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Overcoming hurdles to solar cooking diffusion by designing for diversity of cooking standards

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Welcome!

- Background
- Obstacles in solar cooking diffusion
- Diffusion theory and Opinion leaders
- Methodology and its application
- Q & A

Background

Solar cooking has many benefits.

That’s why we are here today.

Background

Decades of promoting solar cooking behind us

Still only limited cases of successful long-term adoption of solar cooking technologies 😢

Obstacles to solar cooking diffusion

Why is it difficult to find good examples?

1. Paucity of quality data that is both relevant and current
2. Short-termism and lack of financial sustainability in the initiative's design
3. Ineffective communication strategies
4. Failure to consider and integrate local needs, culture and perspectives into the initiative's strategy
5. Underuse of social leverage

Obstacles to solar cooking diffusion

1. Paucity of quality data that is both relevant and current

Impact assessments lacking

Few current examples

Obstacles to solar cooking diffusion

2. Short-termism and lack of financial sustainability

Equipment is **given for free** with no service in return or payment

Inadequate training

no **supply chain** for spare parts or service

Obstacles to solar cooking diffusion

3. Ineffective communication strategies

Setting unrealistic expectations

Not setting the example

Failure to address the poverty stigma

Obstacles to solar cooking diffusion

4. Failure to integrate local needs, culture and perspectives

cooking indoors

world view and values

real limitations of the technology

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Obstacles to solar cooking diffusion

5. Underuse of social leverage

opinion leaders

influence pathways

influencers

The poverty stigma

Is solar cooking only for the poor?

'Solar cooking is a perfect tool for "the most in need", where the sun is also shining the most'

Is solar cooking merely a side note?

=> (

) =>

Will you abandon solar cooking once you have saved enough money and earn more for a living?

Is that what we want?

Diffusion theory

Diffusion theory puts great emphasis on Opinion Leaders

When opinion leaders adopt an invention the diffusion accelerates

The “tipping point” is reached

The S-curve of diffusion

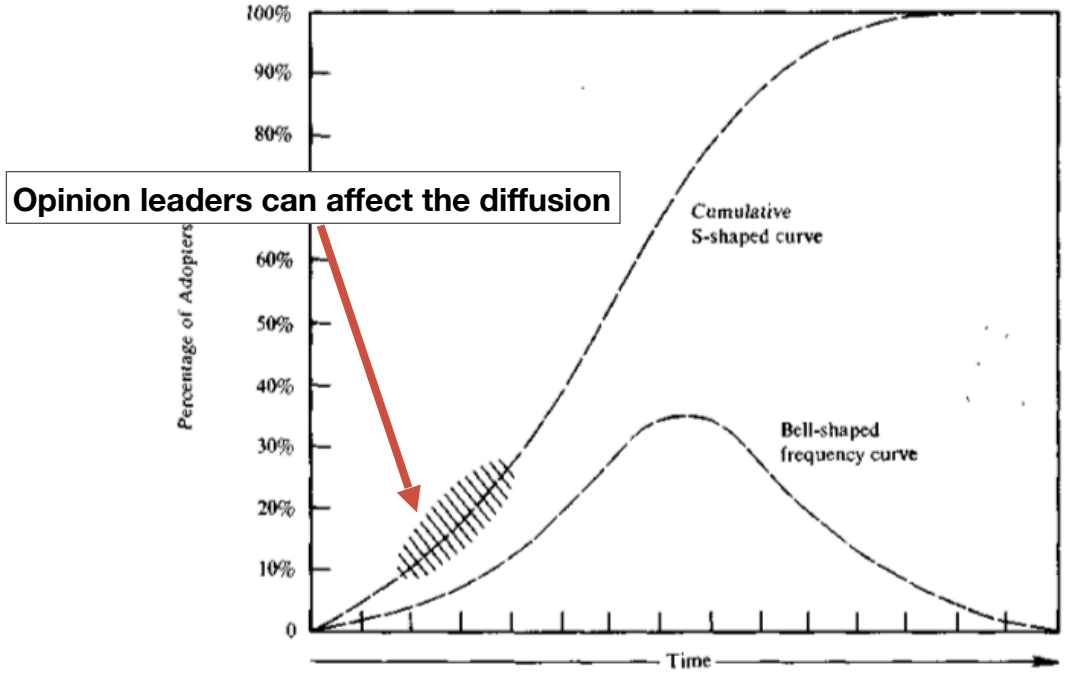

Figure 7-1. The bell-shaped frequency curve and the s-shaped cumulative curve for an adopter distribution.

