

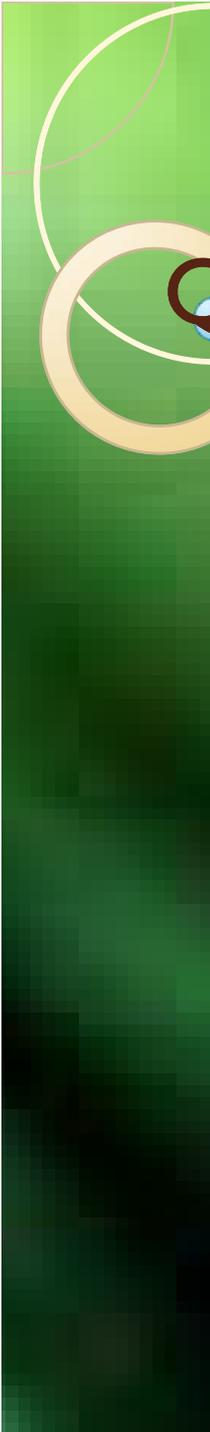


# D-lab Team Ecuador

Trip Leaders: Anna Young, Jose Gomez-Marquez

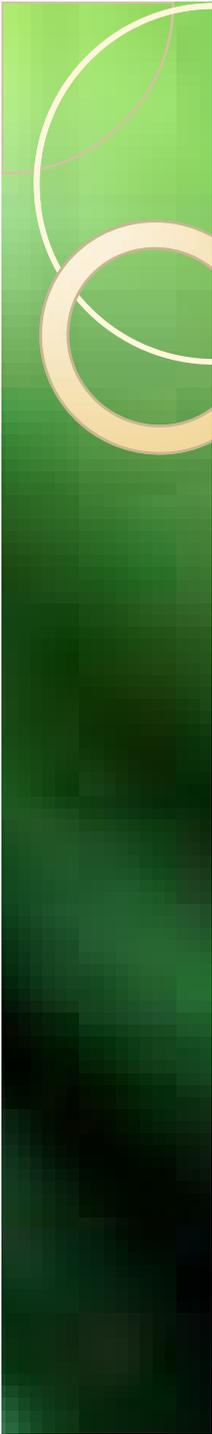
Students: Nick Pellegrino and six other  
anonymous students





# Qualitative Needs Assessment

- D-Lab's first trip to Ecuador!
- We hope to:
  - Identify projects for both D-Lab and D-Lab Health
  - Through:
    - Group assessments
    - Individual interviews
- Emphasis on *participatory* survey
- Both an asset-based and a needs-based assessment



# IT Projects

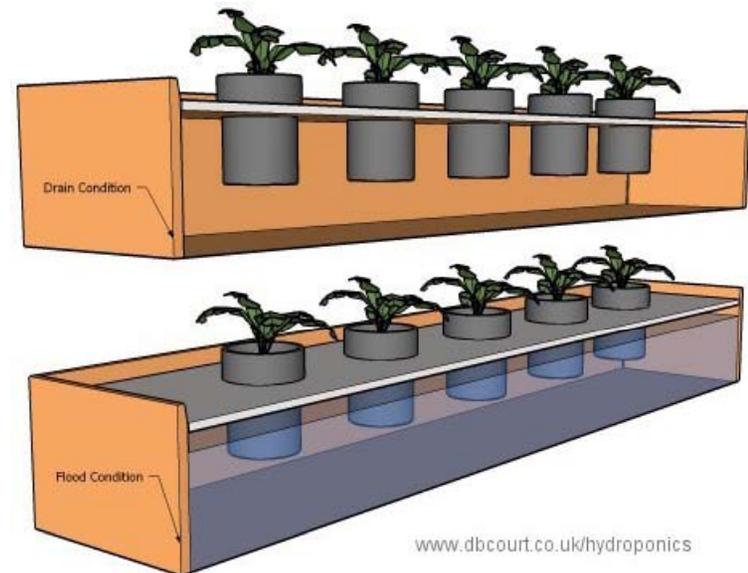
- Deploying software to facilitate education
  - Emphasizing the creative process
- Introducing programming to computer students
  - Past background is in using programs, not changing/creating them

# Hydroponics

- Problem addressed
  - Poor community health
- Hydroponic Systems
  - No soil, low cost, little land
- Project Goals
  - Improve health through increase in vegetable intake
  - Aid city microenterprise by making growth of

profitable vegetables  
easier

- Teach the technology to partners





# Encouraging Design Through Hydroponics Assembly

- Educational Program

- Provide kits for building hydroponics systems
- Encourage students to change design to match their home
- Determine effectiveness through contact with partner.
- Goal for Impact
- Students gain confidence designing for their community
- Program will continue after we leave
- Provide a base for similar future D-Lab projects

