

# Global Design Challenge 2016

# + Global Design Challenge Introduction



- The Global Design Challenge
  - What, why and how...
- How Do I Pass?
  - Three easy steps to success!
- OK, But How Do I Win?
  - On being the best..
- The Engineers without Borders (EwB) Challenge
  - Going further: a national competition
- Questions?

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## What's That?



- A core module for all 1<sup>st</sup> year Eng. and Inf. students
  - Project-based work
  - Interdisciplinary, with team-based activity
- Pass/fail module
  - based on participation and final presentation
- A competition
  - with prizes
- An initiative with Engineers without Borders (EwB) UK

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## Why's That?



- A chance to work on solutions to real-world problems:
  - Sustainable development
  - Technology for change
  - Gain international perspectives
- Gain understanding:
  - Issues around sustainability
  - Thinking creatively
  - Methods for human-centred design
- Develop skills:
  - Team-work and Communication
  - Work with students across the School

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## How's That?



- **Workshops: Structured, Facilitated Design Activities**
  - Run by GDC facilitators
  - Daily 2 hour, self-contained workshops
    - Monday just 90 mins
  - Work in teams of 4 or 5, in hubs of around 28
    - ~320 of you = 12 hubs
- **Global Design Lectures**
  - Talks from guest experts
    - Monday, Tuesday and Wednesday, 2pm – 3pm
  - Discuss issues around technology, sustainable development, human-centred design

# + Global Design Challenge Yes, But How Do I Pass?



- Step 1: Participate!
  - Come to the workshops
  - You must attend at least 4 of the 5 over the week!
- Step 2: Engage!
  - Take part in the team activities in the workshops
- Step 3: Present!
  - You must attend the presentation session on Friday
  - Help your team build their presentation

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## Competition! (Did we mention that?)



- A winning team will be chosen from each hub
  - That means 12 'hub winners'
  - All member of hub winners get individual certificates
- The Global Design Competition
  - The 12 hub winners will be invited to take part on Friday afternoon, 2pm – 4pm
- Competition Prizes:
  - £200 prize to be shared by 1<sup>st</sup> place Sussex team
  - £100 prize to be shared by 2<sup>nd</sup> place Sussex team



# Global Design Challenge Engineers without Borders



- Engineers without Borders Challenge
  - National Design Competition
  - Can put forward student teams for consideration
- Design Briefs
  - Partners: Reignite Action for Development (Bambui, Cameroon)
    - Design Area: Infrastructure and urban planning
    - Design Area: Information and communication technology
  - Student support via dedicated Challenge web site:

<http://www.ewbchallenge.org>

# EWB CHALLENGE 2015-16

## REIGNITE ACTION FOR DEVELOPMENT

### BAMBUI, CAMEROON



# BAMBUI OVERVIEW





North Atlantic Ocean

South Atlantic Ocean

Morocco

Algeria

Tunisia

Libya

Egypt

Syria

Iraq

Iran

Afghanistan

Western Sahara

Mauritania

Mali

Niger

Chad

Sudan

Saudi Arabia

Oman

Yemen

Guinea

Burkina Faso

Ghana

Nigeria

South Sudan

Ethiopia

Gulf of Aden

Arabian Sea

Gulf of Guinea

Somalia

Gabon

DR Congo

Kenya

CE RN  
PI PE PB  
BA SE AL  
ES  
RJ

Angola

Tanzania

Zambia

Mozambique

Namibia

Zimbabwe

Botswana

Madagascar

South Africa

# CAMEROON OVERVIEW

- Located in North-West Africa
- Population 22,534,532
- GDP 2014 estimates: \$32,163 billion/\$1,426 per capita
- Cameroon is aiming to become an emerging economy by 2035
- 2010 literacy rate: 71.3%
- Life expectancy is 53.69 years
- Under 5 infant mortality rate is 95 deaths per 1000 live births

# THE DESIGN AREAS

1. Water supply
1. Sanitation and hygiene
2. Energy
3. Food transformation
4. Transport
- 5. Infrastructure and urban planning**
6. Waste management
7. Climate change
- 8. Information Technology**



# The Global Design Challenge

## QUESTIONS TO ASK

1. What's the context?
2. What's the problem?
3. What are the options?
4. Why this solution?
5. How might it be implemented?



## The Global Design Challenge



# EWB CHALLENGE WEBSITE



[Get involved](#) [Rules](#) [About](#) [Awards](#)

Search site



- Challenges -

 Dan Craddock (EWB-UK)

[Log out](#)

Current Challenges...

## REIGNITE ACTION FOR DEVELOPMENT

The EWB Challenge program is currently partnering with Reignite Action for Development. Students working on these design projects will be supporting Reignite's work in the village of Bambui in the Tubah Sub Division, Cameroon. While Bambui has been chosen as a case study the ideas will be shared with the entire Tubah Sub Division.

