

Observed Impediments to Cost Effective Beam Line Development and Operation

- Over weighting of ID investment vs experimental equipment & detector investment
- Overly ambitious plans vs budget reality (late division into baseline vs mature scope)
- Too much investment in facilitating the outlier portions of the demand/capability curve
- Too large a communication & skill/background divide between instrument scientist and design engineers resulting in ineffective trade off assessment
- Lost opportunities for amortizing NRE and other non-recurring costs over more units owing to unnecessary/unproductive customization
- Under investment in light source ownership of key enabling engineering capabilities and associated technologies through over use of vendors in order to meet schedule
- Insufficient attention during the design phase to minimizing operational complexity and maximizing automation. More broadly, inadequate attention to full life cycle costs