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*Tackling the*  
**Systems Thinking  
Assignment**

# Assignment

Systems thinking is at core of mission, company, product:

- Capacity to see and model as a broader system
- Communication skills in presenting findings
- Technical skills in delivering assignment

## Systems Thinking Assignment

Hi there!

Thanks for investing your time in this assignment.

### Purpose

Systems thinking is at the core of our mission, company, and product. So we are interested in assessing:

1. your capacity to see and model something as part of a broader system
2. your technical skills in delivering this assignment (as relevant to the role you're applying for)
3. your communication skills in presenting your findings

### Brief

Take a topic that you care about and already know something about (so, say, "marijuana legalization").

Now create a network where you link that topic (node) to as many other topics (nodes) as you can. We are most interested in relationships (edges) where one node affects the other or causes the other.

- Think upstream and downstream (things that affect/cause and are affected/caused by)
- Use as much evidence as you can to make the links between nodes. We expect candidates applying for technical roles to employ statistics to substantiate an edge.

### Form

You can deliver your assignment in any form you choose: document, code, design piece, poem, really anything. Just make sure that the form you choose allows for your network to be clearly communicated. We expect candidates applying for product or design roles to communicate with some form of narrative.

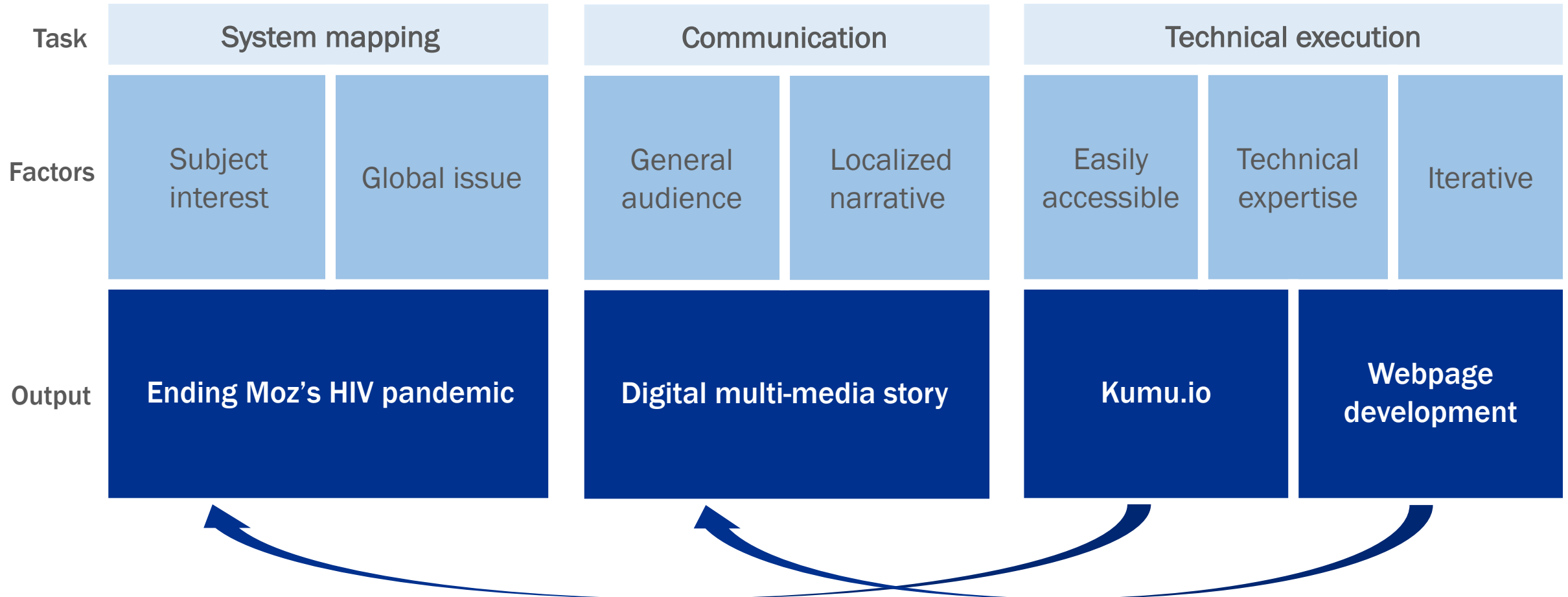
### Logistics

You have one week to complete this assignment. When you're done, email it to [jobs@system.com](mailto:jobs@system.com). We'll review it and be back in touch within a week.

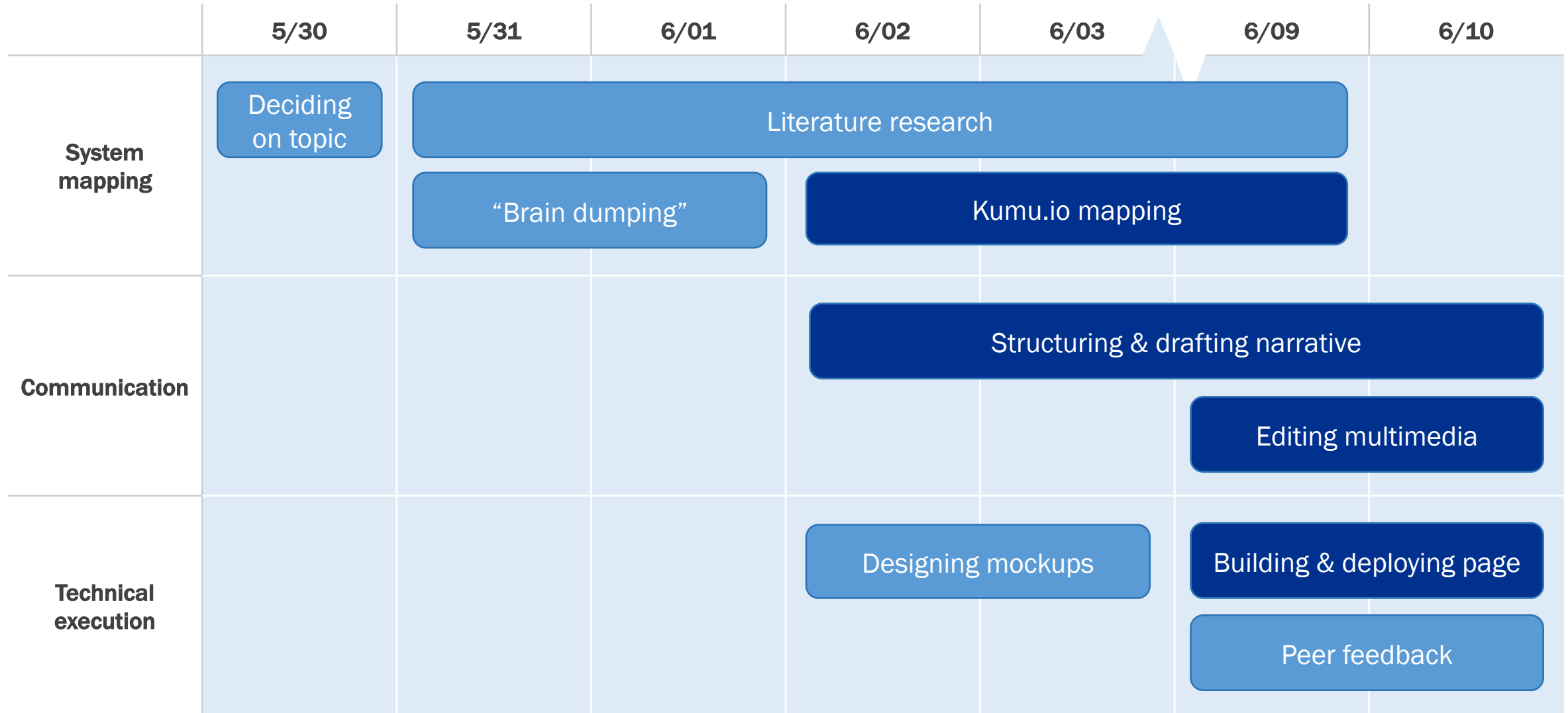
May 2018

Please do not share this assignment.

