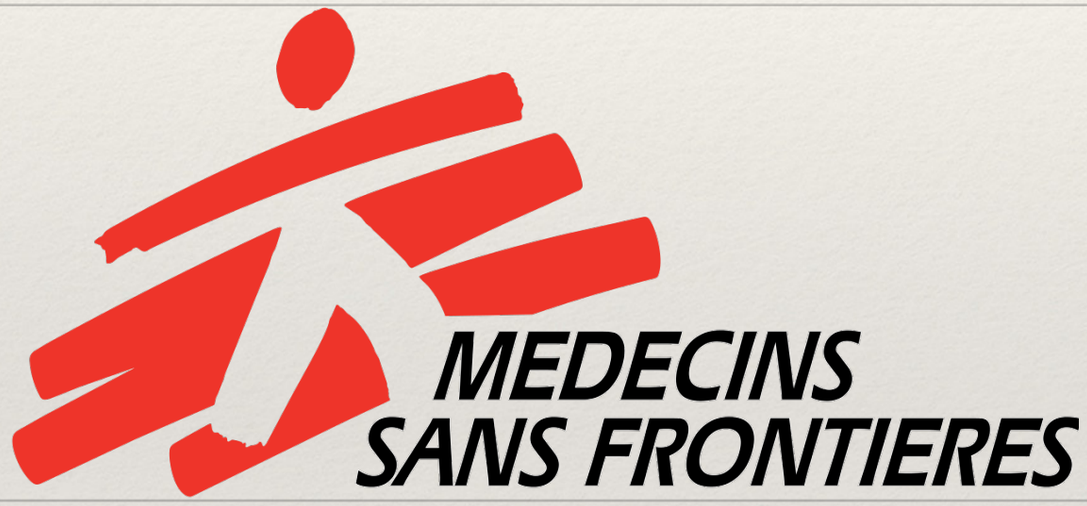


DA+A
CARE

Dulguun Bayarsaikhan | Nishant Sonkar
Vilas Sharma | William Tardio

Our Team

Dulguun Bayarsaikhan

Project Lead

Vilas Sharma

Technical Lead

Nishant Sonkar

Technical Lead

William Tardio

Business Lead

Agenda

1) Problem

2) Goals

3) Our Solution

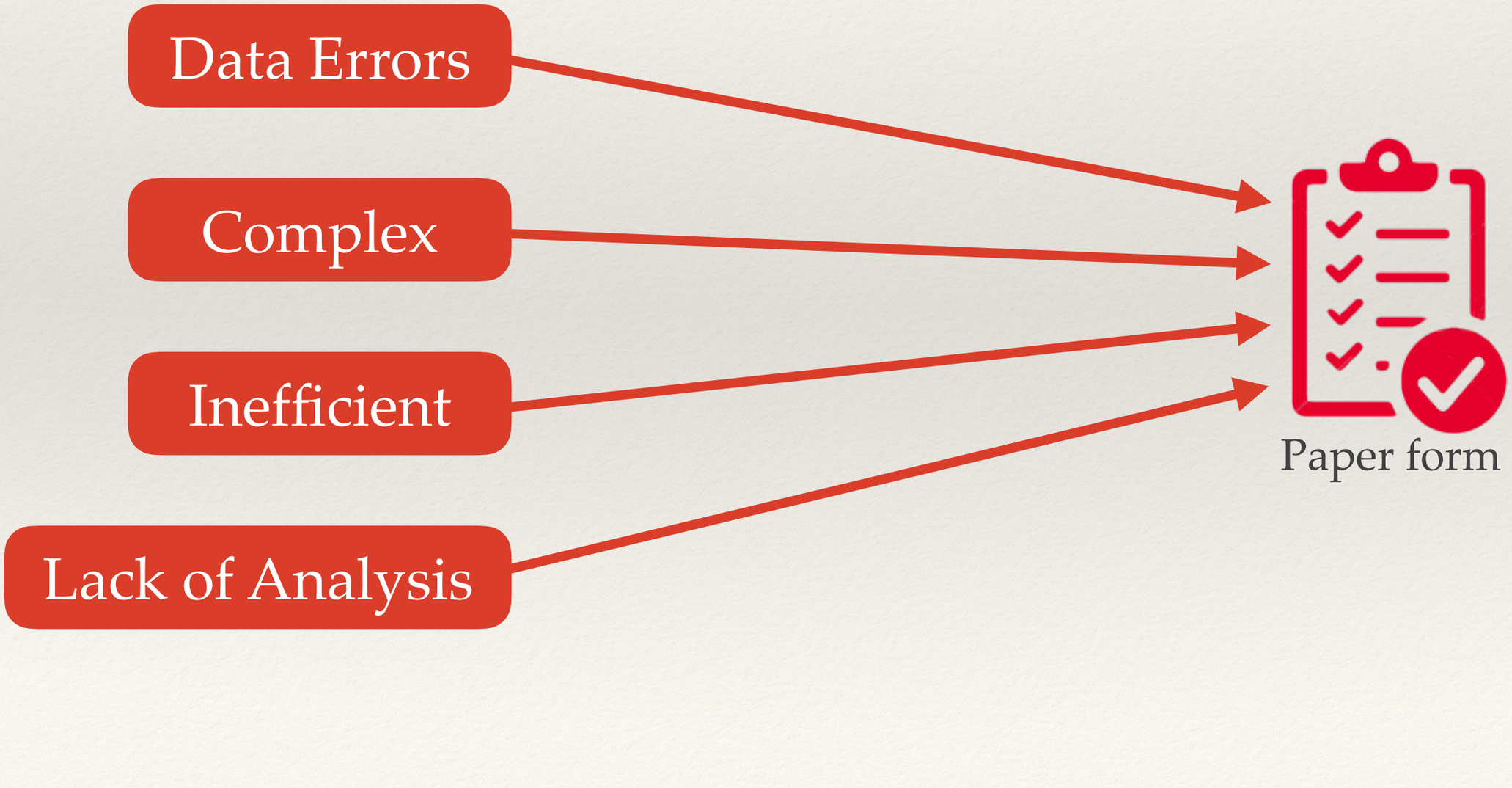
4) Feasibility

5) Challenges

6) Version 2.0

The problem

Administering vaccines in developing countries is broken!

