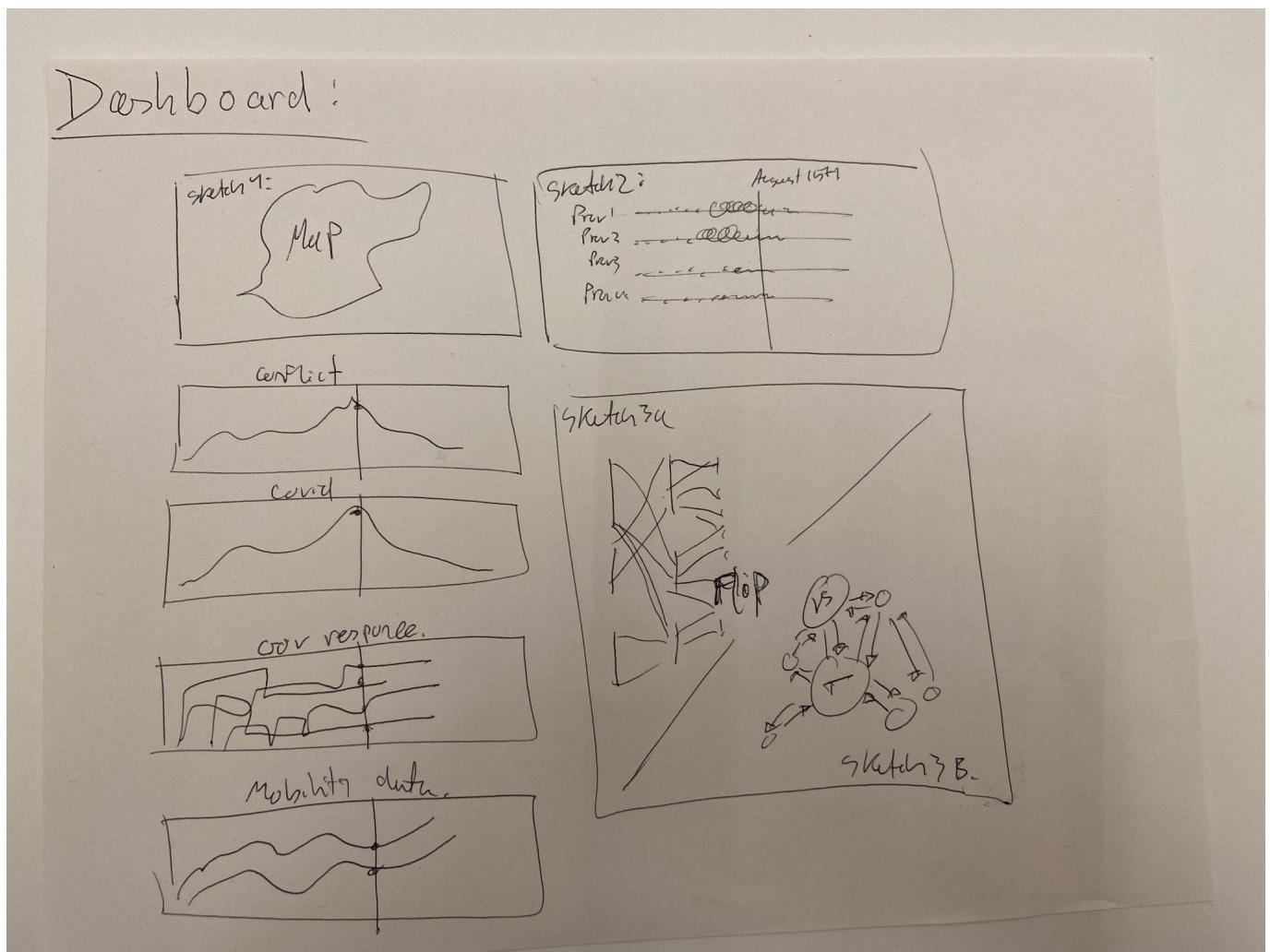
Tadhg 5, 6, 7 & 8



Question(s):

- How has day to day mobility changed since the Taliban's takeover? Using google mobility data we can get a sense for daily movements in the kabul.
- Relationship between the taliban controlling provinces and violence?
- How has the government responded to the taliban's advances?
- How has the violence and war affected covid cases?

Tadhg 1 through 8 combined



Decide Step

Sketch ID	Question ID	Author	Votes
T1	1, 2	TL	2
T2	2a	TL	1
T3	5	TL	
T4	5	TL	
T5	9	TL	2
T6	9	TL	

T7	9	TL	
T8	9	TL	
M1	7	MR	2
M2	3	MR	2
M3	3	MR	
M4	4	MR	
M5	8	MR	1

Voting rationale: The sketches we've chosen tell a full story about the US withdrawal, the Taliban takeover, the consequences for the Afghan people, and the lackluster humanitarian response from the global community. The visualizations cover a broad range of styles (e.g. maps, charts, abstract designs) and can all make use of time sliders and animations.