From Rogers, 1983

How can we go faster?

“Opinion leaders have higher socioeconomic status than their followers”.

(Rogers, 1983)

Solar Cooking

-

the Future Kitchen

If solar cooking is more than just a side note

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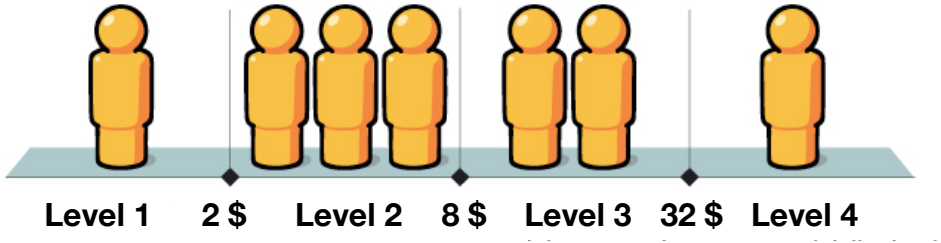
then it has to be for everyone!

REGARDLESS OF LIVING STANDARD

Where do we live?



Daily income per person in USD, corrected for price differences.
Source: Gapminder

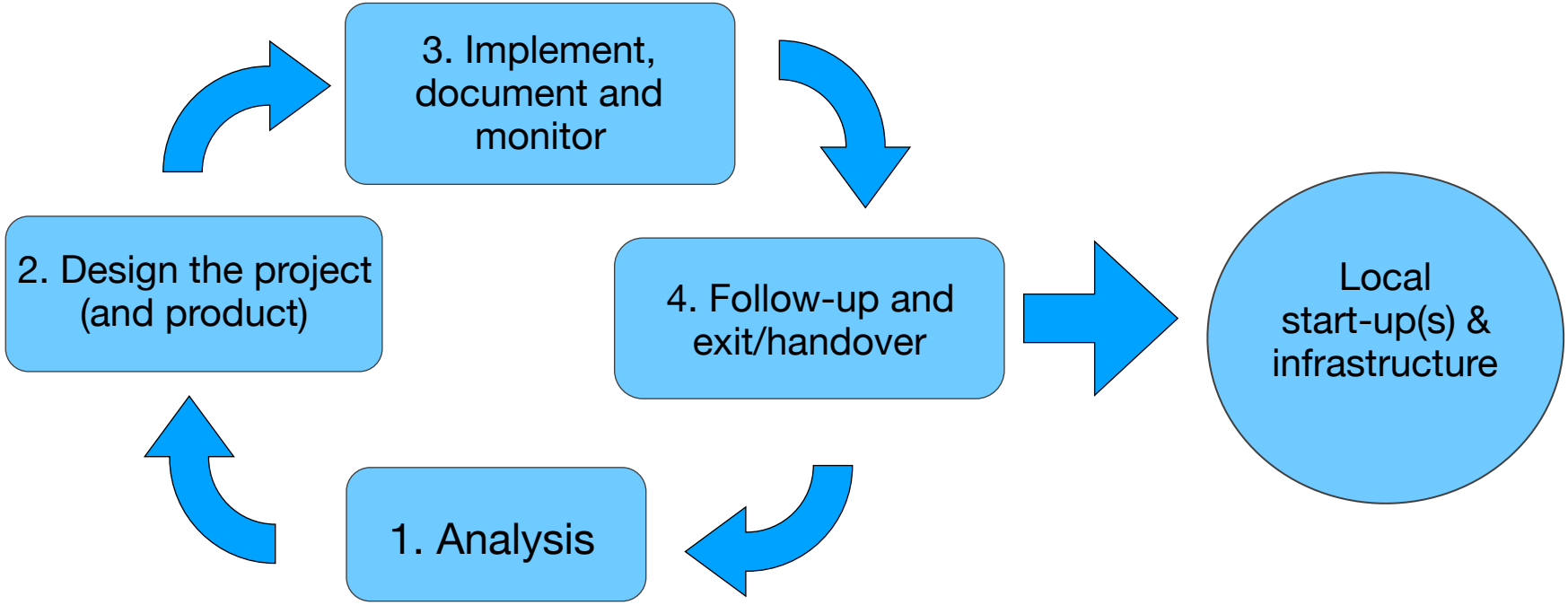
7 billion people
4 living standards
Present on all continents
In all countries

