

Assistive Technology: Innovating from the Middle of the Pyramid

Marie Stettler

July 31, 2013



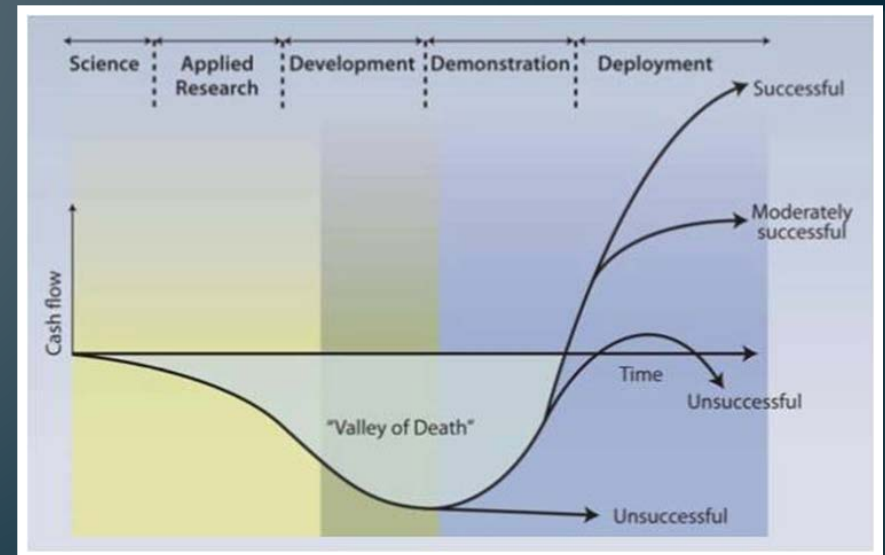
Bridging the Gaps

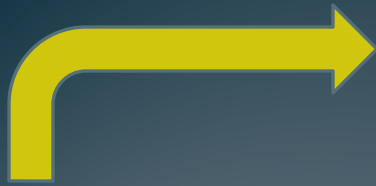
Need to Solution

Over 4 Billion people live off less than \$2/day



Idea to Implementation





**A lot of need,
finite resources.**

Focus: Area of great need that address common development issues

- 10/90 Gap Public Health
- Low-income and middle-income countries 5%-15% assistive devices are available



Need

Solution

Advantages of Providing Solutions in Response to Need

What the American S&T Community can do, and why they would get involved.