Storyboarding

Insights:

- **Matt 1:** Humanitarian aid needs are way up since the withdrawal, and funding has not kept pace
- **Matt 2:** Pakistan and Iran have taken in the vast majority of refugees. The US has received shockingly few. Almost nobody has been returning voluntarily since the Taliban takeover
- **Matt 3:** Public opinion polls about quality of life measures show a shockingly high level of suffering since the Taliban takeover
- **Tadhg 1:** There appears to be a sharp decrease in armed conflict after the US withdrawal, suggesting a measure a relative peace
- **Tadhg 2:** Mobility has returned somewhat since a noticeable dip after the Taliban takeover. This might indicate a return to normal life for many people after an adjustment period
- **Tadhg 3:** Some regions have been under Taliban rule for much longer than others, giving us an interesting point of comparison to see the effect of the US withdrawal

Main Insight:

- A year into Taliban rule, the suffering inflicted on the Afghan people from armed conflict has been replaced by an arguably worse crisis, which the global community is not adequately addressing.
 - We think this insight is important to share with our audience because (1) many people have stopped paying close attention to developments in Afghanistan since last year, and (2) many countries - the US in particular - bear some

responsibility for the current suffering of the Afghan people, so their shortcomings in addressing the crisis should be called out

Jamboard Session

1

Before the US left, the Taliban had some strongholds and there was constant violence. When the US withdrew, they quickly took control. Conflict continued in some areas

Taliban Takeover of Afghanistan: Case Study using Twitter Data Reporting

2

Millions have fled Afghanistan over the years due to violence. Recently, more are leaving due to the humanitarian crisis and Taliban rule. Few have returned since the takeover

Reported Fatalities By Afghanistans Provinces

3

Quality of life has decreased to a startling degree (user guesses how QoL measures have trended over time)

Public Opinion Polls X

U.S. Withdrawal Actual
Viewers' guess

4

Despite the crisis, mobility data suggests some return to normalcy and day-to-day activities under Taliban rule

Conflict Data

Covid Cases

Afghanistan's New Normal

Mobility Data

5

Most refugees have gone to Pakistan and Iran. The US has taken in shockingly few refugees & asylum seekers

Year: 2014
Return: 2021
Refugees: 2021

5

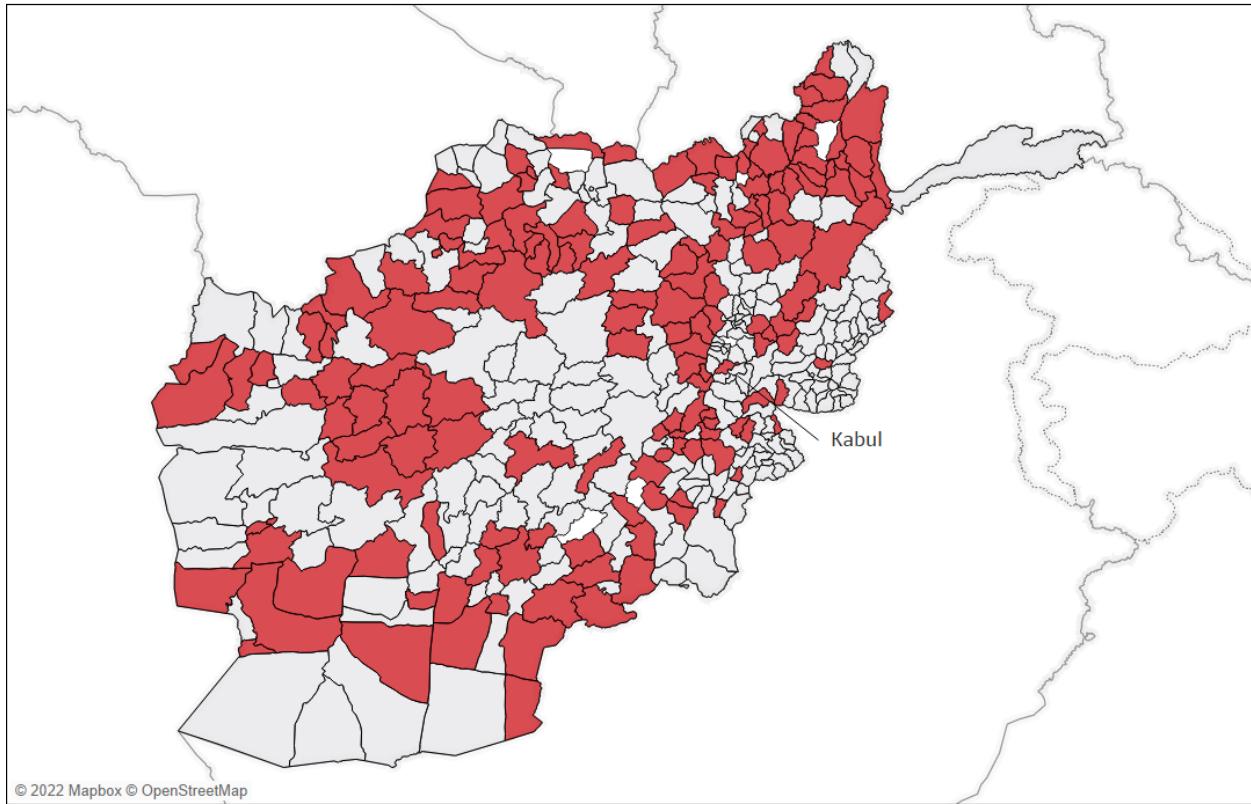
But humanitarian aid is severely understaffed. Organizations need donors to step up in XYZ categories to address the needs of the Afghan people

