

ENGINEERS WITHOUT BORDERS

DESIGNATHON



UK
ENGINEERS
WITHOUT BORDERS

AGENDA

- Who is Engineers Without Borders UK?
- Design process
- Introduction to the challenge
- Judging process



UK

ENGINEERS

WITHOUT BORDERS

"It's no longer acceptable to sit at your desk and do your engineering and not think about what the consequences of that are."

Tom Newby, Senior Engineer at Burohappold



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**WE HAVE
NO
PLANET B
AND TIME IS
RUNNING OUT**

DESIGNATHON



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PURPOSE

- Develop your engineering skills using a real-world design brief
- Learn how design decisions can impact people both locally and globally
- Develop communication, planning and project management skills
- Opportunity to work with people from a range of different disciplines

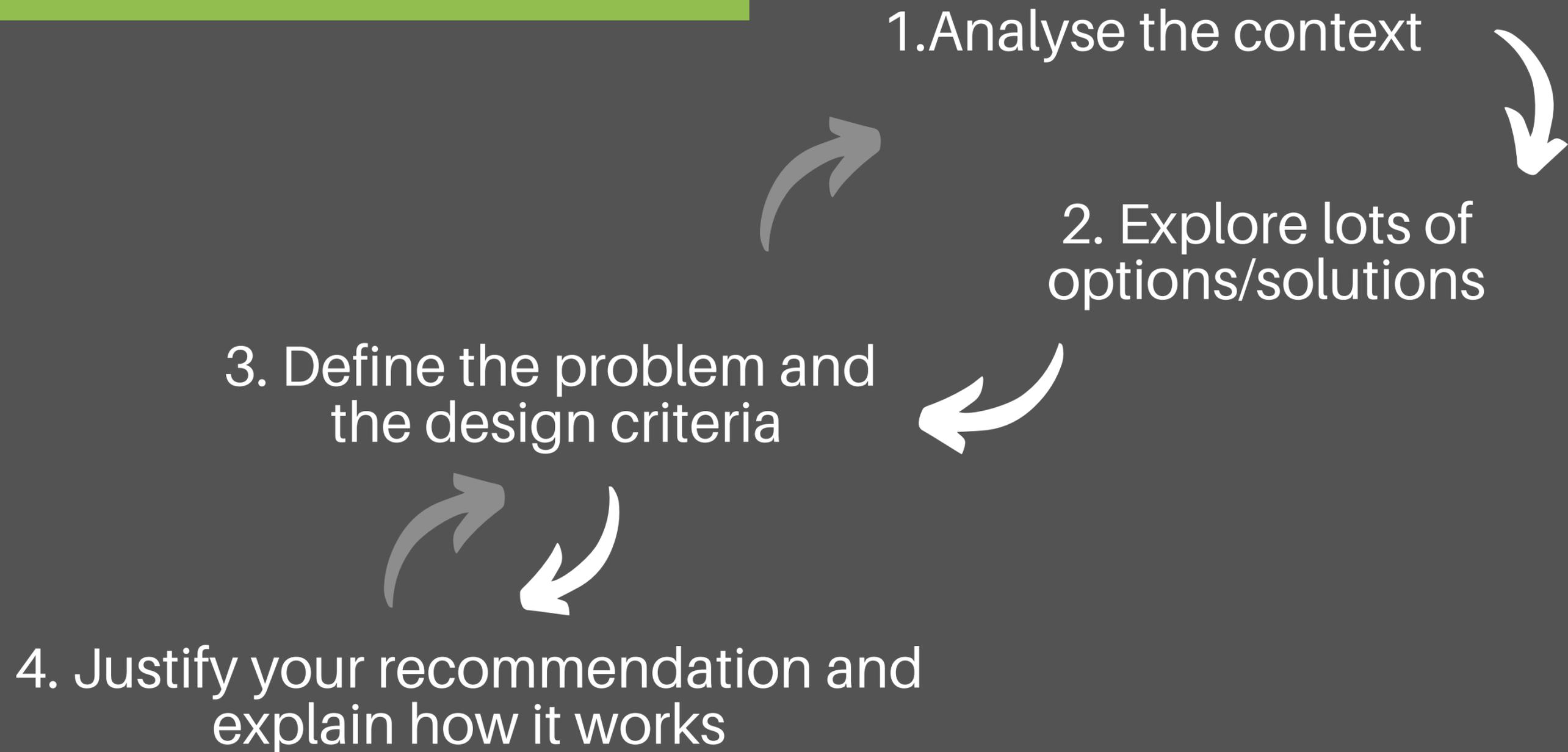


WHAT WILL WE CREATE?

Your aim is to propose an engineering design that you think will make a difference to people's lives and livelihoods, whilst positively impacting the environment.



DESIGN PROCESS



MARKING CRITERIA

UNDERSTAND CONTEXT

Demonstrate analysis and comprehension of the social, environmental and economic factors of the context.

REASONED APPROACH

Clearly outline assumptions and design criteria. Evidence design decision making.

APPROPRIATE IDEA

Justify why the idea is appropriate for the context and how it will be implemented.



KIBERA



KIBERA



OVERVIEW

- One of Kenya's largest informal urban settlements located in the capital: Nairobi
- Population is estimated to be between **250,000 - 500,000** people
- Settlement started developing in the early 1900's
- Kibera is not formally recognised by the authorities in Nairobi



THE CHALLENGES

The development of key infrastructure has been challenging for the people living in Kibera:

- Poor water and sanitation provision
- Lack of waste management
- Limited transport infrastructure
- Unsafe energy provision
- Limited digital infrastructure



THE COMMUNITY

Despite these economic, social and environmental challenges, Kibera also has many assets:

- Entrepreneurship
- A strong social fabric
- Extensive community activism
- Affordable housing



YOUR TASK

To develop engineering solutions to improve lives, livelihoods or to enhance the natural environment within Kibera.



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JUDGING PROCESS

During your presentation to the judges:

- Outline the issue you wish to address
- Demonstrate analysis of the social, environmental and economic factors
- Evidence your engineering/design decision making
- Justify why your proposed engineering intervention is appropriate