[About the program](#)

[Get involved](#)

[Previous Challenges](#)

# EWB CHALLENGE DISCUSSION FORUM

## Discussion forum



### Explore

[Home](#)

[Reignite Action for Development, Bambui and the EWB Challenge](#)

[Design area 1 - Water supply](#)

[Design area 2 - Sanitation and Hygiene](#)

[Design area 3 - Energy](#)

[Design area 4 - Food Transformation](#)

[Design area 5 - Transport](#)

[Design area 6 - Infrastructure and Urban Planning](#)

[Design area 7 - Waste Management](#)

[Design area 8 - Climate Change](#)

[Reignite Action for Development](#) > [Discussion forum](#) >

Welcome to the EWB Challenge discussion forum. Post here to ask a question about the EWB Challenge. The EWB Challenge team will work with the community partner to answer your questions as quickly as we can. Please note that sometimes this may take a little while to get a response as internet connections aren't always reliable in the countries where the EWB Challenge is focused on. We also encourage you to reply to posts to share information that you may have and swap ideas with your peers. The more people contributing to each discussion thread the better!

To get started click on the topics below to see the active discussion threads or use the search box to find something specific.



### Browse by topic

[Post a question](#)

All topics

Climate change

Community and culture

Energy

General discussion

Housing

ICT

Transport

WASH

Waste

1  
reply

#### Road width

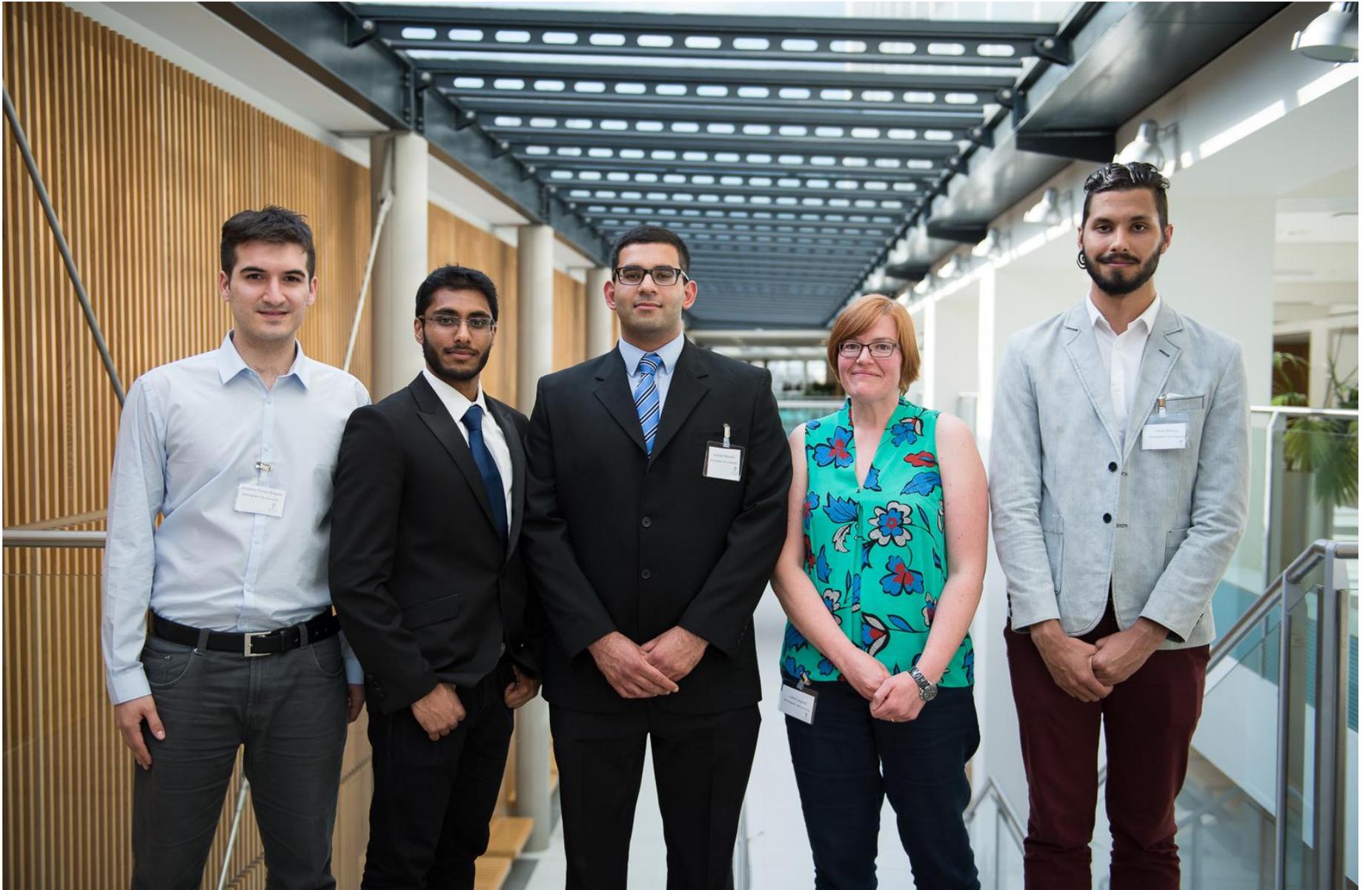
Hi i was just wondering what the road width is for the main market road near four corners. Or where i can find this info. Also do they have access to a roller or tractor that can compact small rocks?



# THE EWB CHALLENGE FINALS



# THE EWB CHALLENGE





# Questions?