# Overview



# Roadmap



# System mapping

What is a global challenge I have subject expertise in?

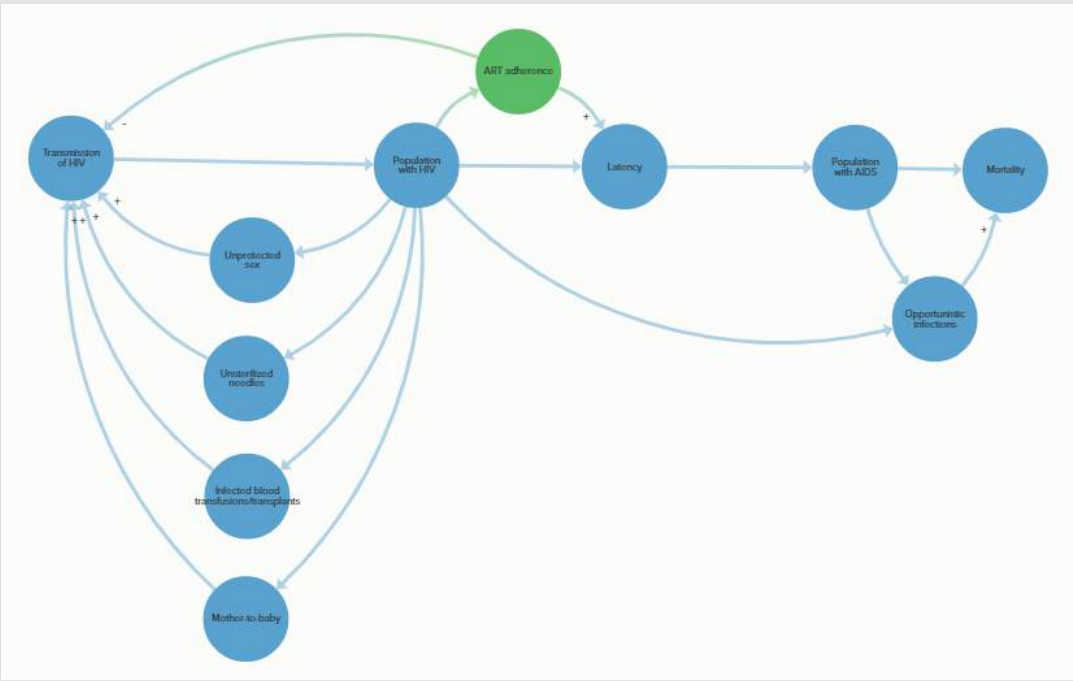
## HIV Pandemic

Sustainable Development Goal 3.3:  
By 2030, end the epidemic of AIDS;  
measured by “Number of new HIV  
infections”

Inspired by trip to Mozambique (8<sup>th</sup>  
highest prevalence of HIV/AIDS)

Demonstrated interest through  
health and gender work with UN and  
Planned Parenthood

# Approach & Classification



HIV/AIDS  
Transmission Flow

## 1. HIV/AIDS Transmission Flow

**2. Value**

Behaviour/intervention, Output, Agent, Agent characteristic

**3. Sector**

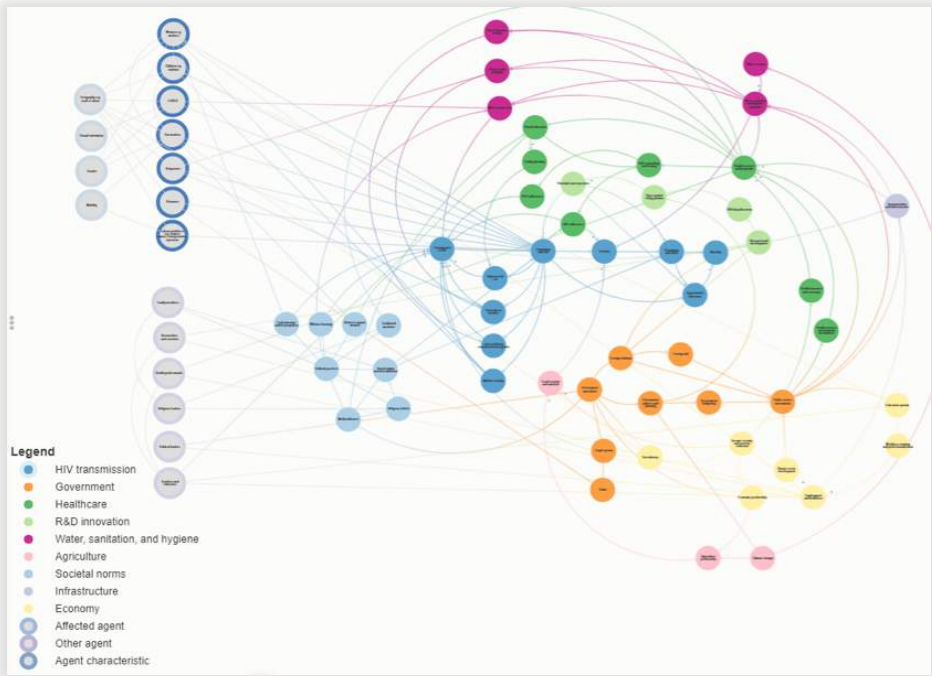
Government, Healthcare, R&D innovation, WASH, Agriculture, Society, Infrastructure, Economy

**4. Agent (Affected, Non-affected)**

Women, Children, LGBTQ, Sex workers, Drug users, Prisoners, Labour workers, Family members, Researchers, Health professionals, Religious leaders, Political leaders, Educators

**5. Agent characteristic**

Geography, Sexual orientation, Gender, Mobility, Race/Ethnicity, Religious beliefs, Socioeconomic status



Kumu.io  
system mapping



Example  
topic

## Public service investments

BEHAVIOUR/INTERVENTION

Investments for public services including infrastructure, healthcare, education, and WASH are provided by the government, international aid, and the private sector.

In Mozambique, health services are provided for by the "Ministerio de Saude" (MISAU). MISAU spends approximately \$167,796,000 USD on funding its health system. This equates to approximately \$9.00 USD per capita. Mozambique's current government sees health as a main priority, and will more likely subtract funds from other important sectors such as education and infrastructure before cutting funds from the health sector.