# Background on MEDIK Project

## Identified Problem:

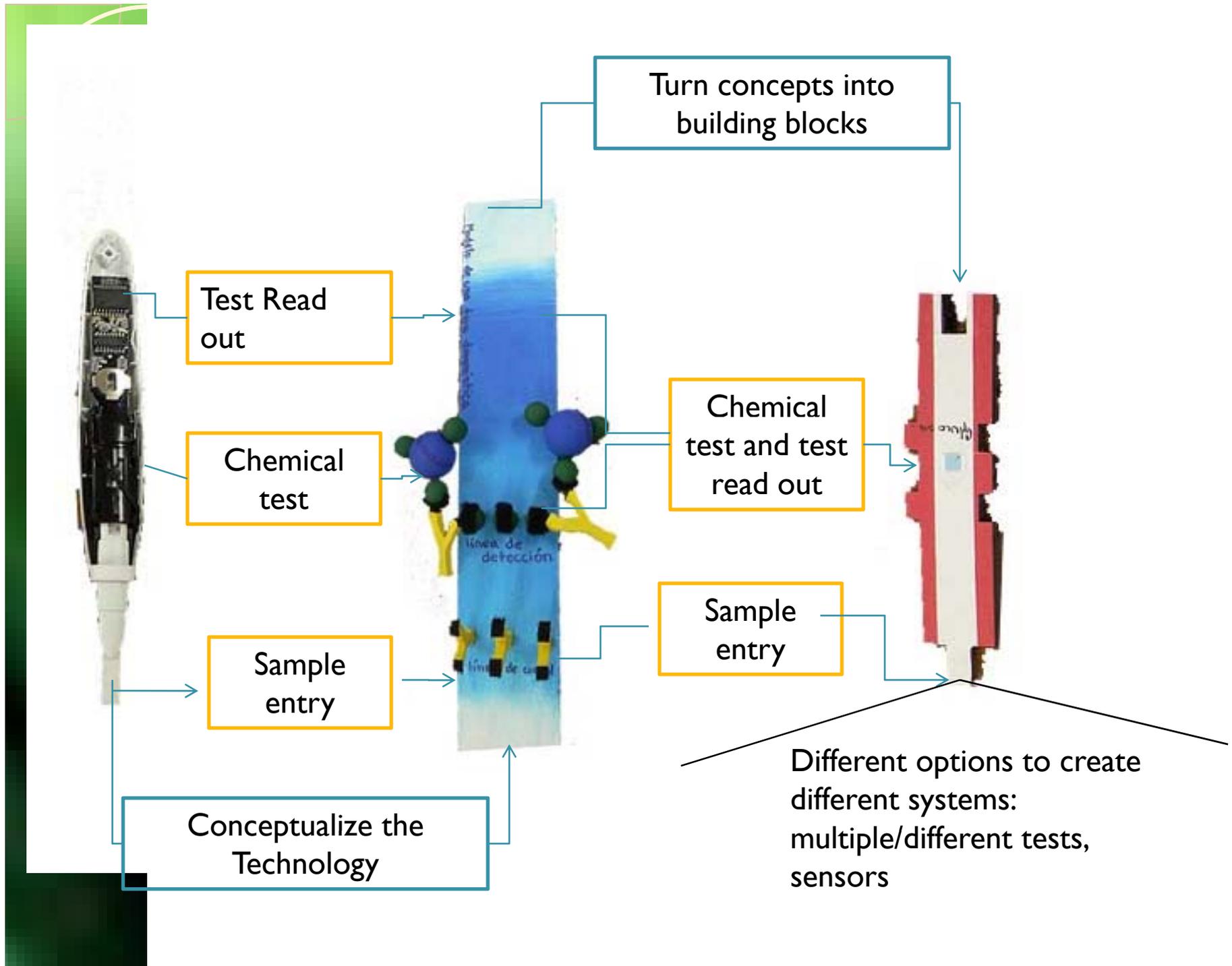
- Most medical equipment is donated
- 80% of donated equipment fails because of lack of user knowledge and maintenance
- D-lab Health team 2009 found centrifuges major limiting factor

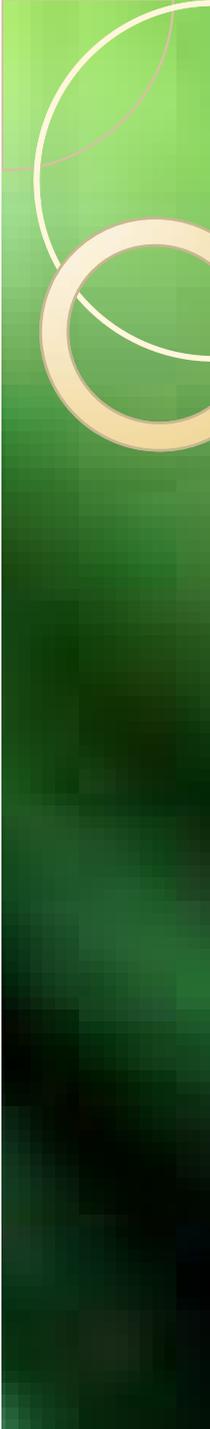
## Work So Far:

- Turn the tables: instead of MIT students design, the users design
- MEDIK project gives healthcare workers tools to innovate and maintain
- 6 kits taught through class in Nicaragua

## Plan for IAP

- Begin a new program in Ecuador
- Set up class and workshop to work with microfluidics and diagnostics
- Identify both urban and rural partners
- Tailor program to different situations
- Modify kits to meet specific needs of partners





# Ensuring Reliable Water Sources

## Right Now in Ecuador:

- In most areas: piped water is either unavailable or contaminated and unsafe
  - Not enough water available to support hydroponic systems
- 

## To Do:

- Design household rainwater collection and purification systems
- Identify different levels of water needs and integration into their environments
- Analyze water quality and safety conditions through testing

MIT OpenCourseWare  
<http://ocw.mit.edu>

EC.701J / 11.025J / 11.472J D-Lab I: Development  
Fall 2009

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.