

Problem or need: _____

Background information (Why do you use this equipment, what is the treatment that is sought, what does the entire process entail): _____

Technical description/specifications: _____

How is the local user community approaching the problem? What type of improvised, or local solutions are being used? _____

Who is the primary contact for this challenge? _____

Who are the key stakeholders (do you have their contact info? if not, get it...)

Name & Phone/Email	Role

What relevant resources are available? *Consider materials (not just local materials, if they are imported, then just note it. Don't get hung up in price. Cost is best defined as how difficult it is to obtain. Difficulty MAY include price, but may also be affected by other issues. Also consider resources to obtain relevant training, and frequency of supply. Use the parameter table.*

What resources may be needed? _____

What are the potential benefits of solving this challenge? _____

What are the potential obstacles? _____

What are the risks of undertaking this project? _____

How can you get the local user community involved in the process? _____

What photographs and videos should you take? (take them!!) _____

What additional information should you collect? (collect it!!) _____

Checklist

- Did you see the patient?
- Did you see the user go through the process?
- Where you able to get some “alone time” with the user to make sure they spoke candidly?
- Where you able to deflect “preventative” measures that do not address the problem at hand? (e.g., *clean water to avoid cholera instead of a better IV for the patient once he has cholera*)
- Where you able to deflect big science solutions that are far away from solving the problem at hand? (e.g., those in the upper right hand of the Global Health Innovation Compass; those that rely on fancy technology that is years and millions of dollars away being delivered)
- Did they share some anecdotal “war stories” on how they deal with the issue?
- Did you go through the parameters of design to obtain a vantage point from each parameter?
- Did you look at the design strategies so brainstorm some potential solutions?
- Where you able to share some initial ideas with your user?
- Did you sketch out the problem?

Innovations in International Health Medical Device Design Attributes

Essential	Enhancing	Long Term
<ul style="list-style-type: none"> •SAFE •Accurate •Robust •Longevity •Cheap •Reliable •Reusable/Disposabl •Redundant 	<ul style="list-style-type: none"> •Mobile •Connected •Smart •Plug n’ Play 	<ul style="list-style-type: none"> •Local Manufacturing •Local Innovation

Innovations in International Health Medical Device Design Strategies

- Hybridization = Two types of technologies mashup up
- Vintage Technologies + Smart Design/Tech = New Solutions
- Finding an invention in an improvised solution and sprinkling some engineering
- Bottom up observation: What are the people telling you? What are the users saying?
- Be trendsetting, not trendy
- Context shifting
- Distributed Systems: Decentralizing solutions by using many nodes that talk to each other
- Crowdsourcing: Using many individuals working as a passionate army to arrive at a solution

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EC.710 D-Lab: Medical Technologies for the Developing World
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