Category 1
Category 2
Category 3
Category 4

Year: 2021

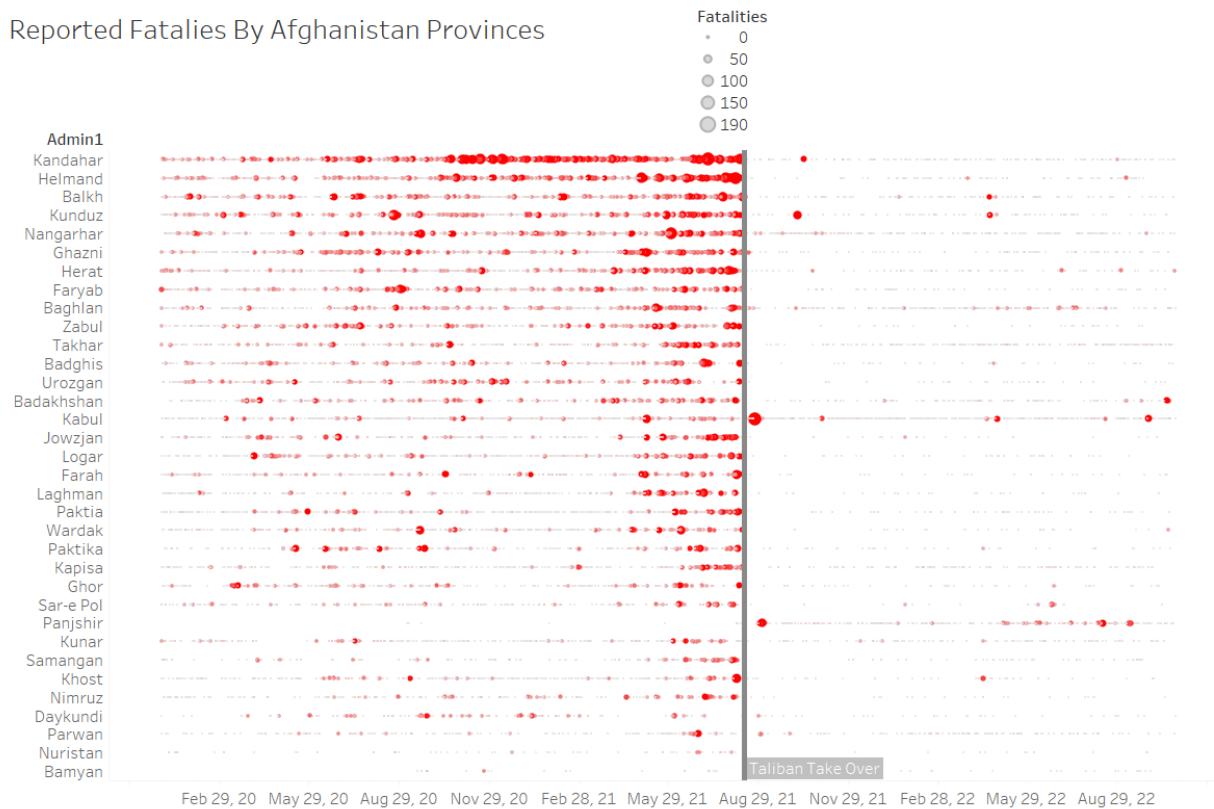
Tableau Screenshots

Taliban Take Over of Afghanistan - Case Study using ToloNews Reporting

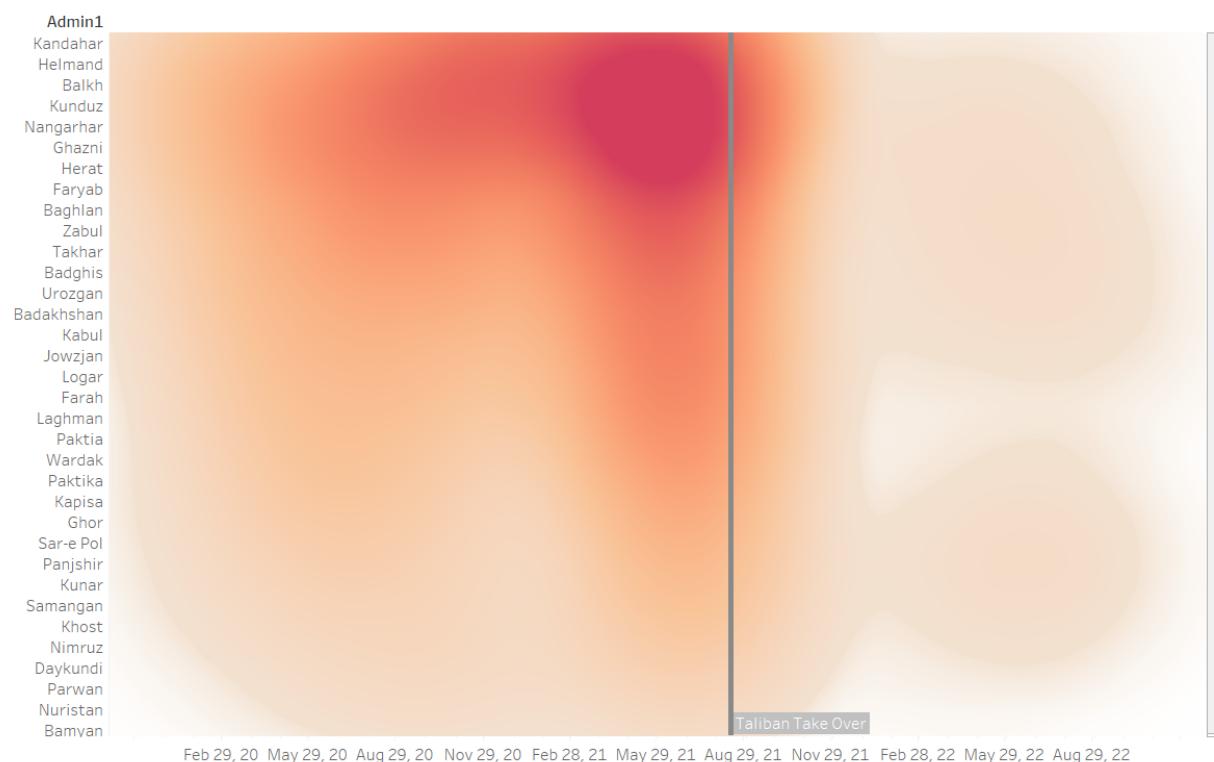


Map based on Longitude (generated) and Latitude (generated). Color shows sum of Pivot Field Values. Details are shown for District. The data is filtered on Pivot Field Names (MDY), which keeps August 16, 2021.

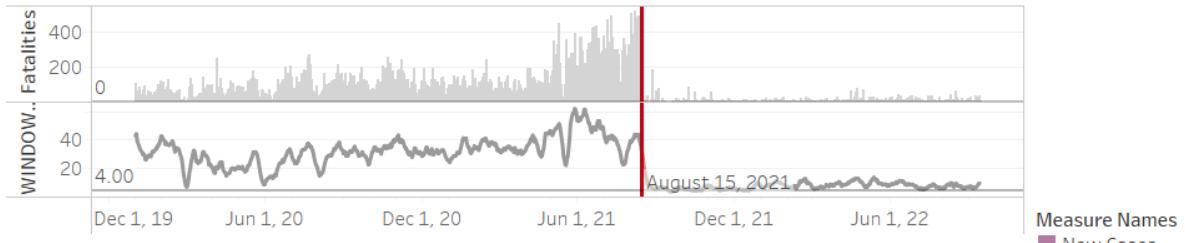
Reported Fatalities By Afghanistan Provinces



