aPriori

Cost Model Workbench (CMWB)

CMWB Overview

The Cost Model Workbench (CMWB) is the same toolset extensively used by aPriori's development and services teams to build and refine cost models and digital factories for customers and is designed for aPriori customers who want more control over their digital factories. In addition to the maintenance of existing digital factories, CMWB allows you to build and edit your own digital factories.

The CMWB toolset enables you to build and edit the rules and logic of cost models and is used in conjunction with the aPriori digital factory manager, which enables you to manage specific machine and material data, to provide full control over a digital factory.

With the CMWB, aPriori digital factory administrators are able to:

- Add user inputs, defaults and outputs for specific cost models/digital factories that support internal use cases
- Create should-cost digital factories with:
  - » Machines and processes that are not in the baseline or existing digital factories
  - » Routings and manufacturing rules that are not in the baseline or existing digital factories
- Create a digital factory to represent a specific factory (e.g., customer or supplier factories)
- Create a digital factory that replicates an existing internal factor
- Create user-guided cost models for costing components without CAD models or with incomplete CAD models (e.g., carry-over parts, electrical components, wire harness, surface models)
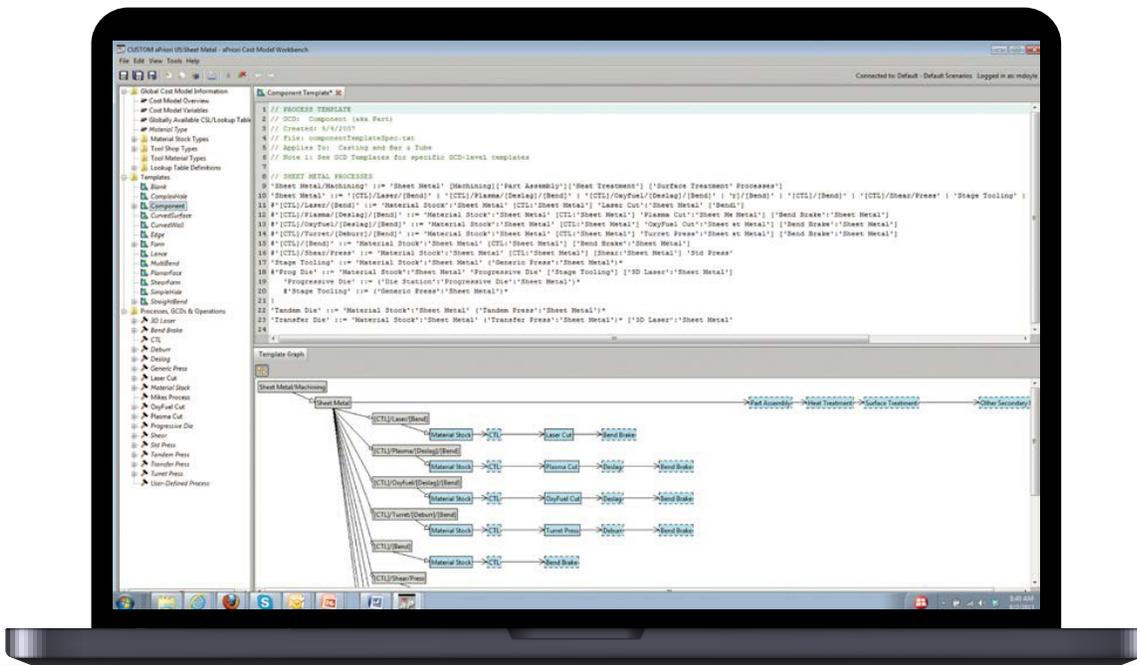

Figure 1: Editing the Routings for the Sheet Metal Process Group.

Supported Actions

- Add new user input controls (e.g. the ability to override the calculated number of tacks for a robotic weld)
- Add new outputs (e.g. output the detailed breakdown of cycle time for a die cast part)
- Configure data structures — machines, materials, lookup tables and tool materials
- Modify existing processes or operations (e.g. change the cost model for the bend brake, edit the tooling model for stamping to include a shipping estimate and display a more detailed breakdown of cost)
- Configure routings (available processing steps used to manufacture a component)
- Configure operation sequences for geometric cost drivers (GCDs) (e.g. techniques for holes, bends, etc.)
- Add operations for GCDs (e.g. new hole-making operations)
- Add processes within existing process groups (e.g. straightening to sheet metal, anodizing to surface treatment, adhesives to assembly)
- Add user-guided processes (e.g. models to cost thermoforming, wire harness or injection molding)

Training

A half-day, self-paced training course hosted on aP Academy followed by an invite-only three-day instructor-led advanced training course is available. Students will observe and then engage in hands-on exercises to prepare themselves to use, navigate, and modify the CMWB interface. Please consult your aPriori Customer Success Manager to see if this training is right for you.

Customer Support

The Cost Model Workbench is a separately licensed module and support is provided within the subscription. aPriori's service levels for CMWB support are the same as that for our Manufacturing Insights Platform. Customer employees requesting support must have completed the aPriori CMWB training.

Recommended Digital Factory Administrator Skill Set

aPriori recommends that digital factory administrators using the CMWB have experience with or knowledge of basic programming skills (e.g., XML, Visual Basic etc.). Ideally, the user is comfortable reading and manipulating scripting code. Additional preferred skills include:

- A solid understanding of manufacturing processes represented by cost models that they will modify. Knowledge of the primary cost drivers for manufacturing processes.
- A computer science, applied math, manufacturing engineering or mechanical engineering background.

WANT TO LEARN MORE?

Please contact your aPriori account manager to learn more about CMWB.

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