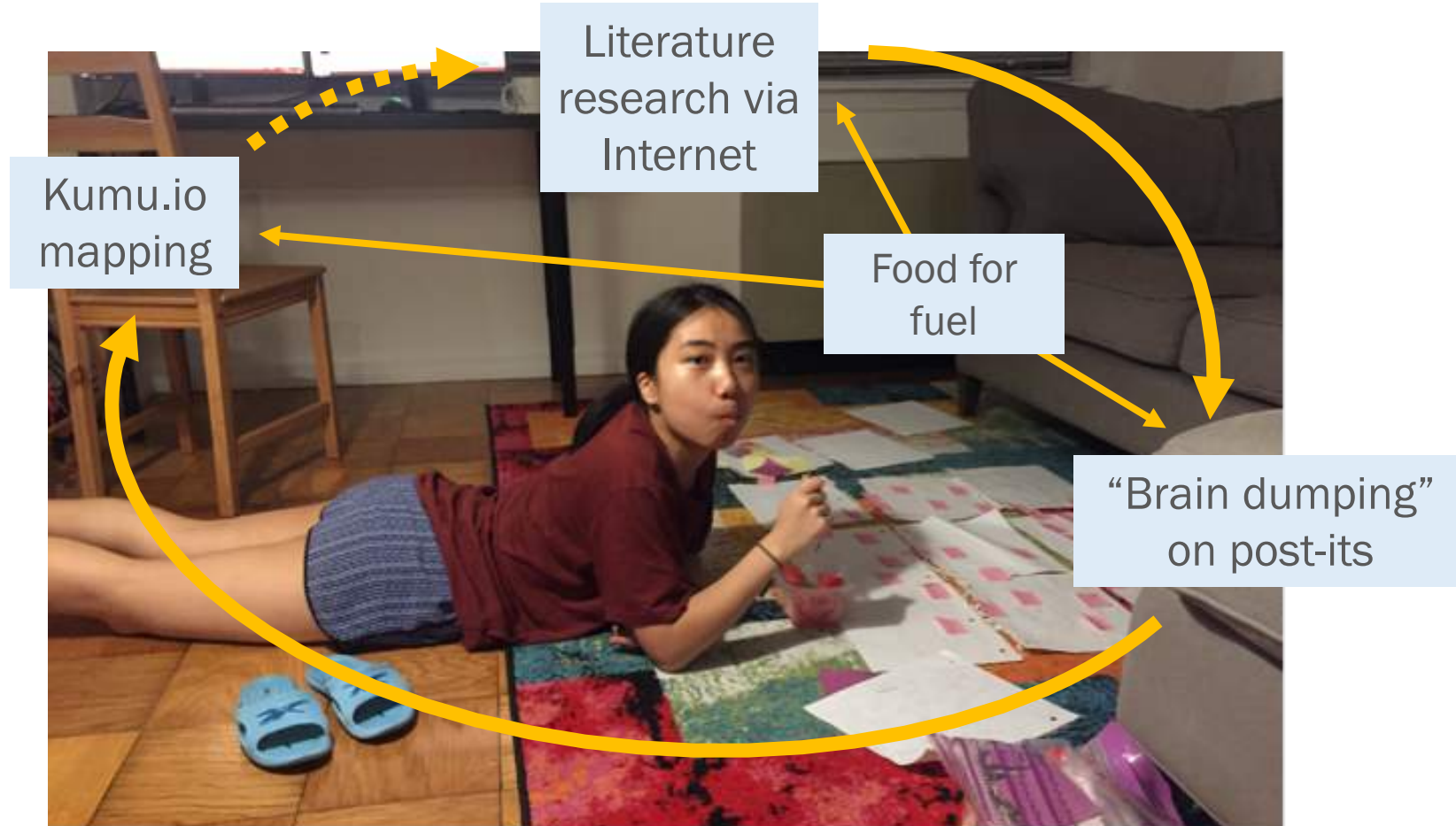
1. <https://www.pacificprime.com/country/africa/mozambique-health-insurance/>

Government

- Topic title
- Value
- General description
- Moz context & evidence
- Source
- Sector



# Process



(This is semi-satirical)



# Comms Format

How do I engage and educate the general audience in a localized narrative?

# Digital Story

Structured narrative around Fatima in Mozambique: intro, system, solutions

Interactive system mapping

Multi-media presentation of story, e.g. videos, data infographics

Blogging experience

# Localized Narrative

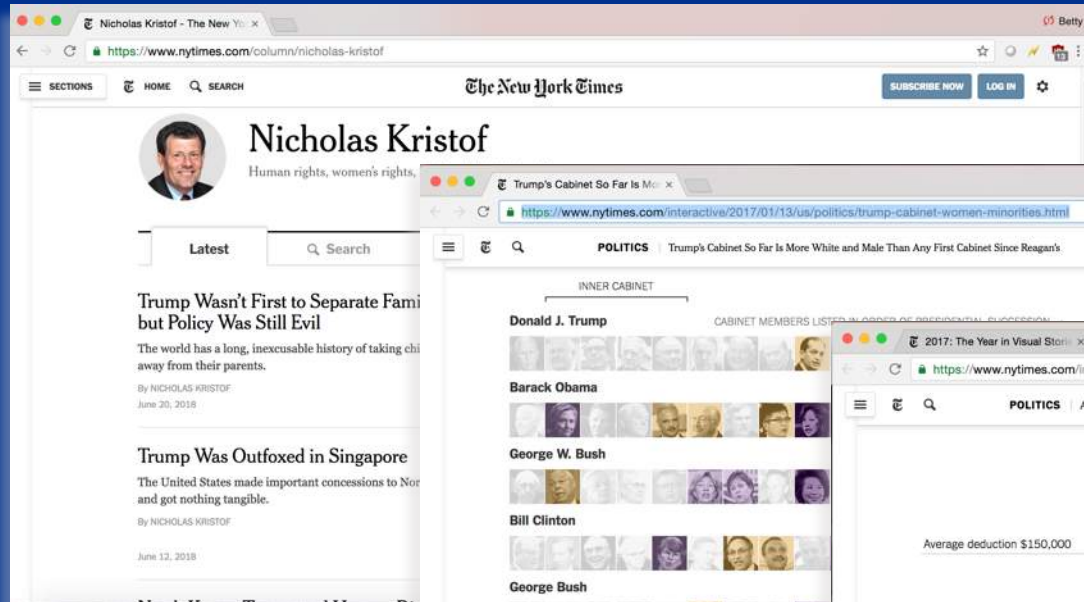
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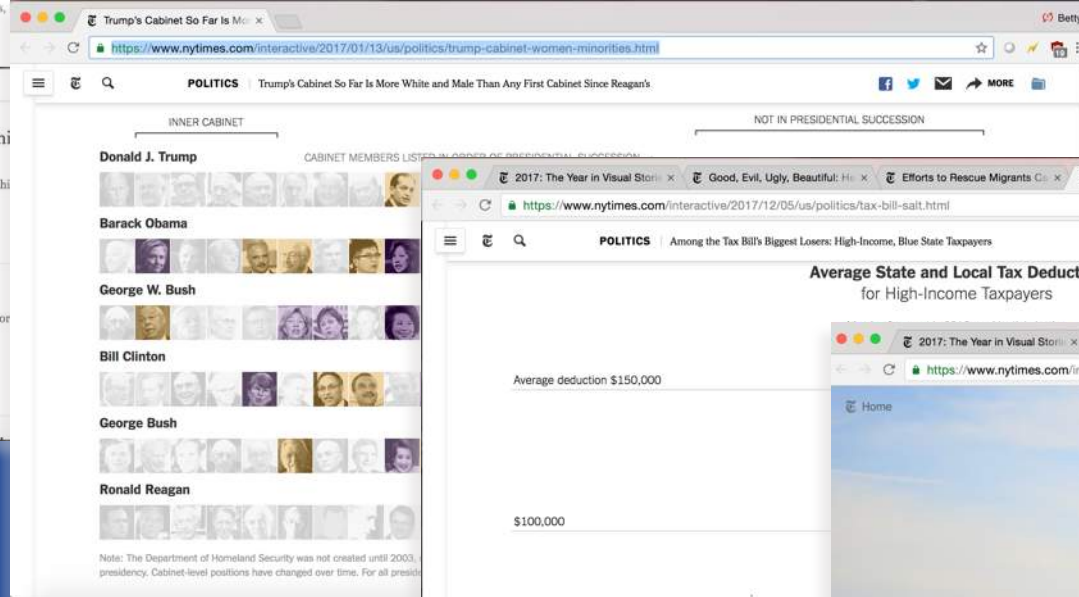
Research trip to  
Mozambique,  
Aug 2017