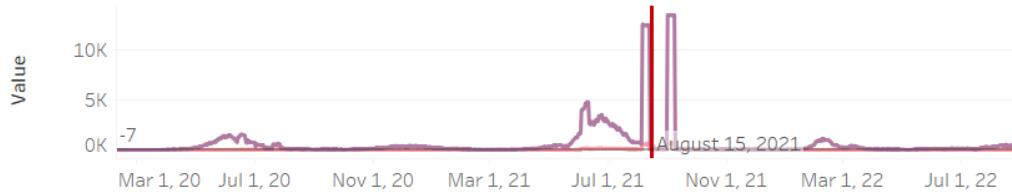
Reported Fatalities by Province



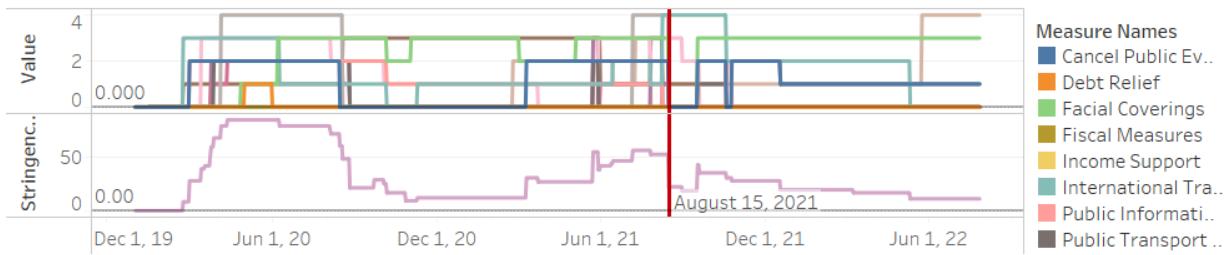
Conflict Data



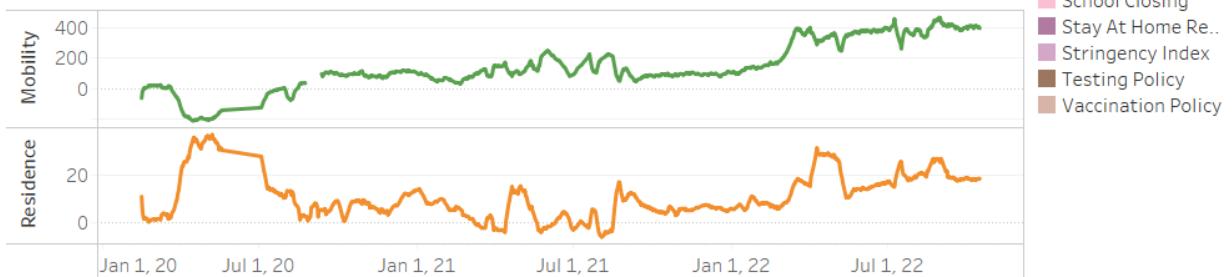
Covid Cases



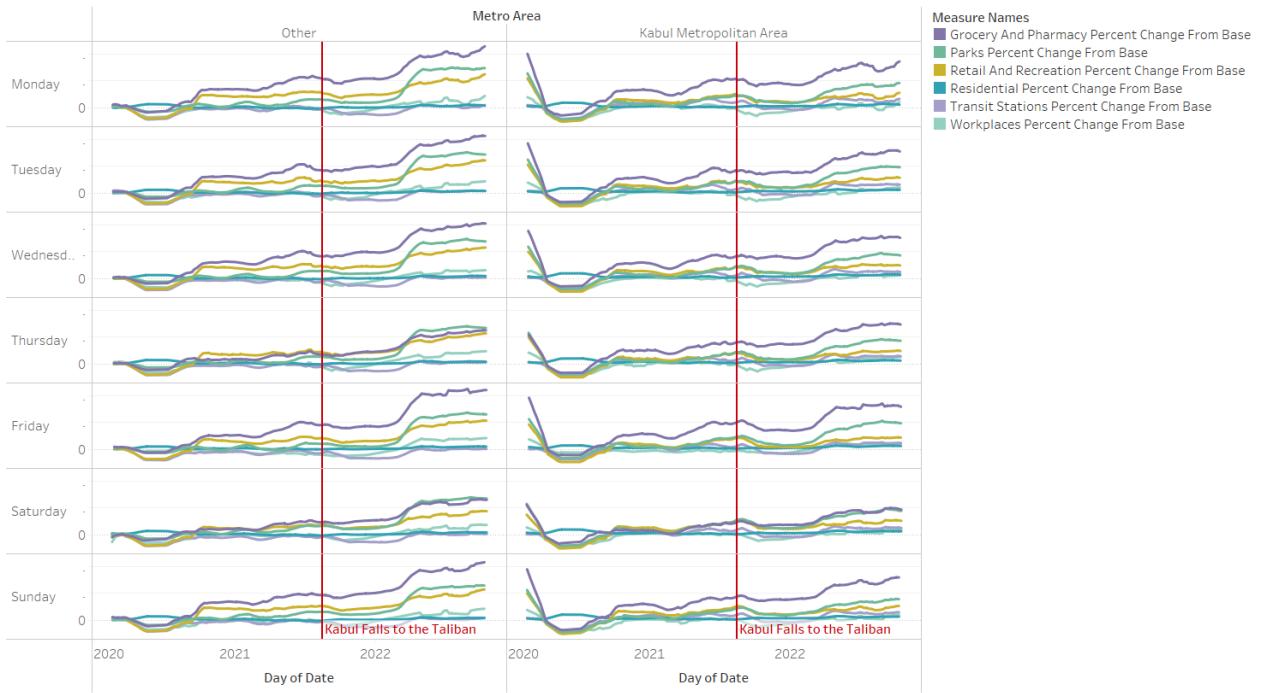
Afghanistan Gov response



Mobility data

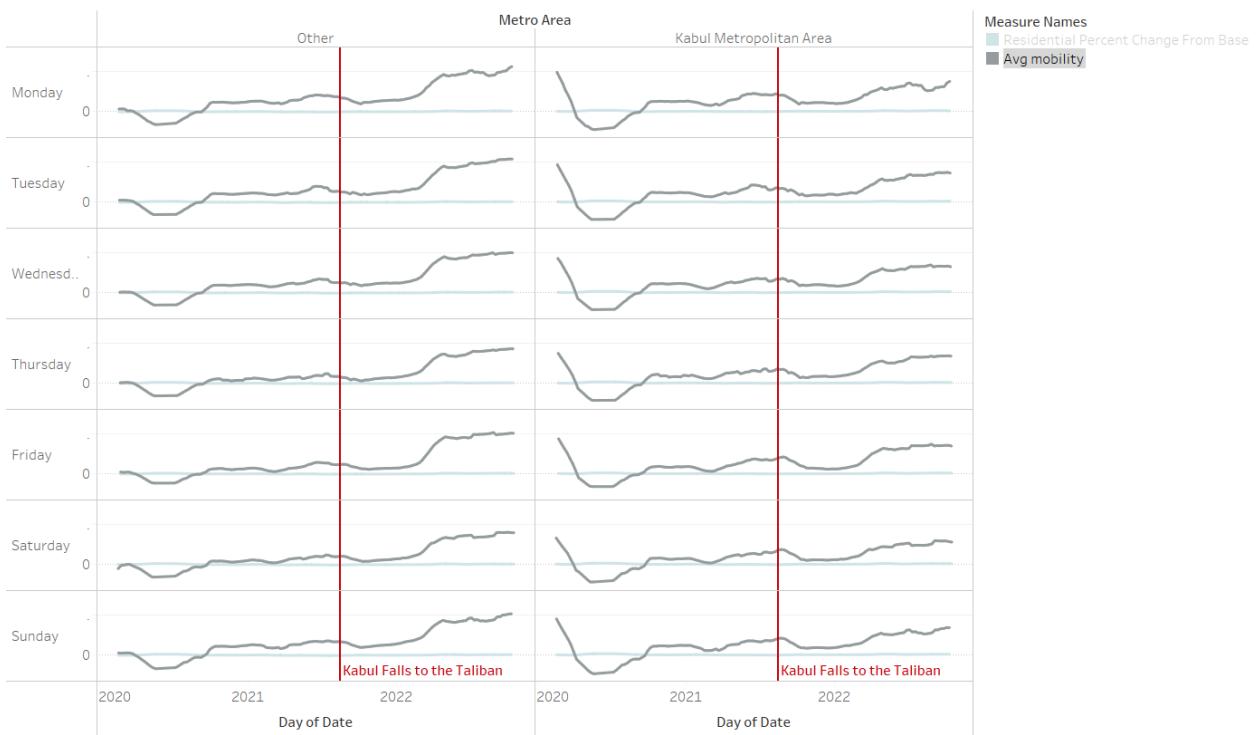


Mobility change by category



The trends of Grocery And Pharmacy Percent Change From Base, Parks Percent Change From Base, Retail And Recreation Percent Change From Base, Residential Percent Change From Base, Transit Stations Percent Change From Base and Workplaces Percent Change From Base for Date Day broken down by Metro Area vs. Date Weekday. Color shows details about Grocery And Pharmacy Percent Change From Base, Parks Percent Change From Base, Retail And Recreation Percent Change From Base, Residential Percent Change From Base, Transit Stations Percent Change From Base and Workplaces Percent Change From Base.

mobility change outside vs residential



The trends of Residential Percent Change From Base and Avg mobility for Date Day broken down by Metro Area vs. Date Weekday. Color shows details about Residential Percent Change From Base and Avg mobility.

Week 11 | Prototype V1 (11/14/2022)

- Name of students that worked on prototype V1 submission.
 - Matt Roth and Tadhg Looram
- Data scraping and cleaning complete (using the real data sets)
 - This task has been completed, we have several datasets from which we can draw visualizations. The main data sources can be found in the zip file:
 1. “Taliban_takeover_data” : reported districts taken over by the Taliban.
 2. “aclead_conflict_data” : reported conflicts in Afghanistan, granular data showing districts of conflicts, actors involved, details on the conflict and fatalities resulting from the conflict.
