Building for the Invisible Majority
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Hi! I’m Keerthana from Cochin, India

I’m a Software Engineer, I work with BHGE

I’m here to talk about building digital solutions, OUTSIDE the Western world
Why am I not here in person?

Well, there was a little problem,

Circumstances beyond my control

A Little Problem
“A Little Problem to Live With”

There are disadvantages to not coming first
“The lower penetration is not a cost, its opportunity”

As expendable income and access to the internet increases, interest in tech increases.
Emerging markets – The rise of spending

• India in 1960 – 65% of people in poverty
• India in 2010 – 26% of people in poverty
• i.e. 40% of the population has a better std of living & expendable income

(Starker changes seen in certain countries like China)
“Your next consumers are here”
Barrier #1: Language

English is a very intimidating second language
Use Case #1: Transport

An industry revolutionized by software
The worst traffic in North America: Vancouver
The average Indian traffic
Assume,

- You’re used to the chaos of Indian traffic
- Traffic is a nightmare
- You’ve never used a smart phone before.

The chance you’ll use Uber?

- The chance you’ll use Uber when it’s instructions are all in English
  - The chance you’ll use Uber when only payment method is card
    - The chance you’ll use Uber with resource drain: GPS, Battery, Data
From the Uber blog:

• Locations for service in US/Canada/Europe vs. South Asia/Africa - https://www.uber.com/en-IN/cities/

• Languages available in US/Canada/Europe vs. South Asia/Africa - https://www.uber.com/en-IN/country-list/
Barrier #2: Devices

Multiple cheap devices, low cost, low specifications
LOW PERFORMANCE
For example, in my own family:
Barrier #3: Network Infrastructure

Forget 5G, sometimes, it’s 3G, 2G, H+
Infrastructure requirements – The battle for bandwidth

• Cell towers in USA - ~350,000 for 327 Million people
• Cell towers in India - ~461,000 for 1.18 Billion people
• Cell towers in China - ~1.94 million for 1.4 Billion people
Challenge: Let’s load CNN in 2G

- Open developer tools (F12)
- Go to Network tab
- Throttling dropdown > Custom
- Avg 2G profile - ~50 kbps
- Go to cnn.com
- WAIT :(
Netflix VS Hotstar – The battle for views

- Netflix in India - < 1 Million subscribers (predicted)
- Hotstar in India - ~150 Million subscribers

Perspective: 150 Mill - ~30% of India’s internet/ half of US
So what can do now??

• Tailor your product to the terrain - Language, Cultural sensitivities

• PERFORMANCE in cheap, cracked screen phone on H+ - Have a ‘lite’ version

• Usage directions/ Stress on universal visual cues mode - Digital illiteracy is a disability and a MAJOR barrier for entry

• Pro tip: Pay attention to pricing, a good deal is irresistible
The Magic IS possible

https://www.keralarescue.in

Together, we can solve all the little problems 😊
Contact Control Room or Disaster Management Cell or District Administration for any support.
Volunteers may contact District Project Managers for support related to volunteering and contributions.
Please be gentle
That’s all from me folks!

@KeerthanaK17

Have a great day! :D