

THE NO BULLSHIT GUIDE TO EFFECTIVE

# ICT IN EDUCATION

IN AFRICA

“Beyond one laptop per child”

MUKOM AKONG T.  @PERFEXCELLENT

# Quiz: which one these has failed Africa most?



Colonial  
Masters



Greedy  
Multinationals



Corrupt  
Politicians

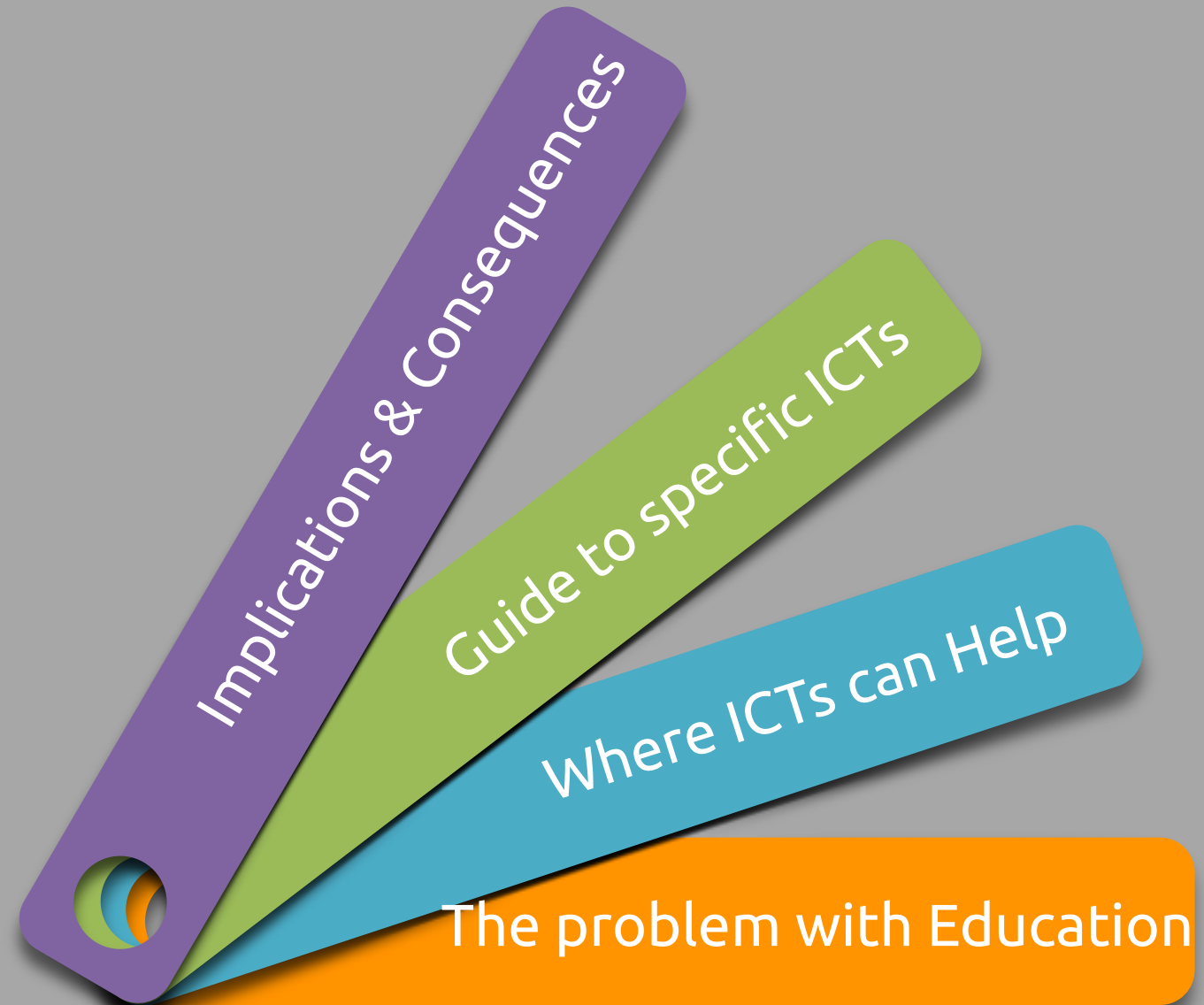


Africa's educational  
system

800  
million

Africa's population in 15 - 45 year bracket by 2030

# Agenda!



1

# Understanding the Challenges of education in Africa



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# Low educational achievement levels