 3. “refugee” : several datasets showing internal displacement and refugees seeking asylum abroad.
 4. “Humanitarian” Different cuts of data showing humanitarian assistance in Afghanistan by categories of need.
 5. “Public Opinion” : polling data of US citizens on topics regarding afghanistan.
- **At least two D3 visualizations already partly implemented**, and drafts for 2-3 more visualizations
 - See Zipped file, we included two working visualizations, one a map showing the number of fatalities by province in afghanistan, this map is a placeholder. The second visual is a bubble chart of funding by requirement with a yearly filter.
- Rough webpage design and structure has to be done and implemented (placeholders for visualizations, text, and images allowed)
 - The index_template.html in the zip file serves as a placeholder fo the webpage design, we will adjust it as we determine the number of visualizations and styles we want to include. For the time being the layout will be as follows:
 - Visualizations will be stacked on the right side of the webpage
 - The context/narrative text will be on the left side.
- Storytelling is clear
 - Our EDA and mock visuals in tableau supports the narrative being told, the storytelling will be chronological and walk the viewers pre and post Taliban takeover:
 - 1) Taliban take over from may to August 2021

- 2) Displacement and mass exodus that followed the conflict
 - 3) Decline in quality of life and need for humanitarian funding since the Taliban took power
- **The first design of an innovative view**
