YES! DELFT

SUPPORT SHELL WITH YOUR SOLUTION FOR THEIR POWER PLANT CASE DURING THE SHELL GAMECHANGER HACKWEEK

Are you a data-savvy startup, team of developers or students team with a drive to innovate the energy sector? Then apply for Shell's GameChanger Hackweek!

YES!Delft and Shell are looking for early stage startups, student groups or developer teams with ideas and solutions to innovate the smart energy sector. Your challenge is to optimize energy consumption at Shell power plants, while maintaining a high and stable energy consumption by working with their provided dataset. Shell's GameChanger program works with early stage businesses which have the potential to impact the future of energy. Within a 5-day hackathon, you will get the opportunity to work on an actual business case with Shell's dataset to validate and prove your insights in their data.

The challenge

In terms of operational expenditure at power plants, electricity cost is the highest driver, of which about 85% is used by gas compressors. These compressors run at maximum throughput, with a high energy price, thus maximum production isn't necessarily the optimal point both from an economic and environmental perspective. By assessing different pressure points and parameters (such as electricity price, seasons/day fluctuations) a more balanced operational model can be identified, thereby creating economic and environmental benefits.

Given the required operating mode (e.g. max production, profitability, etc.) and current status of the process to calculate an optimal model for achieving this. This should include predictions for the next hours/days, which also include predictions on the marked data.

About Shell GameChanger

Founded in 1996, Shell GameChanger provides startups and businesses with a quick and cost-efficient way to show the technical and commercial viability of their technology idea or business plan. Shell GameChanger has interacted with more than 5,000 innovators around the world, helping them turn more than 150 ideas into reality. They are ready to take a chance on yours.

THE HACKATHON

The Hackweek is a 5-day hackathon where selected startups, developers and students test and adapt their novel digital solutions rapidly on a real-life dataset provided by Shell. Data parameters include: production volumes, power usage of equipment, export pipeline pressures, pressure set points along the plant, weather data from sensors and spot market data. Objectives are to present operational models for different scenarios (minimum environmental impact, maximal production etc.), build a predictive model for the power consumption on the plant, calculate optimal points, and provide recommendations on how to smoothen power offtake. During the HackWeek, you will be supported by experts from

Shell, Technical University of Delft and YES!Delft. Also, workshops to sharpen your saw will be provided. On the final day, participants will demonstrate their ideas in the form of a minimum viable product. MVP's will be evaluated by a Shell & YES!Delft jury based on predictive capabilities, optimization and visualization.

WHAT'S IN IT FOR YOU

Access to data to verify and test/adapt algorithms.
Access to Shell and Delft University of Technology experts on data interpretation & modelling.
Customer/business model validation with Shell and YES!Delft.
Ownership of code, algorithms, but not data.
Accelerated access to Shell GameChanger program (when a fit is identified).
A ticket to the YES!Delft Validation Lab (for 2 teams).
10k EUR in cash for the winner.

ADDITIONAL CRITERIA

Early stage startups, student/developer teams
Have at least two team members who will attend The HackWeek Brilliant developer with top-notch programming skills
Creative minds with strong analytical skills and novel ideas