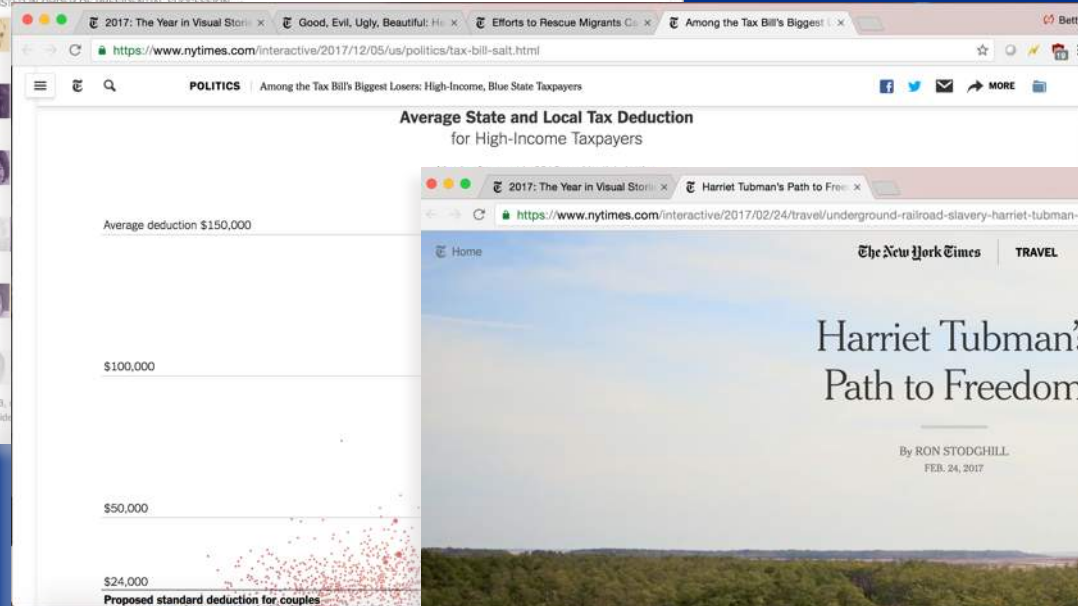
# NYT Inspiration



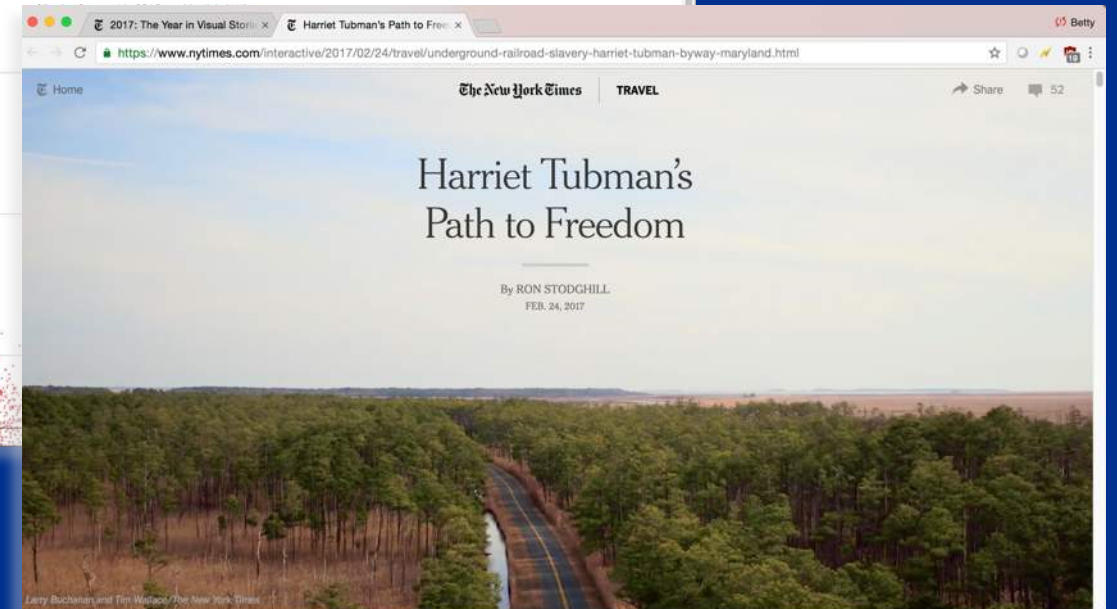
Spotlight on  
global issues



Interactive  
features



Data  
visualization



Digital storytelling

# Technical Execution

What is an easily accessible form, within my limitations and that I can potentially make improvements to?