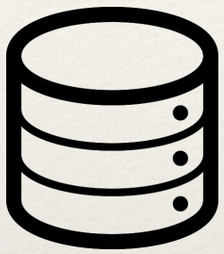


Why is this a problem?

Low quality healthcare

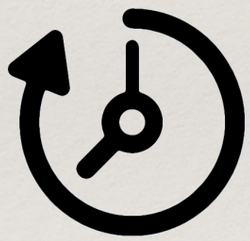
Goals

Focus on the PROCESS!



Reduce data errors

Increase efficiency of delivering healthcare



Simplify the process

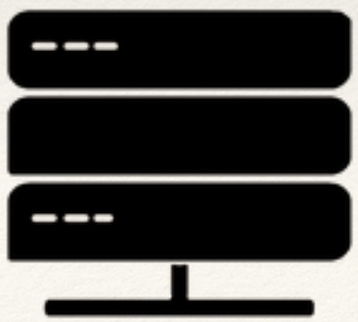
Enable analysis of data

Increase quality of healthcare!

Our solution

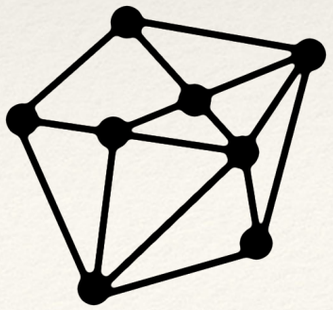
App with Question Flow Logic (QFL)

