Produce $P$ and $Q$ by the irreversible reaction $A \rightarrow P + Q$. The reaction is incomplete; the reactor effluent contains reactant $A$. $A$ is available only as a mixture with inert $I$; $A$ and $I$ cannot be separated.

The simplest design is a reactor and a separator.

You may decide to recycle unreacted $A$, with a purge to remove inert $I$.

Or you may decide to install a second separator to sell $Q$ as well.
You have two choices for the reactor:

Type 1: High conversion, high price and expensive to operate.
Type 2: Moderate conversion, modest price and less expensive to operate.

You have two choices for the first separator:

Type 1: Recovers a high fraction of $P$, high price and expensive to operate.
Type 2: Recovers a moderate fraction of $P$, modest price and less expensive to operate.

You have two choices for the (optional) second separator:

Type 1: Recovers a high fraction of $Q$, high price and expensive to operate.
Type 2: Recovers a moderate fraction of $Q$, modest price and less expensive to operate.

In general, equipment with better specifications has a higher price and costs more to operate. There is economy of scale; the equipment price is proportional to $(\text{capacity})^{0.6}$.

For the first year, you must decide what types of equipment to purchase, the equipment capacity, and your production rates. Economic data are provided in a separate file.

Your fiducial goal is to achieve an ROI greater than zero. Additional rewards are earned for an ROI greater than 0.20 and the highest ROI in your Division.