Disseminate and Market Solar Cooking at all Levels of Living Standard

Advantages

- The “poverty stigma” is removed
- Increased market reach
  - More balanced price distribution
  - Better access to equipment and spare parts (=easier sales promotion)
  - Accelerated R & D
  - Reduced CO2 emission

Our model



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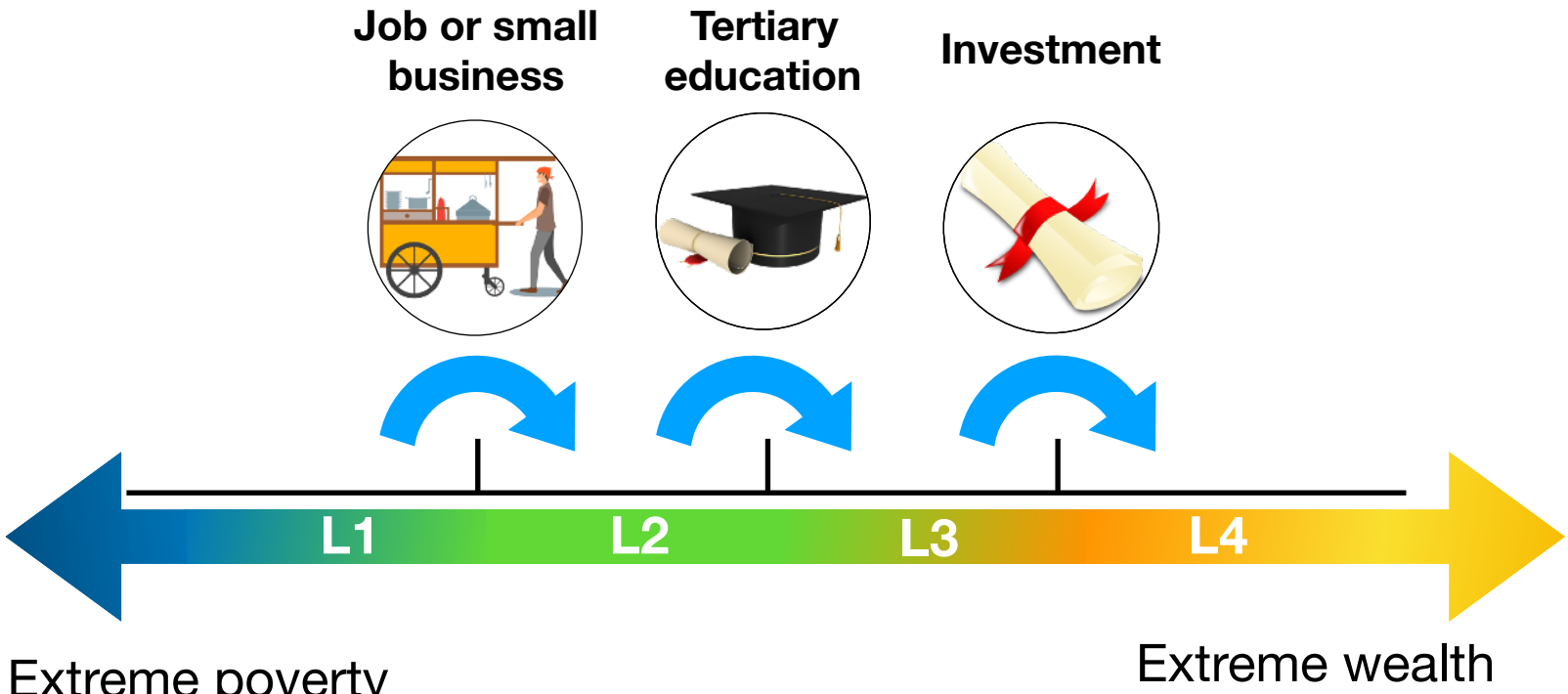
Mobility between levels



Level characteristics

	L1	L2	L3	L4
Influence pathways				
Resources				
Needs & desires				

Level characteristics

Education

Support

Dreams

Motivation for buying solar cookers

Concerns

Power dynamic

Status items

Purchase habits

Gender dynamic

Resources

Questions

Available time

Our model applied to heat retention cooking

Motivation	Save money, more free time, health	Save money, more free time, health	More free time, improves taste
Obtained	Home-made	purchased at thrift store	purchased at camping store
Mobility pathways		University student → upgrade →	Employed adult
Product			

L1 L2 L3 L4

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Questions?

Thank you

Sources

All images sourced from pixabay.com unless otherwise specified

Rogers, M Everett. Diffusion of innovations (Third edition). The Free Press (New York 1983)