 - The bubble chart is our first attempt at an innovative view, we are also still working on implementing the tableau dashboard showing fatalities across provinces as a time series bubble. Lastly the map of afghanistan districts taken over will be a new innovative view as well.
 - Interactions (e.g., filtering, brushing, etc.) have to be designed (at least in a textual description and some sketches)
 - See sketches, the Map and conflict data will include a brushing effect, allowing viewers to select a specific time period
 - The bubble chart currently includes a filter.
 - The Map chart currently includes a tooltip.
 - Up to date process book
 - Completed.

Week 13

CS 171 – Think-Aloud Study 1

Tester Name: Steven Morse

Tester Email: steven.morse@mde.harvard.edu

General Observations from the think-aloud study:

Map:

- Time slider should update on slide, not just when slider is released
- Viewer noted the speed of Taliban spread is very evident
- Wants to see date range shown more prominently or maybe in different format
- Too much text
 - Show only text for relevant time range
 - Add some pictures to show what was happening - make storytelling more visual and less text-based

Interactive Draw:

- User started with dropdown before reading anything
- Clicked “Show all polls” before we would have wanted them to
- Too much distance between poll question and drawing area
 - Display poll q more prominently
- Add markers to annotate timeline
 - Would help with weird 2016 drop
- Mention how surveys were conducted

Bubbles:

- Doesn't know where to start and what the time slider is doing
- Doesn't understand legend as it's presented
- Redundancy in bubble and bar charts
- Have some helper text to make it clear what the user should do and what they should look for
- Match colors between bar and bubbles

What does the tester like about your data story?

