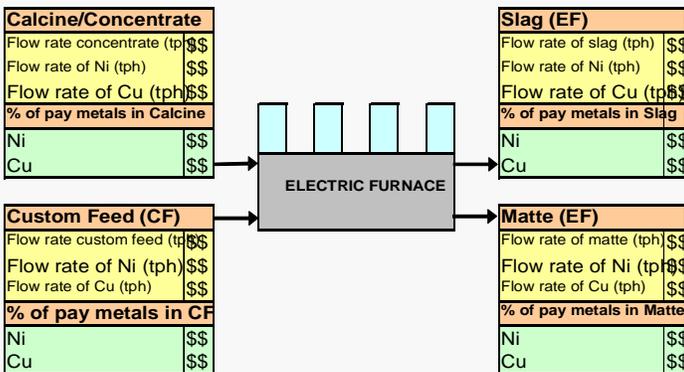
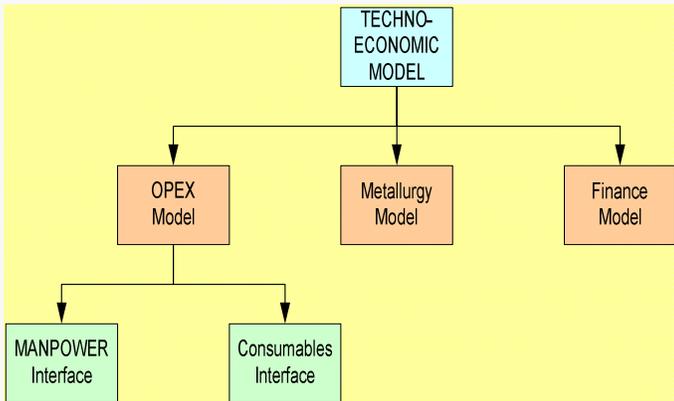


If you desire the ability to **forecast your operating expenditures, metal recoveries, production figures, reagent consumption and revenues** for an existing metallurgical operation or green-field project, then techno-economic modelling can provide the answers that you are looking for. At XPS we are upgrading and pushing the process modelling envelope by combining the output from METSIM™ (mass and heat balance) and FACTSAGE™ (thermodynamic equilibrium) into an Excel-based techno-economic model with a dynamic data exchange.



Based on our **project engineering experience**, XPS has built operating cost models, which are fully aligned with organizational structures. These models include manpower costs, maintenance supplies, and consumable costs, all based upon unit pricing for labour and reagents. Pricing is carried out in consultation with the client, who can also get a revenue forecast by including **long-term metal prices, tax regimes and treatment charge terms**.

The economic and technical information is combined into one single Excel spreadsheet, which also visualizes the economic performance of your process flow sheet by department or the overall project economics. The strength and value of such a robust model lies in the ability to run different scenarios such as total throughput, different feed compositions, emission levels or impurity operating windows.

Our main experience so far has been in the field of non-ferrous metal smelters and refineries. We are progressing on expanding our modelling practices into concentrators, other hydro-metallurgical plants and mining.

Key Capabilities

FACTSAGE™ allows you to model your process chemistry inside METSIM™ using **representative mineralogical compositions; not just assays**. Consequently, METSIM™ is able to simulate your flow sheet with not only a solid mass balance, but also an accurate heat balance based upon mineralogy and experimentally validated thermodynamic data. Through a dynamic data exchange the mass and heat balance output, especially the key plant performance indicators, can be linked to an Excel spreadsheet, which is graphically enhanced to visualize the metallurgical performance.