User Advantage

Make more self-sufficient workers and community members

User-centered Design

Customized to Needs

Developer Advantage

Unique Constraints Work

Global Engineers are Sought out in Job Market

Latent Purchasing Power Opportunity

Express Social Priorities through Innovation

External Advantage

External markets Benefit from Preliminary Research

American Jobs

- NGO
- Suppliers
- Corporate Adaptation
- Academia

Spark Ideas for Domestic Innovation

Acceptable

Accessible

Quality

Adaptable

Available

Affordable

Design Priorities

Appropriate Technologies maximize
Benefits

Two Success Stories in Assistive Technology

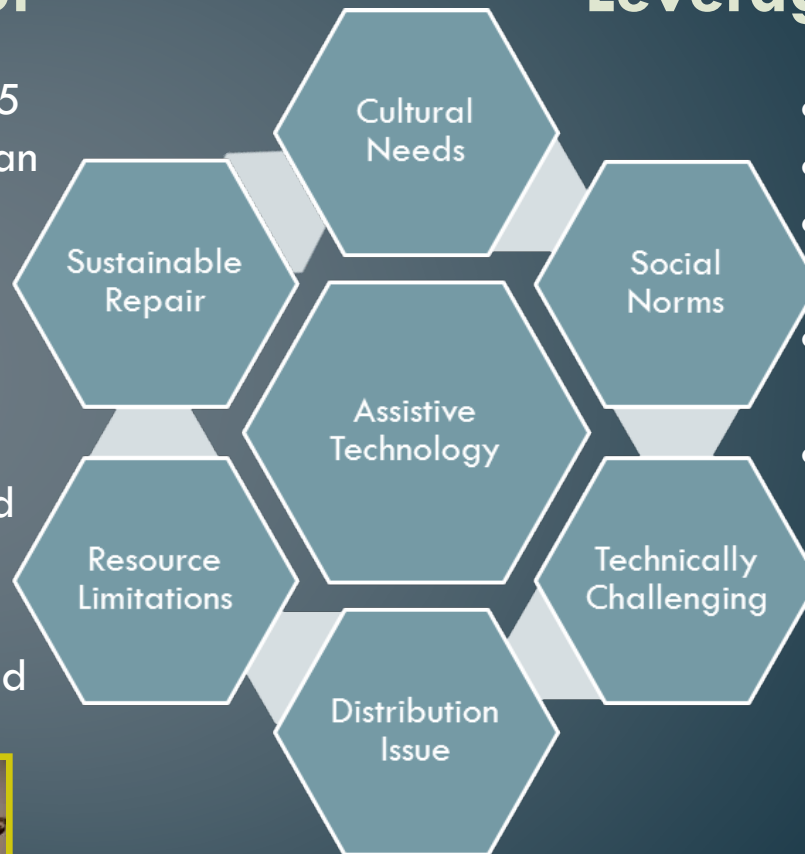
Jaipur Foot

- Originated in 1975
- Part of the Bhagwan Mahaveer Viklang Sahayata Samiti (NGO)
- 1.3 million polio patients and amputees provided prosthetics
- Four Percent of Budget is Overhead and Administrative



Leveraged Freedom Chair

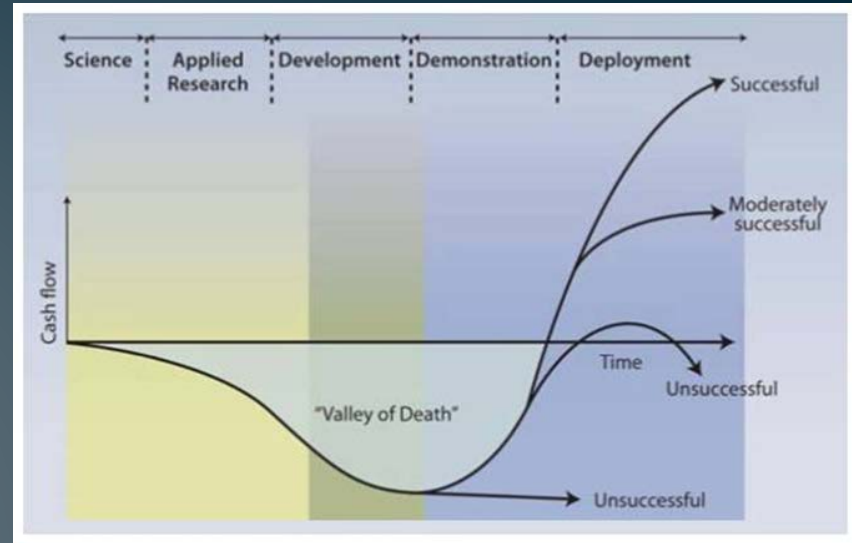
- Founded in 2012
- GRIT Social Enterprise L3C
- 80% faster; 50% more torque
- 7 countries with regions of focus
- Partial List of Partners:
 - Whirlwind Wheelchair
 - ASME
 - Jaipur Foot
 - Continuum





Interest is present, now how to implement?

How can policy encourage social enterprise?



- Promote Local Ownership and partner with Government and Citizens
- Accountability and transparency
- Evidence-based
- Elevate USAID as the lead development agency



Unified International Development

Helping to further close
the 'Valley of Death'