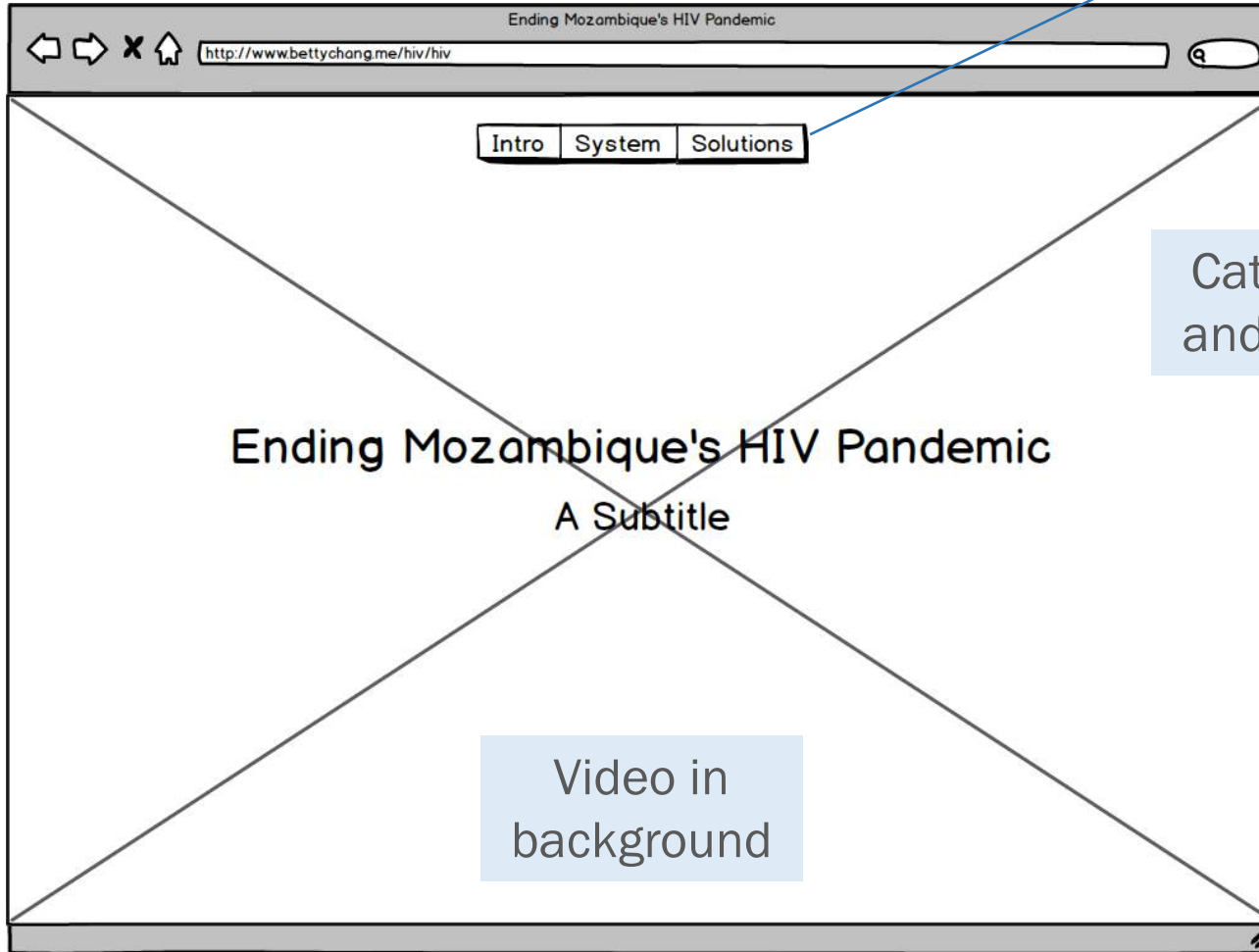
## Webpage

Limitations: time, coding abilities

Static, long scrolling webpage with Kumu.io mapping embedded

Web development in HTML CSS

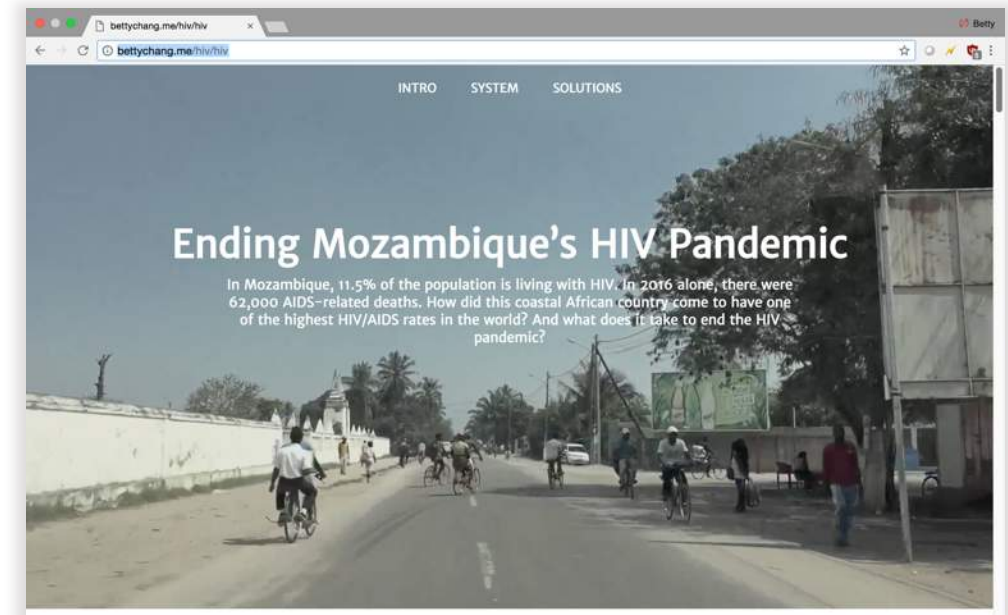
# Landing Screen



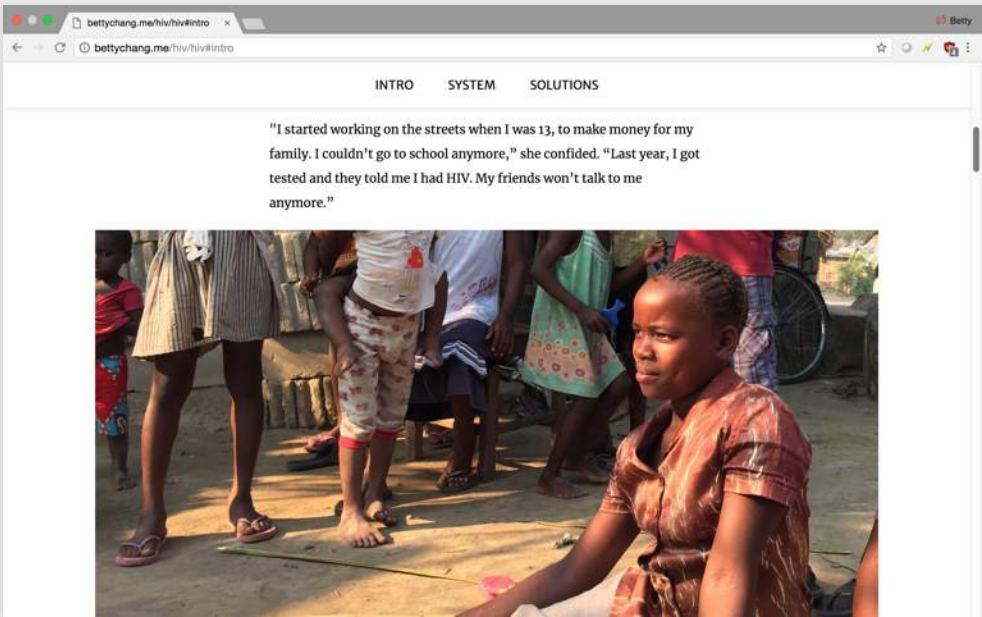
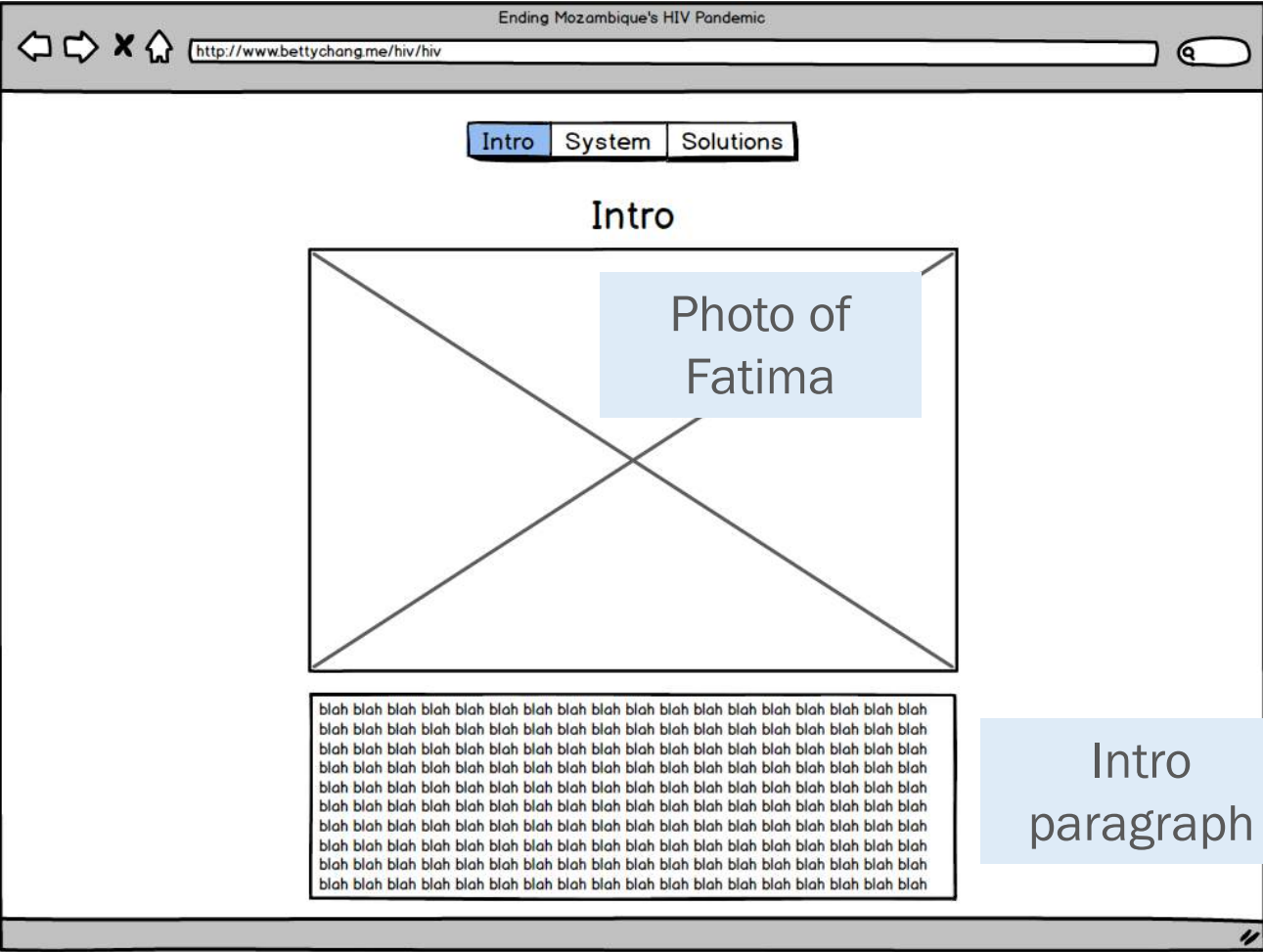
Scroll fixed header

