



Process Options - Balancing Development Risk and Commercial Opportunity

Challenge

In process development it is often the case that several potentially viable options may be open to the developers, each with its own complicated risk - reward relationship. In order to make progress, businesses have to steer a course between the twin rocks of excessive subjectivity - following a hunch to disaster - and objectivity - death by analysis paralysis. A process development team at Johnson Matthey needed to make a rational choice between several process development options with disparate project/developmental risks and potential commercial impact.

Approach

The Britest Duty Definition and Equipment Specification methodology, was adapted to weigh the *feasibility* of a project against the *commercial benefit* of different flowsheet options, using findings from the development of candidate flowsheet and a technical risk review as key inputs. The approach enabled a quantitative comparison of several competing process flowsheets, with scores being applied across a number of metrics for both commercial and project factors.

Benefits

- A framework for objective, productive discussion
- Avoidance of preconceived notions (in this case about processing times).
- Ability to take account of and appropriately weigh significant factors such as limited development time
- Output is a quantitative justification for process selection that can be defended on both a commercial and project basis.
- Priority candidate selected for the available piloting "window" emphasised commercial potential with low-moderate project risks, in the knowledge that a low project risk option (involving incremental process re-engineering) was available as a contingency.

Key Features:

Client - Johnson Matthey

Industry - Application Area

Precious metal recycling - manufacturing, process development

Challenge

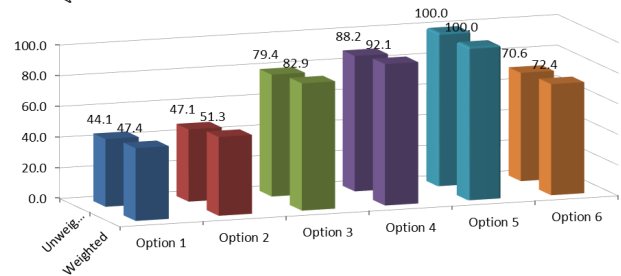
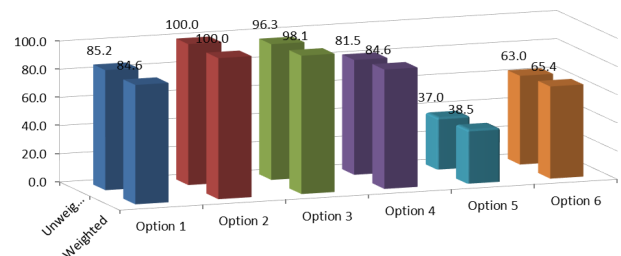
Objectively choosing which of several process development pathways to go down from several options with disparate project/developmental risks and potential commercial opportunity

Solution

A modified Britest methodology, was used to quantitatively compare several competing process flowsheets, applying scores across a number of metrics for both commercial and project factors.

Outcomes

Effective evaluation of the comparative feasibility of viable candidates. Priority pilot approach and contingency plan both identified.



Balancing commercial (top) and project risks (bottom). Option 6 was piloted with Option 1 reserved as a contingency.



No one has a crystal ball in process development, but Britest helps us make informed, justified decisions when weighing up the options.



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Supporting organisations in gaining value from process understanding