Low-Profit Limited Liability Company

Only Recognized in
9 States and 2
Native American
Nations

Social Prioritizes
Have Precedence

Bridges Gap
between Non-profit
and For-profit

Advanced Market Commitments

Arrangement to
Encourage Market
for Product to Exist
at 'Idea' stage

GAVI Alliance

Best Way to Close
Gap over the
Valley of Death

Differential Pricing

Private Sector
Utilize to
Compartmentalize
Funding

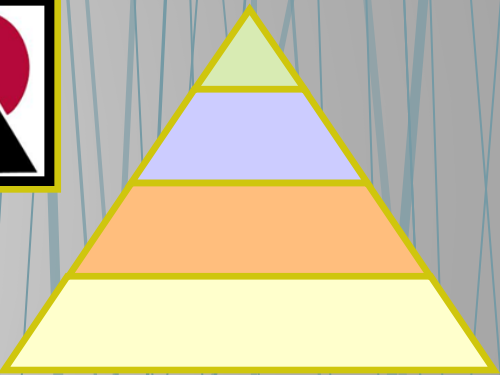
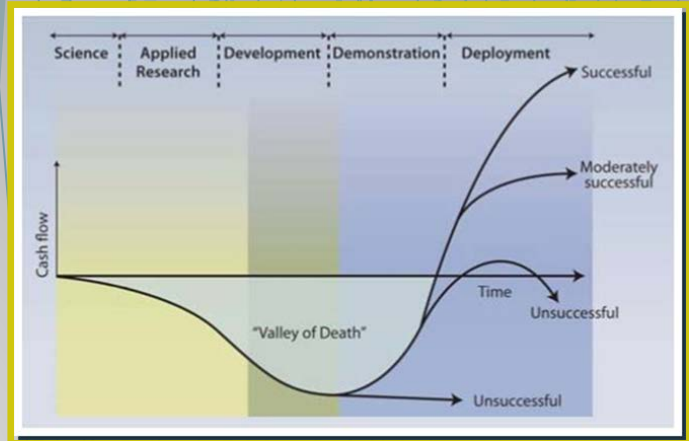
Controversial due to
Prescription Drugs

Varying Resources
and Manufacturing
should Affect
Pricing

ASME-Governmental Relations Staff-Melissa Carl
Faculty Member in Residence-Dr. Gail Marcus
Technical Mentor-Julian Leland
John Buydos
Dr. Sean Moseley and Dr. Mark Minster
The WISE Guys!

Acknowledgments



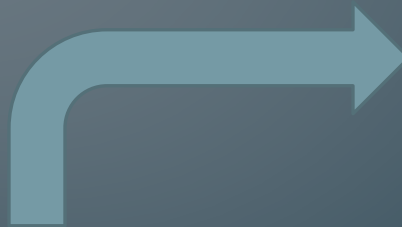
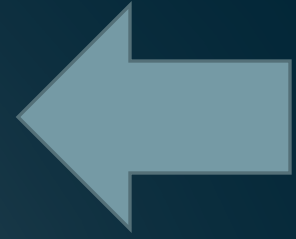


Questions

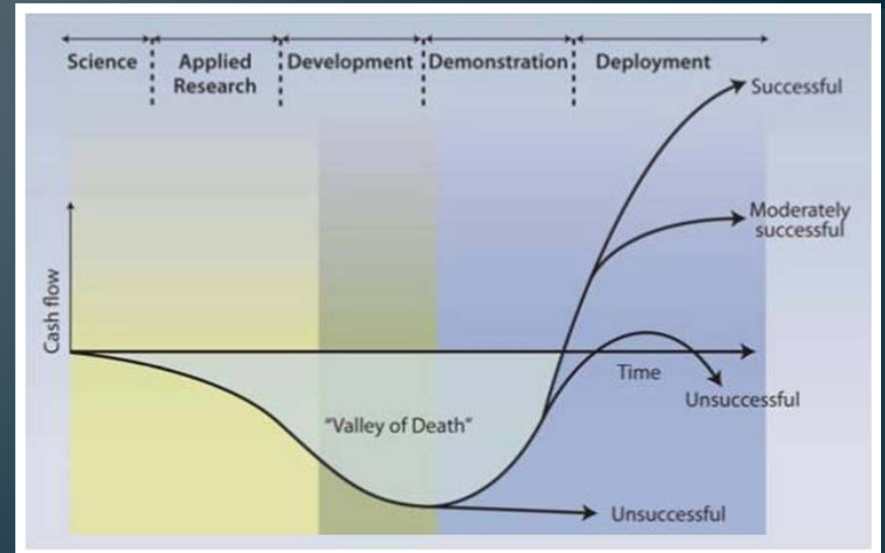
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Idea to Implementation