Easy navigation of site enabling users to find info without scrolling

Catchy title and subtitle

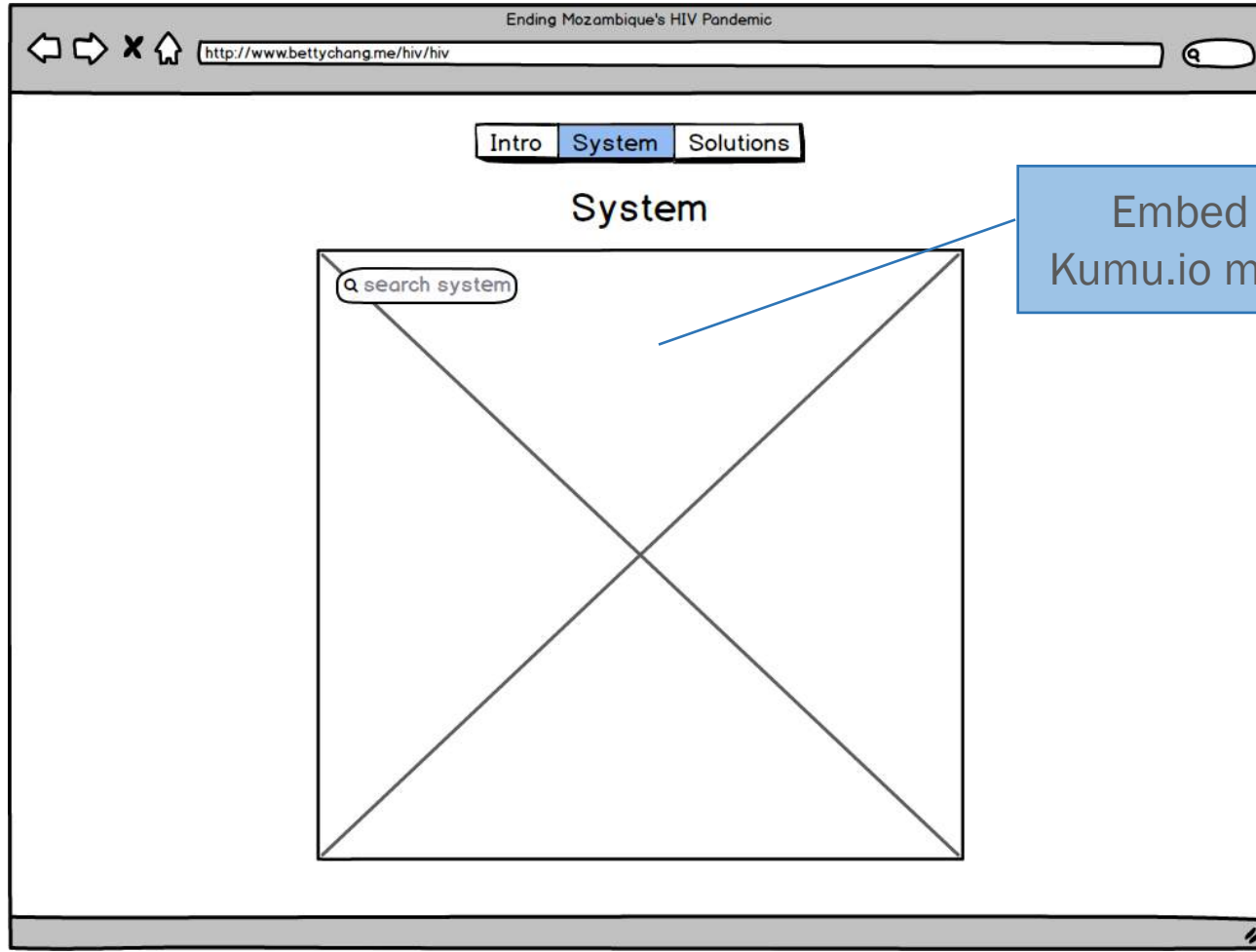


# Part I: Intro

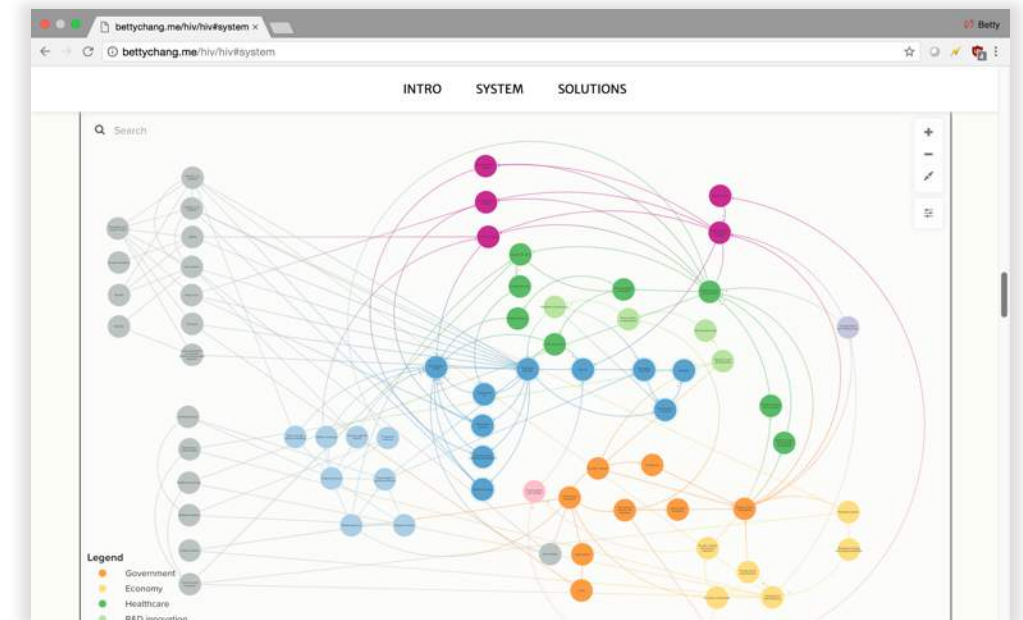




## Part 2: System



- Topic/relationship descriptions
- Search feature

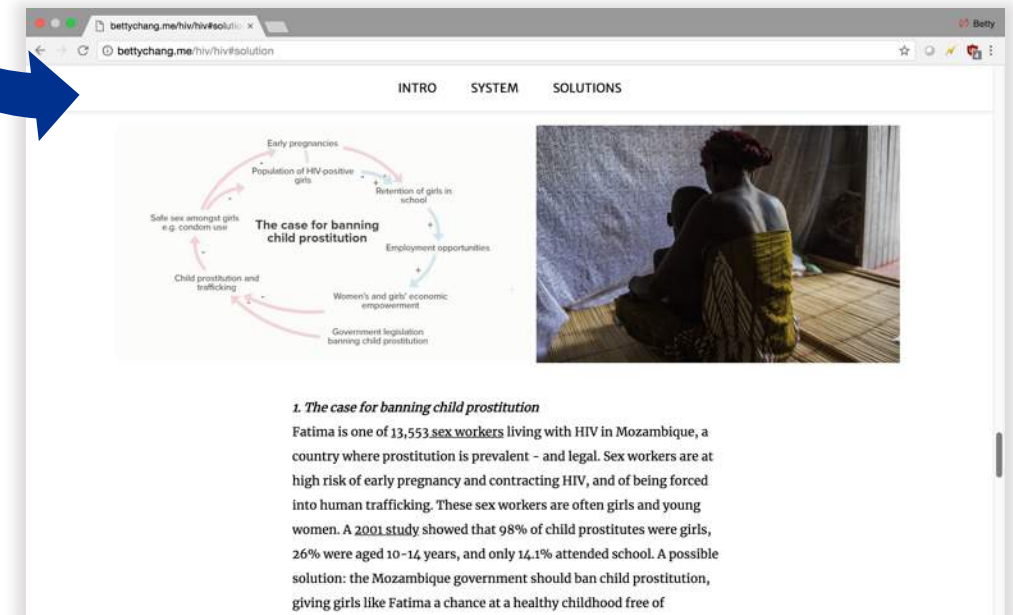
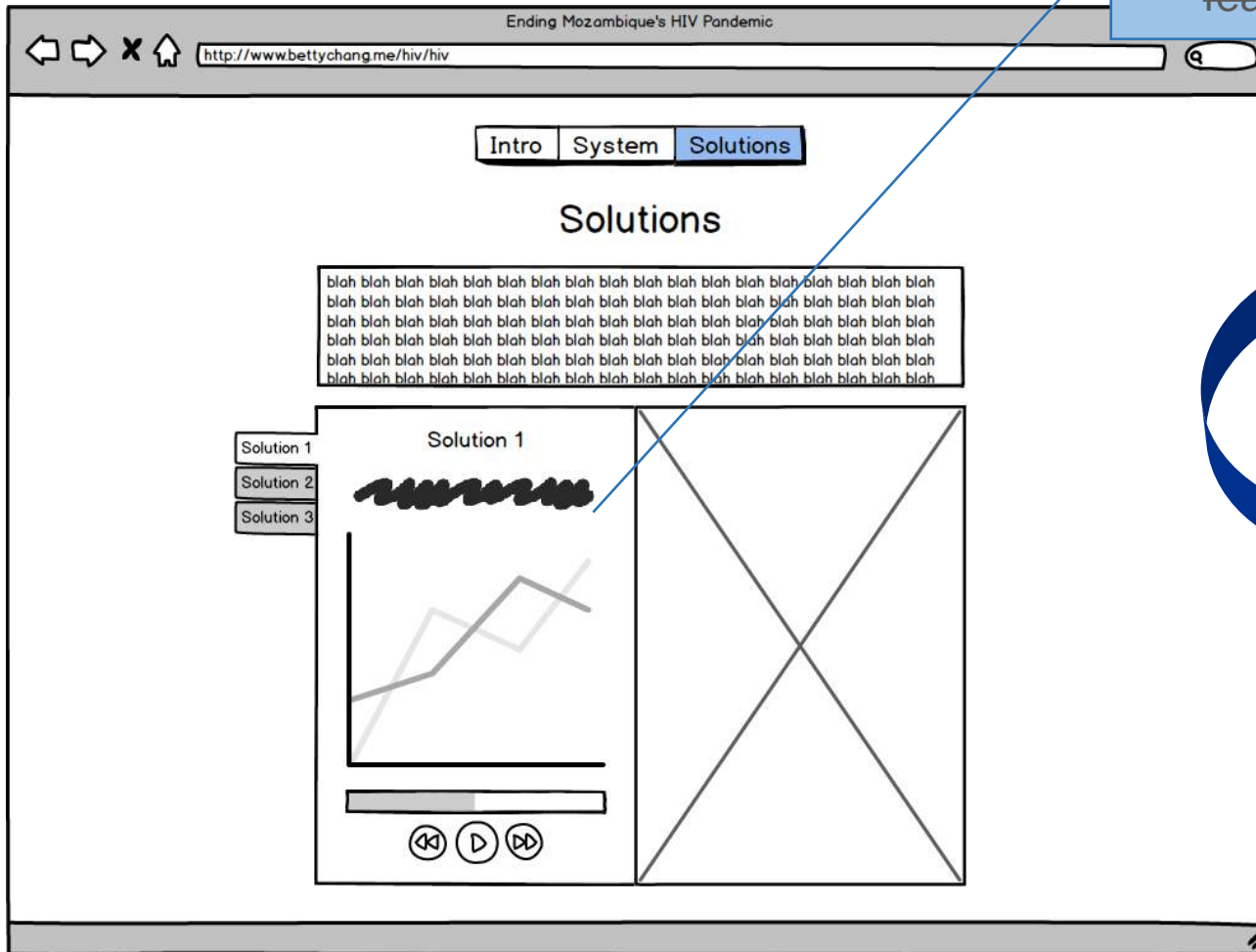


## Part 3: Solutions

Vertical tabs  
feature

- Three proposed solutions specific to Fatima/Mozambique
- Link back to Kumu.io mapping
- Multi-media

Through peer feedback, opted for vertical presentation because scannable, sequential, coding limitations



# Future Considerations

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**More data as evidence:** use statistics to inform relationships