Local & Central Database

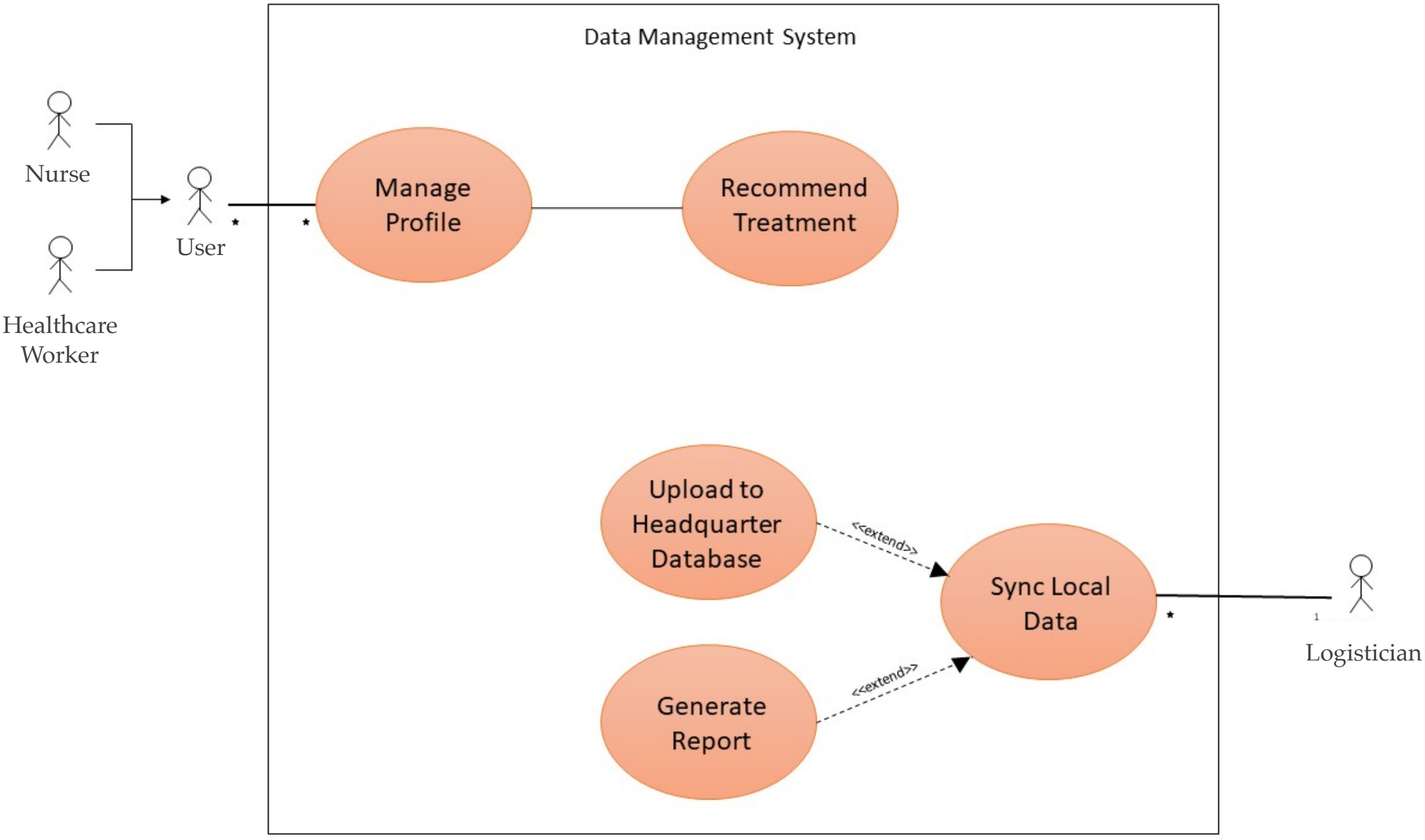


Question Customization

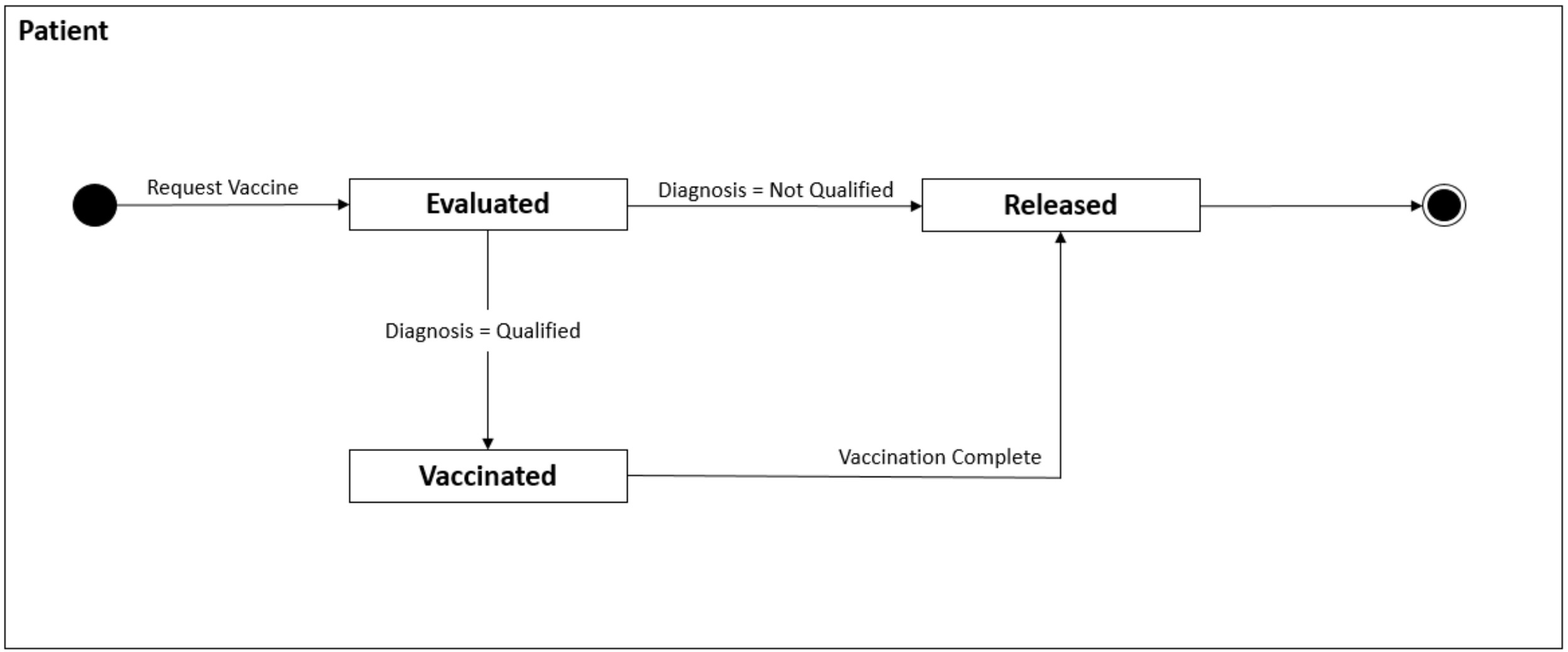
Clinical Decision Support Algorithm



Use Case Diagram



Behavior State Diagram



DEMO

iPad
1:20 PM
100%
MEDECINS
SANS FRONTIERES
DATA CARE
Sign in
User ID
Password
Sign in
Forgot password?

MEDECINS SANS FRONTIERES
DATA CARE

New Patient

Edit Existing Patient

iPad 1:20 PM 100%

Patient Information

First Name

Last Name

Male | Female

Date of Birth

Sun 6 Sep	7	57
Mon 7 Sep	8	58
Tue 8 Sep	9	59
Wed 9 Sep	**10**	**00**
Thu 10 Sep	11	01
Fri 11 Sep	12	02
Sat 12 Sep	13	03

NEXT

Patient Information

What is the patient's temperature?

30°C

NEXT

Patient Information

Is the patient HIV positive?

YES NO UNKNOWN

NEXT

Patient Information

Is the patient HIV positive?

YES | NO | UNKNOWN

NEXT

Patient Information

Is the patient HIV positive?

YES | NO | UNKNOWN

NEXT

Patient Information

Is the patient currently taking HIV medication?

YES

NO

NEXT

Patient Information

Is the patient currently taking HIV medication?

YES

NO

NEXT

Patient Information

Is the patient currently taking HIV medication?

YES

NO

NEXT

Recommendation

Vaccinate

Return to Home

Recommendation

DO NOT Vaccinate

Return to Home

Feasibility

Technical	Economical	Organizational
✓ Existing HQ database ✓ Use of open-source ✓ Compatible with central repository	✓ Cost to implement is low (<$50,000USD) ✓ Attractive ROI ✓ Potential for long-term impact	✓ Organization wide push for better data ✓ Faster patient evaluation by HCW ✓ Previously piloted