Rose-Hulman Institute of Technology

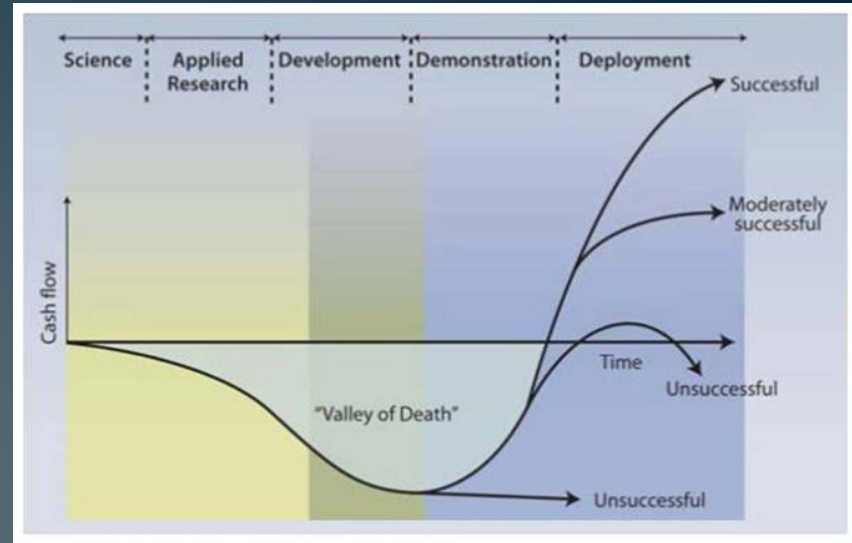


- Founded in 1874 by
Chauncey Rose
- Terre Haute, IN
- First Women in 1995
- 22 Division III Teams
- 2,100 Graduates
- 100 Post Grads



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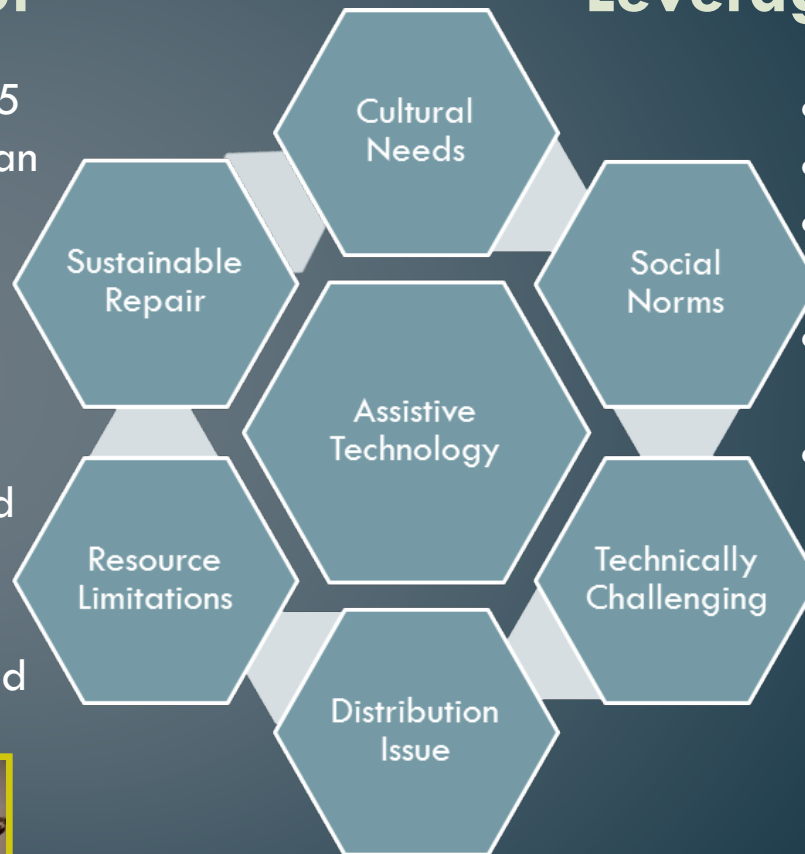
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GAVI Alliance

Private and Public Collaboration

- Five Public Contributors:
 - Italy
 - United Kingdom
 - Canada
 - The Russian Federation
 - Norway
- Private Donor:
 - Bill and Melinda Gates Foundation
- 2007 contributed \$1.5 billion dollars to ensure 200 million doses annually for \$3.50 for 10 years



Low-profit Limited Liability

How L3C's tax classification can benefit the organization and recipients

- Socially beneficial purpose, not maximizing income
- For-profit and non-profit gap
- LLC organization and nonprofit program-related investments (PRI) can be used as explanation for specific business decisions
- Illinois, Louisiana, Maine, Michigan, North Carolina, Rhode Island, Utah, Vermont and Wyoming, Crow Indian Nation of Montana and Oglala Sioux Tribe