ITRAINONLINE MMTK

Exercise: Budgeting and Planning

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Exercise1: Budgeting and planning of a PtP Wireless link

The Rainbow-foundation that recently has established a primary school at the Curricutta Island in Sunshine-land contacts your NGO for technical help. They need to set up a wireless link to the mainland to provide the primary school with an Internet connection.

Your task is to plan and budget (in terms of equipment and human resources, not to find the pricing in USD) the establishment of a wireless PtP link between the mainland of Sunshine-land and the primary school at the Curricutta island.

Consider that it might exist several solutions to the problem. You should be able to work out different scenarios and present them for your client. Describe every scenario with its advantages and disadvantages together with a budget for hardware and human resources.

To perform this task, the following information is provided:

The Curricutta Island is located 7 kms outside the mainland of Sunshine-land. Between Curricutta island and the mainland (half way out and in the line of sight) is the Pirate Island located with an average altitude of 50 m over sea level.

The Internet connection at the mainland is located on top of the roof of a three stories office building. On the roof, there is a 5 meters high (vertical) mast that can be used to mount equipment. The base of the mast is located 50 meters from the Internet connection which is placed indoors. Power is available in the third floor.

The only building, except huts, on the Curricutta Island is the primary school which is located by the shore (altitude 0 m) facing the mainland. The highest point of the island (altitude 70 m) is located 200m from the primary school. The Curricutta Island is not connected to the power grid on the mainland, hence there is no access to electricity on the island.

The island consists of sand and soil and have a very dense vegetation with rich (but harmless to humans) wildlife.

Sunshine-land is a country located at latitude 0. Tropical and thunder storms are common as the climate is hot and humid.

To complete the exercise, the following 10 issues should be discussed:

1.   Who are the key stakeholders in the project? Who are the key people to contact and get support from?
2.   What practical and technical information is required as a starting point of the project?

3.   What technical information about existing infrastructure is required?

4. What physical infrastructure must be in place to establish the connection?

5. Budget for bringing the Internet connection from the place of the implementation to the primary school.
   Consider the following:
   - What technology to use
   - What infrastructure and equipment is needed
   - What human resources are needed

6. Budget for bringing power/energy to the place of the implementation on the Curricutta Island.

7. Budget for implementing the actual link between the two points.

8. Budget for required licenses and permissions to operate your implementation (take your own country as example)

9. Budget for maintenance and quality assurance of the implementation for 1 year

10. What can go wrong? What are the bigger risks in the project? Risk analysis.