General Information

Timeline

February 12th - March 23rd 2018: Registration period and abstract submission
Potential participants are expected to complete necessary forms and submit an abstract by the end of the registration period. Submissions will be then reviewed by the event committee.

March 29th 2018: Abstract award
Outcome of abstract selection will be announced. Groups whose abstracts are selected may proceed to the next stage of the competition.

April 02nd - 27th 2018: Execution period
Participants may work on and complete the project in this period.

May 09th 2018: Finalists announcement
Finalists will be announced after a selection from the judges.

Second week of May 2018: Final round
Final keynotes will be held and the winners will be announced on the same day.

(Technical information shall refer to the TOR)

Contacts

Facebook   : www.fb.com/royalhaskoningdhvID
Twitter   : www.twitter.com/RHDHV_ID
WhatsApp   : +62 812 2021 2031

Challenges

Participants may choose one of the followings:

1. Transportation Challenge

Background: *Development of a city will be followed by the increasing needs of good urban transportation. The unplanned transportation system will lead to loss in terms of economical and environmental. Public transportations have to be reachable and accessible for all society. The accessibility includes good fare, ease of access, and intermodal integration. Furthermore, the use of technology can increase the quality of transportation system.*

Case: *Network approach in smart city solution*

Questions: *Select one big city in Indonesia*
1. *Develop a transportation plan for smart city solution in next 25 years for one big city in Indonesia.*
2. *What technology can be implemented to attain the goal?*
3. *How to improve transportation network system in the selected city?*
4. *Derive a plan t0 integrate public transportation modes in the selected city.*
5. *Support your plan with economy analysis.*
6. *How to improve drivers' behaviour to increase the level of driving discipline?*

2. Industrial Challenge

Background: *The development of the technology and the needs to be more efficient have impact to the industrial world. This impact includes development of the automation and data exchange. This process may impact globally and sometimes inevitable. However, the change always comes with challenges. We should be able to adapt ourself with the current development with careful planning.*

Case: *Industry 4.0 for sustainability in food and beverage industry*

Questions:
1. *How do you see Indonesia transforming from current level to Industry 4.0? Describe the transformation process addressing the enabling-and blocking factors for Industry 4.0 in Indonesia with the timeline for the next 20 years*
2. *How can Industry 4.0 help reach sustainability goals at reasonable cost level?*
3. *Which industries will be the frontrunners adopting Industry 4.0?*
4. *What should a consulting company do to position itself as the leading consultant supporting clients to achieve their Industry 4.0 and sustainability goals?*

3. Water Challenge

Background: *Non-Revenue Water (NRW) is water that has been produced by a Water Utility and is `lost' before it reaches the customer. Losses can be real losses (physical leakage), or apparent losses (water used, but not registered and paid for). Presently, the level of NRW is about 20-50%. High levels of NRW are detrimental to the financial viability of water utilities, as well to the quality of water itself. It further means inefficient use of often scarce water resources leading to insufficient supply, or no supply, to in particular the poorest section of the population. The challenge for the water utilities is to reduce the NRW. So far however, progress is limited, and the water utilities look for support from other parties, such as consulting companies, for assistance.*

Case: *Standard approach for reduction of NRW*

Questions:
1. *Make a flow chart with a standard approach for NRW: possible steps, relation between the steps and questions to be answered in order to select the right steps in a specific case.*
2. *Demonstrate the use of the flow chart for 2-3 medium sized PDAM (100.000-500.000 people served).*
3. *What technologies or tools are required or can be applied?*
4. *Support your plan with an economic analysis using the cost and benefits approach.*
5. *What can be the business model to pay for the implementation of a NRW project?*
6. *Identify the social, environmental and political issues, and propose sets of solution to tackle the aforementioned issues.*

4. Port City Challenge

Background: *Some of Indonesia's largest cities face a growth phenomenon also found in other cities all over the world which have a primary port area; when the city is developing and growing over time, the port area (which often is located in the oldest part of the city and a vocal point of intense industrial developments), tends to get surrounded by the urban and industrial areas, hence limiting it's potential to grow further and add moreterminals and berths which are required to handle the growing cargo throughput. As such space limitations is a major constraint for the economic development of cities or even countries, cities such as Singapore and Rotterdam develop a long-term strategy to create make opportunities for both: relocate the intense port activities to the outer rims of the city, freeing up valuable areas for urban developments. Such strategy often also improves logistics and reduced congestion. As Tanjung Priok in Jakarta city is a typical example whereby the port is enclosed by its supporting city, all combined with logistical challenges and social problems, we would like to entice the project stakeholder to provide an innovative, smart and fully integrated solution to improve this status-quo, hereby implementing the latest in available technologies to maximize efficiency and effectiveness.*

Case: *Existing port cities in Indonesia, such as Jakarta-Tanjung Priok, Surabaya-Tanjung Perak, Medan-Belawan, etc.*

Questions:

1. *What would be conceptually available solutions to overcome the typical congestion problems of these port cities?*
2. *By not considering political interferences, how would you improve the existing port cities in Indonesia?*
3. *What are the available high-end technologies that might be applied to the improved port city?*
4. *What will be the benefit in terms of environment, social and economy impact by applying your idea?*