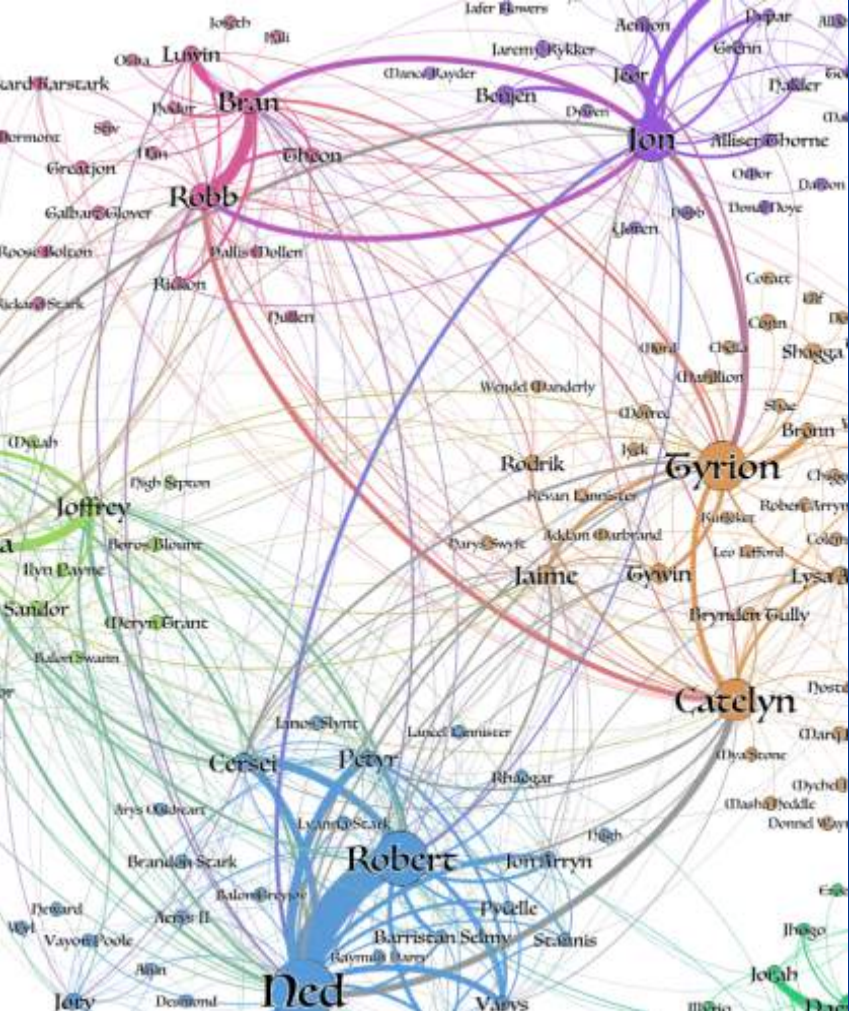
**System understanding:** improve UX of mapping

**Scannability:** less text, more multi-media

**Responsiveness:** UI/UX optimization including for mobile

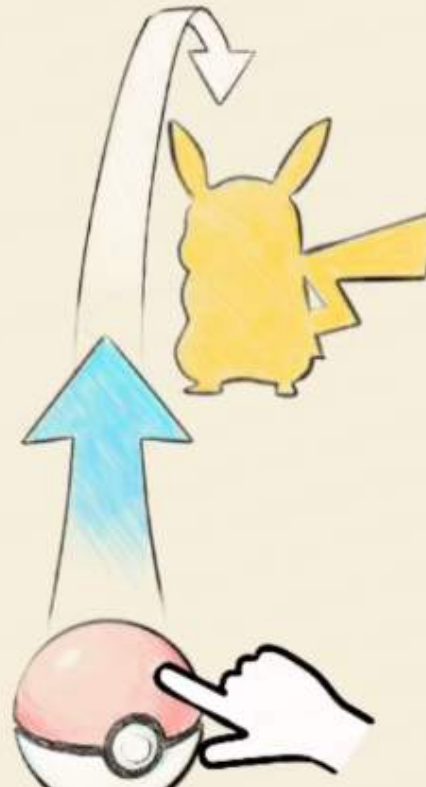
**Impact measurement:** tracking analytics and insights



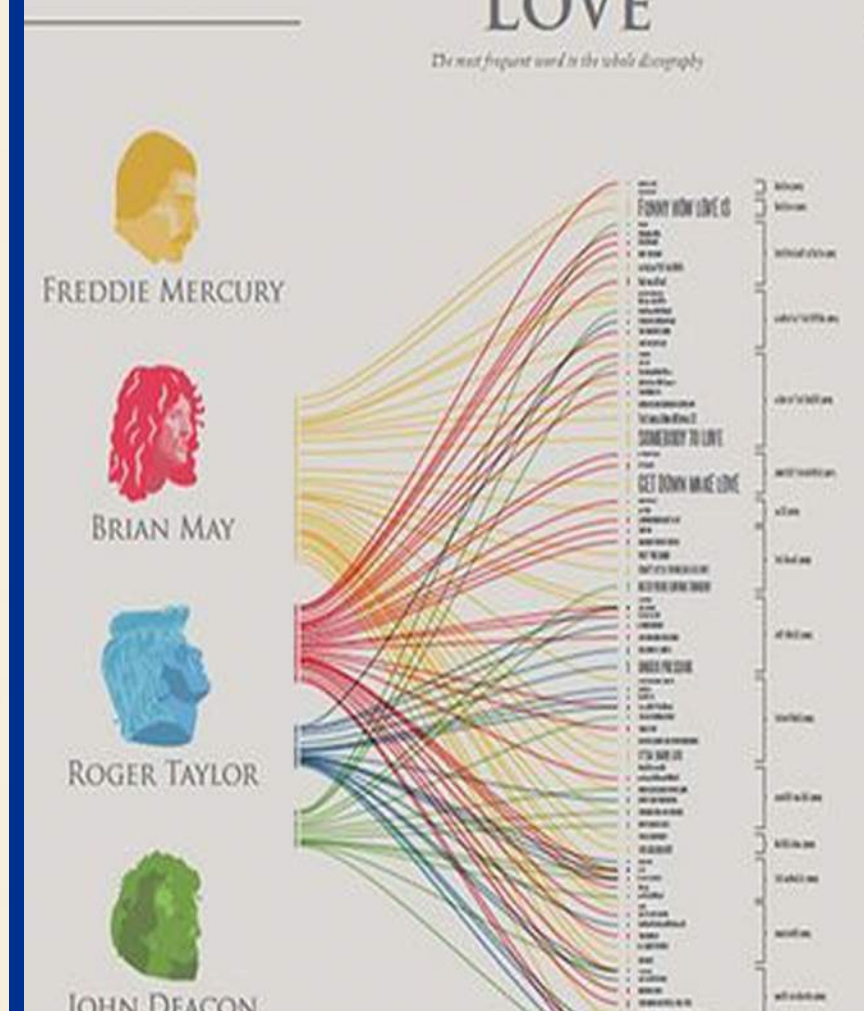


Data as evidence  
**Weighted  
System**

When a Pokémon appears, throw a Poké Ball to catch it.

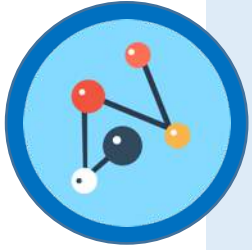


System understanding  
**First-Time User  
Tutorial**



Scannability  
**Data  
Journalism**

# Takeaways



Seeing the big picture (system) helps develop localized solutions to global issues



Data helps forecast impact allowing for solution evidence, prioritization and preparedness



Topics and relationships differ from context to context!



Former NY Senator  
Thomas Duane,  
Pride March 2018



[www.bettychang.me/hiv/hiv](http://www.bettychang.me/hiv/hiv)

*Betty Chang*  
*betty.chang@mail.mcgill.ca*  
*331-240-5529*

*Thank you!*

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