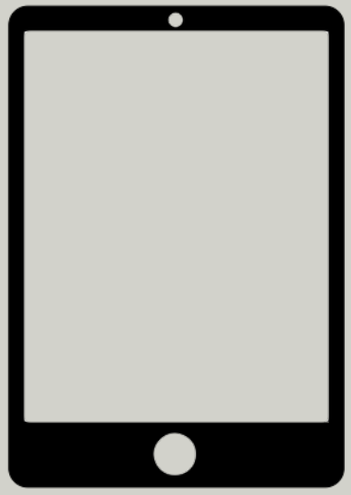
Economic Analysis

Items	Year 1	Year 2	Year 3	Total
Savings on Stationery(Papers,Printing, Maintenance,Ink, Packaging)	$2,000	$2,000	$2,000	
Savings on Warehousing and inventory storage costs	$3,000	$3,000	$3,000	
Savings on Manual Labor cost in tranfers between different centers	$10,000	$10,000	$10,000	
Savings on Courier Costs to HQ	$15,000	$15,000	$15,000	
Total Savings by Year from automation	**$30,000**	**$30,000**	**$30,000**	
Cumulative Present Value of Savings	$27,522	$52,773	$75,938	
Infrastructure	$1,000	$0	$0	
Development Labor	$10,000	$0	$0	
Total Development Cost	**$11,000**	**$0**	**$0**	
Hardware(Development, Testing and Production Environment)	$5,000	$5,000	$5,000	
Software	$5,000	$5,000	$5,000	
Operational Labor	$10,000	$10,000	$10,000	
Total Operational Costs	**$20,000**	**$20,000**	**$20,000**	
Total Estimated Cost by Year	**$31,000**	**$20,000**	**$20,000**	
	NPV @ 9%			**$4,938**
	MSF does not currently implement any			
Intangible Benefits	such service on the field. This deployment would substantially increase the efficiency of the treatment provided, besides improving the accuracy of the data it analyzes, for ensuring the success of future			
Break Even Analysis				
Savings By Year	30000	30000	30000	
NPV By Year	$27,522.94	$25,250.00	$23,165.00	
Remaining amount for break even after 2 years		$18,227.00		
Number of Days into the third year for achieving breakeven point		287 Days		
Total Breakeven point		**2.78 Years**		

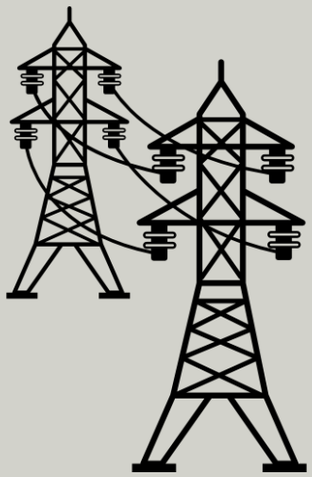
Challenges

Internet

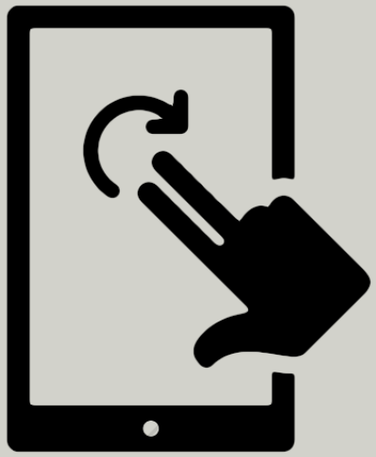
Durability



Power



Usability



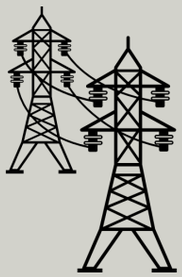
Addressed challenges

Internet

Local Database Syncing
HQ Syncing at Basecamp

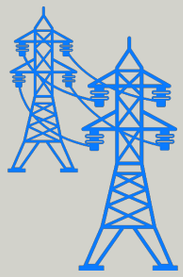
Internet

Power

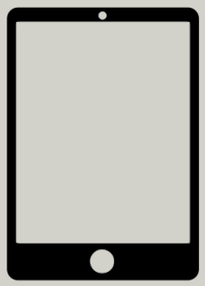


Solar Panels
Backup Tablets

Power

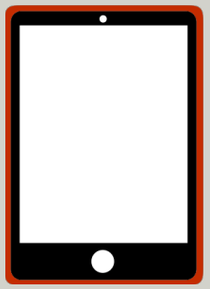


Durability

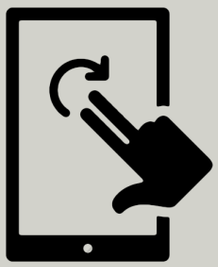


Military Grade Cases
Pre-Production Testing

Durability



Usability



Simplified UI
Staff Training Program

Usability

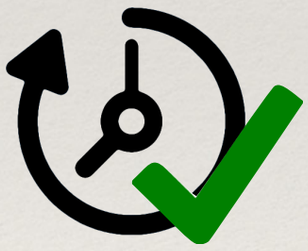
Version 2.0

- Pediatric malnutrition
- Patient tracking
- Build off of foundation to address this growing need
- Will allow us to provide more effective and timely care

Data Care

Reduces data errors through QFL

Increases efficiency for both HCW and patients



Simplifies the process of screening patients

Enables detailed data analysis

Thank you.