Use Case

X36 Falcon Design

Turning Around a Biotech Project

- A private investor had deployed US $ 225 Million in a biotech startup
- Objective was to mass cultivate a photosynthetic organism that produced a diesel like fuel

Challenges :

- Fuel yields were low due to suboptimal lipid density in the organism

  The oil price collapse by US $ 40 / bbl (in Aug 2014), led to unviable economics

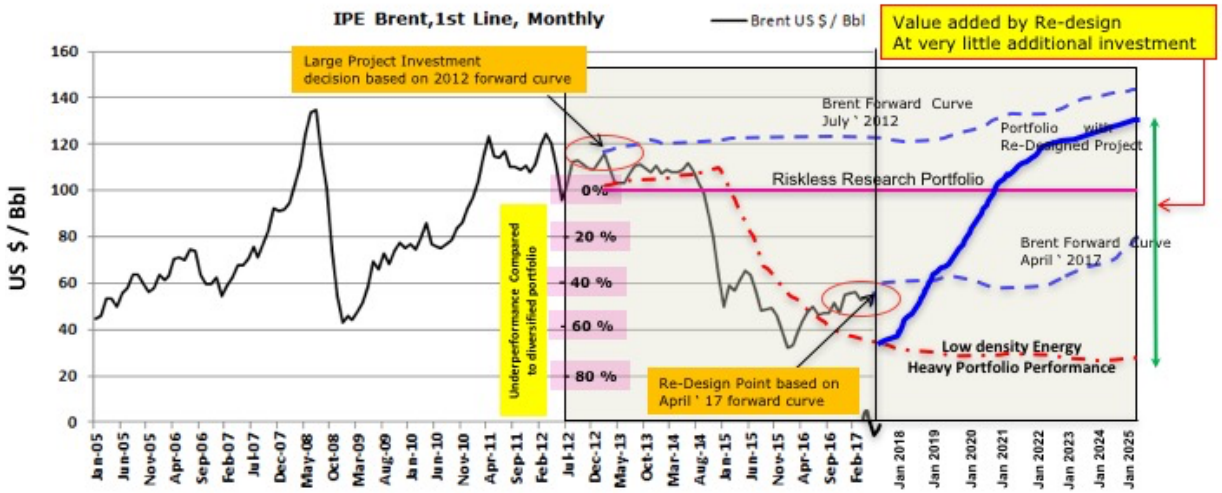
Design Brief :

- To recover the situation at the least possible additional cost.
- Re-deploy project assets more productively.

Unique insights :

- The photosynthetic organism, if processed differently could produce a Super Material of very high tensile strength with good yield per unit volume

  We summarised the opportunity to the company's management in a graph. Dark blue line represents proposed turnaround plan



Conceptual Re-design can unlock large value

Improved Economics :

- The super material could sell at US 6000 / tonne and global demand was 5,000 tonnes each year.

Seeing this opportunity, the company re-assigned a team of 12 scientists to further develop this super strong material.

Additional Mandate :

- The client asked us to help re-assign another 50 scientists to new higher value projects.
- For this we studied 64 different companies in the biotech space globally, to understand which projects were receiving funding and what mistakes companies had made.
- We suggested 19 new products, of which 3 high value product ideas were supported by the client's management

Financial Impact :

- A comprehensive study by the client's marketing team found that the four new products would yield an additional US $ 45 Million EBITDA / year starting in 2023.

In this way we helped turn around the investment from a US $ 225 million loss situation.