Source: Brookings Institute

28%

Tanzania

19%

Kenya

<10%

Uganda

% of 6th grade pupils reading at grade level

# Not enough teachers!

	2015	2030
Primary school	902	2,100
Secondary school	1,575	2,541

Number of teachers (thousands) needed in sub-Saharan Africa

Primary schools must also replace 2.6m lost to attrition by 2030

# Large class sizes





2

How can  
ICTs Help  
in developing countries



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# The key stakeholders



Teacher



Learner



Administrator

# What do learner's need?

- Learning resources
  - textbooks
  - games
  - multimedia
- Inspiring teaching



- Knowledge > skills
- Experimentation
- Exploration

# What would be useful for teachers?

- Teaching aids
  - textbooks
  - multimedia
  - examples
- Scalable testing



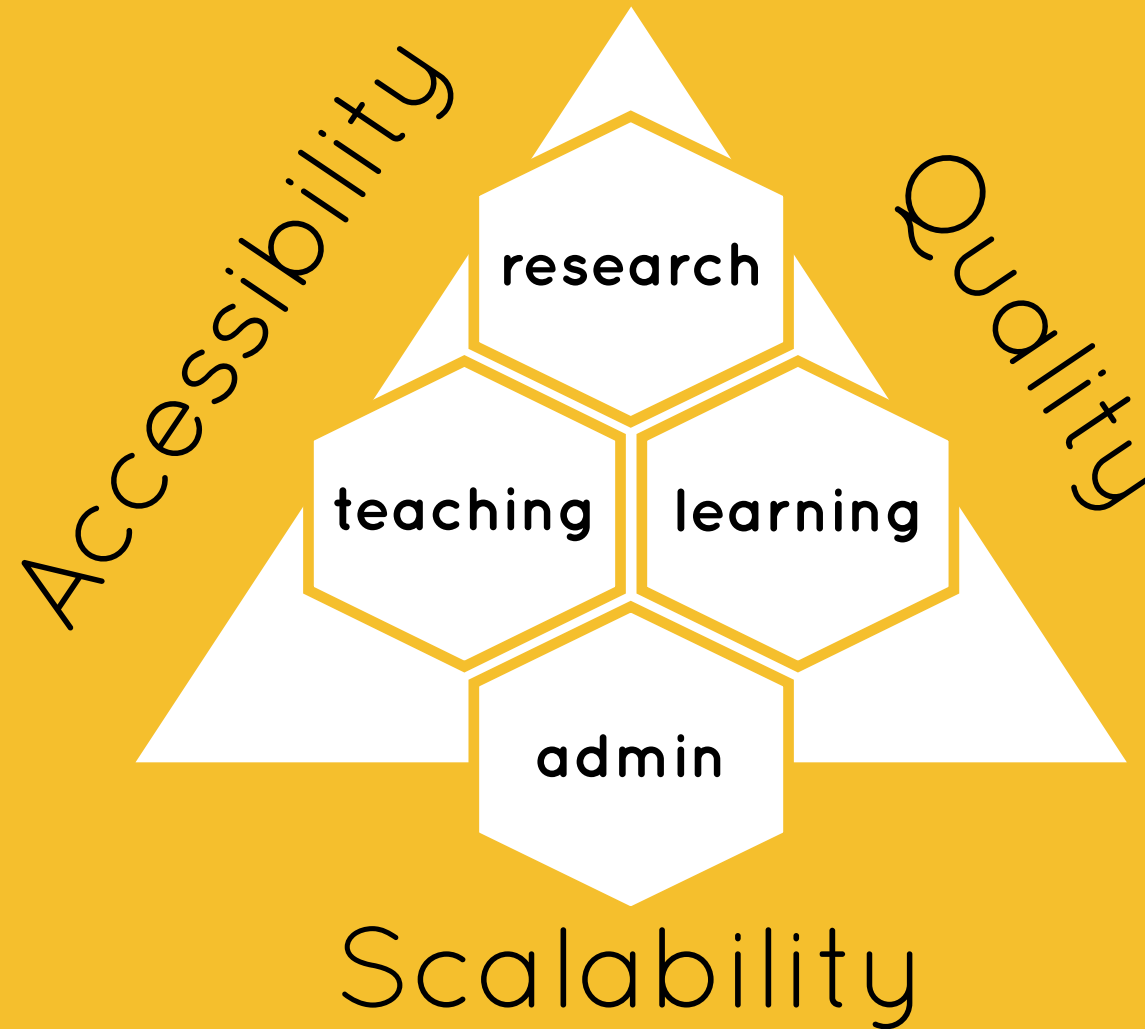
- Class management
- Skills acquisition
- ICT integration

# What would be useful for administrators?

- Rapid reporting
  - attendance
  - academic records
  - asset utilisation
  - financial
- Analytics on all the data