The tester liked the visualizations, but it's clear we have a lot of work to do in terms of storytelling

What improvements does the tester point out?

Design improvements:

- Make colors consistent
- Make clearer connections between related visual elements (e.g. bubbles and bars)
- Add photos

Interpretability:

- Tell user what they should look out for and how they should read certain charts (e.g. bubbles)

Concision:

- Remove redundancy in bubble charts
- Cut down on superfluous text

Was the intended key message clear to the tester? Why or why not?

- No: we have not yet tied our narrative together. We have disparate visualizations at the moment, and it's not clear how each relates to the others or what the viewer should take away

Did the tester get your next steps or call to action? Why or why not?

- N/A: we don't have these clearly outlined yet

CS 171 – Think-Aloud Study 2

Tester Name: I didn't get her name!

Tester Email:

General Observations from the think-aloud study:

Map:

- Make tolo news link open in new tab
- Unclear about increments on time slider
- Likes tooltip
- Geo reference of Kabul, key cities, big events, etc. would be useful context

Interactive Draw:

- Cut end of drawing area to match up with graph area
- Make sure text annotations use same baselines as visuals (e.g. 12% vs 88%)
- Missed “show all polls” button entirely

Bubbles:

- “What does ‘relative to needs’ mean?”
- Good that 2022 goes off the scales
- Maybe start on 2021 to make the point that things got worse, then allow the user to explore earlier on their own

What does the tester like about your data story?

The tester liked some of the interactive features such as the map tooltip and the interactive drawing. She also liked some of the design decisions we used to communicate our message, such as showing the bubble growth going off the scales.

What improvements does the tester point out?

Interpretability:

- The map time-slider’s behavior is a bit unintuitive. It would be improved by making it update as the user drags and by making selected time ranges clearer

Narrative:

- Bubble chart takes too much work to get user to the takeaway. We can reduce that friction with instructions and cues

Was the intended key message clear to the tester? Why or why not?

- No: we have not yet tied our narrative together. We have disparate visualizations at the moment, and it's not clear how each relates to the others or what the viewer should take away
- Tester did get the takeaway that humanitarian aid is more urgently needed and less well-funded after the Taliban takeover

Did the tester get your next steps or call to action? Why or why not?

- N/A: we don't have these clearly outlined yet

Based on the results of your ‘think aloud’ study, what would you improve in your data story?

- Our story has very little context and connective tissue. We need to ground our story in background & context, make our message clear, and drive home what takeaways the viewer should get from our visualizations. We will also switch from a dashboard view to a forced-scroll page. The dashboard structure puts too much of the onus on the viewer. Instead, we should have more control over how they proceed through the narrative

Are there any additional insights and visualizations you would use? Would you amplify or change your message? Did your narrative work? Did the tester get your takeaways?

- We definitely need to amplify our message and change our narrative structure. Our testers did not get our takeaways because we did not make them clear. We need to call out key insights and ground them in a story so that users 1) have the background and context they need to engage with the data, 2) know what they should learn or conclude from each visualization, and 3) understand the bigger picture and why it's important

Decide as a team which of these improvements you will implement and write down your decisions and why you made them in your process book as a numbered list.

1. Add narrative structure and context
 - a. We knew this draft of our project was lacking narrative structure, but it was clear from the testing sessions that we'll need to do a lot of the work to bring our viewers to the right takeaways. There's a lot of data for them to explore, and we risk them missing the key takeaways if we don't guide them through
2. Add photos and visual storytelling elements
 - a. Our dashboard is too dry for such an emotionally charged subject
3. Switch from dashboard to forced-scroll page
 - a. The dashboard view is too nonlinear for us to be confident our viewers will gather the right insights. A forced-scroll page will ensure users see content in the order we want and that each visualization will be grounded in a well-structured narrative. It will also build up to a call-to-action, maximizing the impact of our data story

Implement the intended changes and check them off your list (e.g., adding “done”). You can distribute the tasks among your team members. If you are unable to implement specific changes, please explain why and describe the expected results in your process book.

- In Progress -> Add narrative structure & context
- Completed -> Add photos and visual storytelling elements
- In Progress -> Fix up design and functionality bugs
- Completed -> Switch from dashboard to forced-scroll page

Feedback Session Notes

General

- Improve narrative structure
- Fix up navigation - the dashboard layout is a little confusing to users and doesn't do the narrative justice

Map

Session 1:

- Time slider should update on slide, not just when slider is released
- Viewer noted the speed of Taliban spread is very evident
- Wants to see date range shown more prominently or maybe in different format
- Too much text
 - Show only text for relevant time range
 - Add some pictures to show what was happening - make storytelling more visual and less text-based

Session 2:

- Make tolo news link open in new tab
- Unclear about increments on time slider
- Likes tooltip
- Geo reference of Kabul, key cities, big events, etc. would be useful context

Draw

Session 1:

- User started with dropdown before reading anything
- Clicked "Show all polls" before we would have wanted them to
- Too much distance between poll question and drawing area
 - Display poll q more prominently
- Add markers to annotate timeline
 - Would help with weird 2016 drop
- Mention how surveys were conducted

Session 2:

- Cut end of drawing area to match up with graph area
- Make sure text annotations use same baselines as visuals (e.g. 12% vs 88%)
- Missed "show all polls" button entirely

Bubbles

Session 1:

- Doesn't know where to start and what the time slider is doing
- Doesn't understand legend as it's presented
- Redundancy in bubble and bar charts

- Have some helper text to make it clear what the user should do and what they should look for
- Match colors between bar and bubbles

Session 2:

- "What does 'relative to needs' mean?"
- Good that 2022 goes off the scales
- Maybe start on 2021 to make the point that things got worse, then allow the user to explore earlier on their own

Week 14 - Final Submission

Link to project website: <https://mraottth.github.io/>

Data Description

Humanitarian Funding (Amount needed and provided)

Path: ./data/cleaned/humanitarian/grouped_funding_req.csv

File: grouped_funding_req.csv

Source: United Nations Office for the Coordination of Humanitarian Affairs (OCHA),
Financial Tracking Service Afghanistan Humanitarian Response Plans 2009-2022

<https://fts.unocha.org/appeals/1100/summary>

Description: Data on the amount of humanitarian aid was needed and provided for each category in each year

Fields:

- year (INT, quantitative)
 - o Year funding was provided
- cluster (STRING, categorical)
 - o Humanitarian need category that funding is required for
- requirements (INT, quantitative)
 - o The amount in funding that UN OCHA determined is needed for each cluster in each year
- funding (INT, quantitative)
 - o The amount of funding provided for each cluster in each year
- percent_funded (FLOAT, quantitative)
 - o funding / requirements

Humanitarian Funding (Donors)

Path: ./data/cleaned/humanitarian/grouped_donor_updated.csv

File: grouped_donor_updated.csv

Source: United Nations Office for the Coordination of Humanitarian Affairs (OCHA),
Financial Tracking Service Afghanistan Humanitarian Response Plans 2009-2022

<https://fts.unocha.org/countries/1/summary/2022>

Description: Data on the amount of humanitarian aid provided by various organizations to Afghanistan. Aggregated by year and organization

Fields:

- year (INT, quantitative)
 - o Year funding was provided
- srcOrganization (STRING, categorical)
 - o Organization providing funding
- srcOrganizationTypes (STRING, categorical)
 - o The type of organization the funder is (e.g. government, NGO, private)
- amountUSD (INT, quantitative)
 - o The amount donated in \$USD

Gallup Public Opinion

Path: ./data/cleaned/public opinion/public_opinion.csv

File: public_opinion.csv

Source: Gallup World Poll <https://news.gallup.com/topic/country-afg.aspx>

Description: Results from Gallup's yearly world poll aggregated from published articles on Gallup's website

Fields:

- Date (INT, quantitative)
 - o Year survey was conducted
- Population (STRING, categorical)
 - o Whether the respondents were Afghans or Americans
- Question (STRING, categorical)
 - o The question that was asked in the poll
- Value (INT, quantitative)
 - o The percent of respondents who answered affirmatively to the question
- Text (STRING,
 - o Additional commentary on the result of the poll for each question

Taliban Takeover - Tolo News

Path: ./data/cleaned/taliban_takeover.csv

File: taliban_takeover.csv

Source: Tolo news: <https://tolonews.com/>

Description: from thousands of scrapped articles we identified those that reported on the Taliban taking control of a district/province.

Fields:

- id (STR, categorical)
 - o name of the district
- date (date, ordinal)
 - o date of the status of the district
- taliban_control (INT, categorical)
 - o status of the district, 1 = reported to be under taliban control 0 = not reported to be under taliban control.
- id (INT, quantitative)
 - o date index

Conflict Data by District - ACLEAD

Path: ./data/cleaned/conflict_map_data.csv

File: conflict_map_data.csv

Source: Aclead: <https://acleddata.com/>

Description: number of deaths reported in afghanistan resulting in conflicts by district.

Fields:

- idx (INT, quantitative)
 - o Date id
- date (date, ordinal)
 - o date of the reported incident
- fatalities (INT, quantitative)
 - o .number of recorded deaths

Conflict Data by actor- ACLEAD

Path: ./data/cleanedfatalities_network.json

File: fatalities_network.json

Source: Aclead: <https://acleddata.com/>

Description: number of deaths reported in afghanistan resulting in conflicts by actor (e.g Taliban, Afghanistan Military, citizens ect). Data was reshaped and wrangled to fit a network chart

Fields:

- Nodes:
 - Id (INT, categorial)
 - o index of actor/circle
 - Nodes (STR, categorical)
 - o Name of the actor/circle
 - Radius (INT, quantitative)
 - o number of fatalities
- Links:
 - Source (INT, categorial)
 - o Index of actor 1
 - Target (INT, categorial)
 - o Index of actor 2
 - Edge Thickness (INT, quantitative)
 - o number of fatalities

Afghanistan TopoJson file

Path: ./data/combined.json**File:** combined.json**Source:** <https://gist.github.com/tmaybe/5989042>**Fields:**

- International (GeometricCollection)
 - Border of afghanistan with neighboring countries
- Province(GeometricCollection)
 - Shapes of afghanistan provinces
- District(GeometricCollection)
 - Shapes of afghanistan district