Knowledge Transfer and Adobe Block

by

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Order of Presentation

- What is Knowledge Transfer
- Adobe Solutions
- Summary
Knowledge Transfer

Long Term Influence
WITHOUT
Continued Outside Influence

Undeveloped Countries
AND
Rural Areas

Sounds Simple

But is it ??
Knowledge Transfer to Underdeveloped Countries

Culture (not Western)

Our rules do not apply

Need time to discover and learn their rules

Build relationship
Knowledge Transfer to Underdeveloped Countries

Local Resources
(not Western)

Unmilled Branches for Shoring

Adobe is Baked in Ovens
(adequate heat ??)
Knowledge Transfer to Underdeveloped Countries

Skill Sets
(not Western)

Hand Labor

No Heavy Equipment
Knowledge Transfer to Underdeveloped Countries

BUILD RELATIONSHIPS
DETERMINE RESOURCES
DETERMINE SKILL SETS

THEN
BEGIN
HELPING

ADOBE
Knowledge Transfer to Underdeveloped Countries
Knowledge Transfer to Underdeveloped Countries

Kenya
Rural Orphanage for Child of AIDS Pandemic (Nymbani)
Marauding Tribes Break in with Sledgehammers

HELP
Create a Wall System that will take much longer for penetrate.

BUT
Wall to be tested at Cal Poly using resources of Kenya
Knowledge Transfer to Underdeveloped Countries

Make Adobe as Made In Kenya
- Use resources of Kenya (dirt, water, cement, sand)
- Use skill set of Kenya (Freshman)
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Use Wall System that can be Repeated without Continued Outside Influence

- Double wall with energy dissipating material (SAND)

Single Wall: 9 Swings and Back of Wall Explodes Out
Knowledge Transfer to Underdeveloped Countries

Use Wall System that can be Repeated without Continued Outside Influence

- Double wall with energy dissipating material (SAND)

Double Wall: 139 Swings and have to Dig through Wall
Knowledge Transfer to Underdeveloped Countries

Current Effort

DURABILITY of ADOBE
Knowledge Transfer to Underdeveloped Countries

DURABILITY of ADOBE

ISSUES

Rains Erode the Adobe
Average Building last 10 years

Curing of Adobe is not of High Enough Heat
Adding Cement is Expensive

Western Solution of Asphalt Emulsifiers is NOT local resource
Knowledge Transfer to Underdeveloped Countries

DURABILITY of ADOBE

ISSUES

Studying
LIME to augment Adobe
Knowledge Transfer

Can we take our Technology and “REVERSE” Engineer in THEIR TERMS?

Slide No. 16
Knowledge Transfer

What is Your Goal?

Short Term Immediate Help?

Long Term Lasting Affects?

Each has its Challenges and Rewards

Thank You