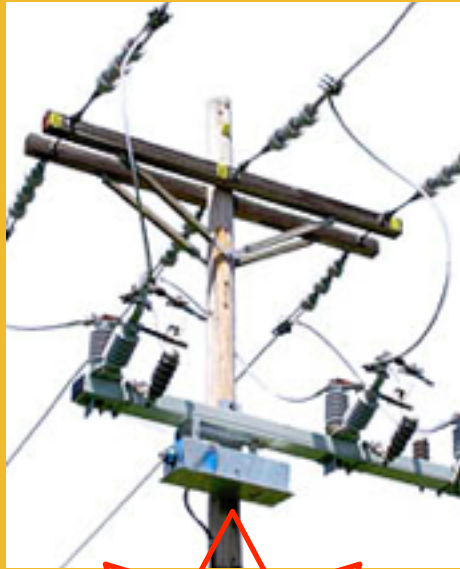


# Deconstructing the problem



# Understanding key constraints

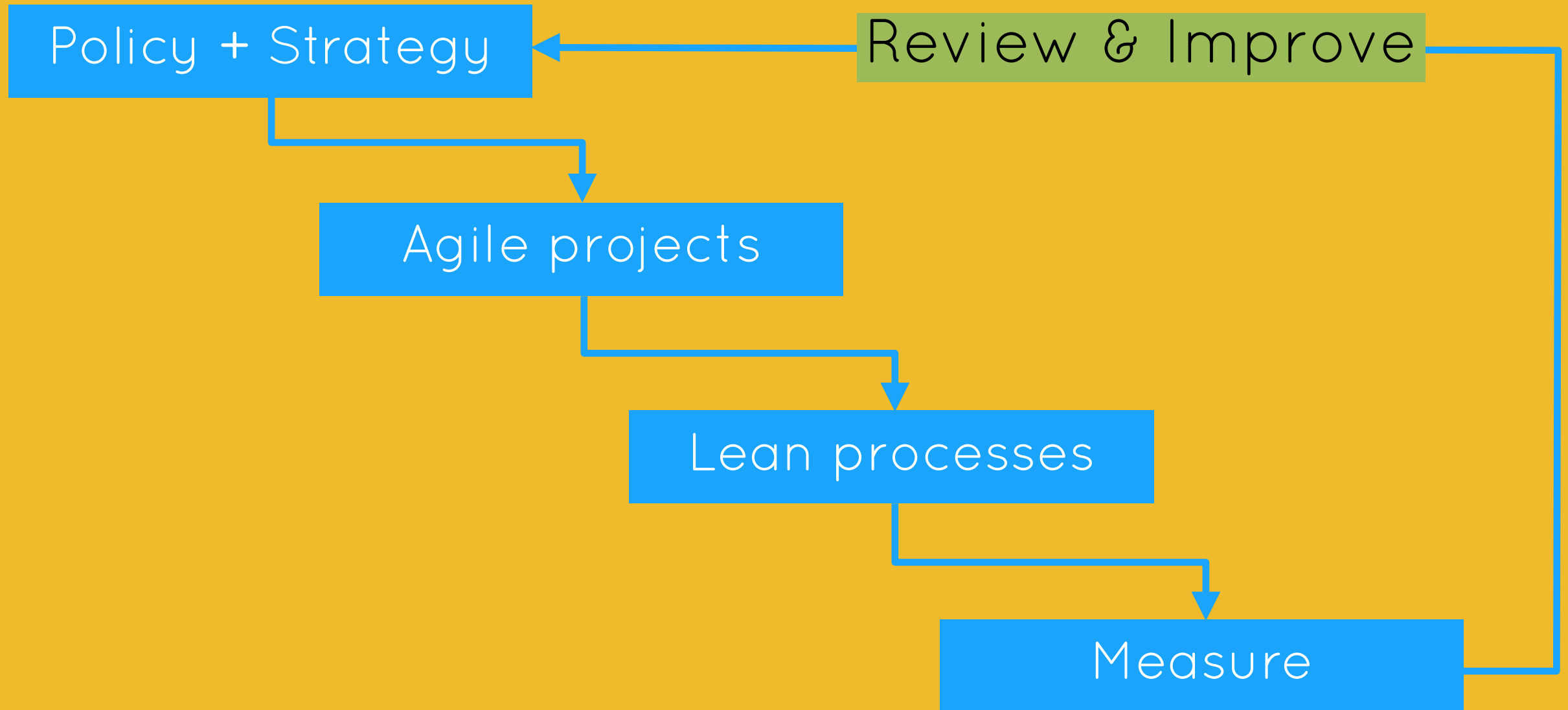
Reliable grid electricity



Pervasive broadband

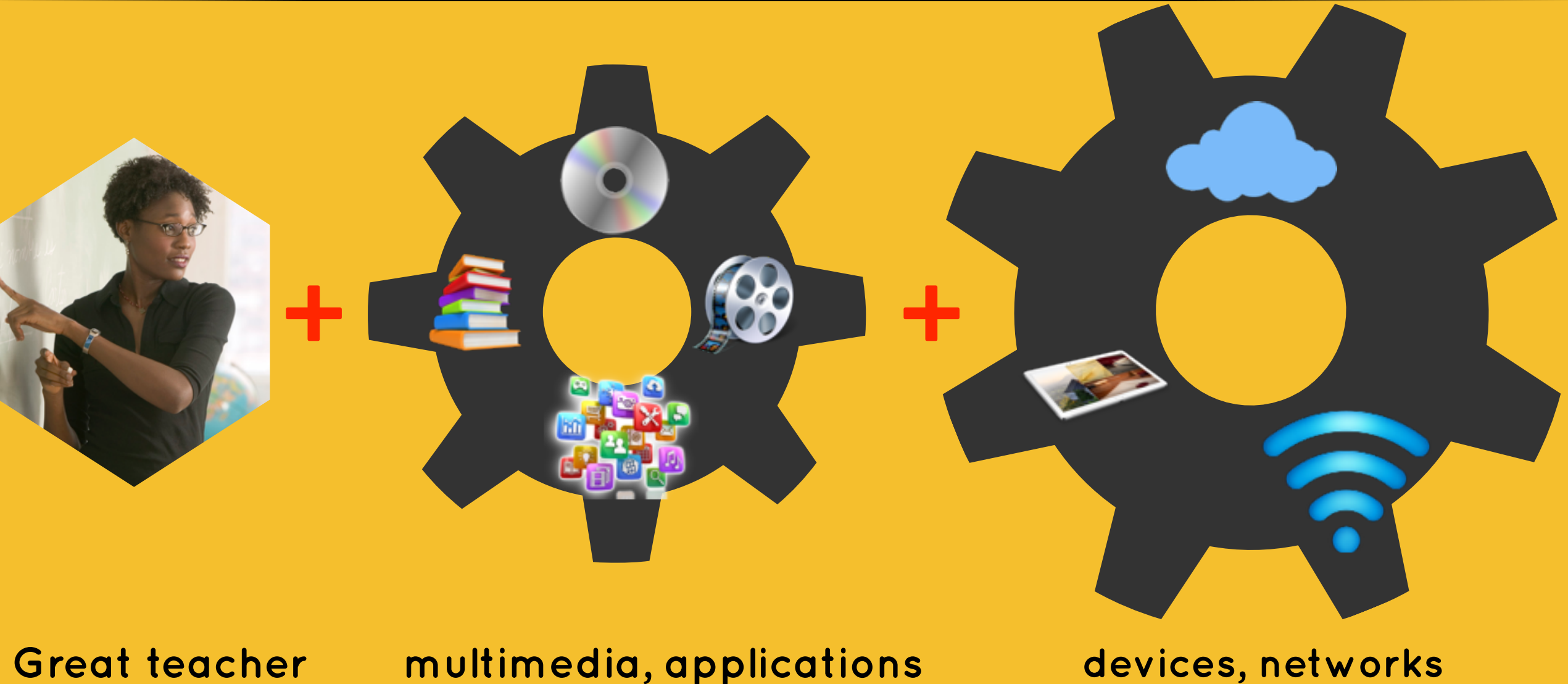


# Towards a sustainable solution





# Solving the accessibility & scalability problem



# Solving the 'quality' problem



multimedia-enhanced content

True continuous assessment

subject-specific applications

Gamification



3

# Quick evaluation of specific Technologies

being positioned for this space



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# Devices for access



# Technologies for the teacher



# Applications categories

Courseware

Assessment  
software

Course  
authoring  
software

Maths  
Analysis

Classroom  
aids

Reference  
software

Classroom  
management

Simulations

# Specific Applications

Edubuntu

Khan  
Academy App

Youtube  
video  
downloader

Coursera,  
Udacity,  
Udemy

Moodle

wikipedia  
offline

TCE-Exam

SPICE

# Some important websites

ed.ted.com

schoolforge.net

khanacademy.org

curriki.com

opentapestry.org

youtube.com/edu





First, foremost ...and ultimately!

# Scaling technologies



# 4

Some

# Implications

and consequences of this shift



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# Bye to the priesthood of the teacher!



# Teacher, behold the competition



# Beware the Bermuda triangle of productivity





# Why I am a believer!



Richard A. Mueller  
“Physics for Future Presidents”



Salman Khan  
Khan Academy



mukom.tamon@gmail.com  
@perfexcellent