

# THE BOEING COMPANY – ENTERPRISE METALS CAPABILITY

## Model for Guiding In-Sourcing Decisions

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**Boeing Commercial Airplanes** needed to restructure its make/buy framework for its Metals parts division as a way of increasing factory utilization. By developing a systematic way of reviewing large groups of parts, it intended to identify packages whose internal manufacture aligns closely to its long term strategy and also may provide a cost advantage.

To address this challenge, the Tauber team developed a model based on three pillars: first, estimating internal fabrication costs through a linear regression to compare them with current purchase cost; second, creating a metric to identify the strategicness of internal manufacturing, combining different attributes such as supplier quality, delivery reliability and financial health, market competitiveness, market innovation and future forecast; and finally identifying required capacity through a part-based labor hours estimation.

Through the model and subsequent verifications with relevant stakeholders, the team identified 11 part families as good candidates for insourcing. They represented a 5-year-value of \$56M, estimated savings of \$18M, and an increase of 4 percentage points in utilization.

Finally, as a way of facilitating the expansion of this analysis from the market segment reviewed to the whole metals part list, the team created a Tableau dashboard. By enabling an straightforward update with current Boeing's data sources, this tool provides an easy and fast identification of most attractive parts for future insourcing decisions.