

### Development of a Spreadsheet based Cost Estimation System

#### Storyline...

The client is India's leading manufacturer of bulk material handling equipments. The brand has become a hallmark of quality for conveyors, pulleys and related products. The client caters to a wide range of industries like cement, steel, power and mining.

MaGC® (formerly NCRCL®) developed a spreadsheet based utility for cost estimation and preparation of proposal for the client. The client is now able to respond to business opportunities faster and more accurately.

#### Once upon a time...

The client's business is characterized by a number of products with minor changes in specifications from one product to the other. Also, the components used differ from product to product and from order to order.

These variables results in a wide combination of finished products. The client often found it difficult to prepare quotations for orders due to the numerous combinations and calculations involved.

#### Moving on...

The MaGC team began by listing out the various parameters that influenced the product cost. These parameters included the specifications of the materials to be used, particulars of components, the drawings of the desired final product, the unit costs and standard rates for labour and overheads.

For each of the parameters, the range of possible values was collected in discussion with the production and QC teams of the client. Input forms were designed to capture the variable data. The captured data along with the fixed values were run through a small computation engine containing the various calculations and rules to arrive at the final cost to which the cost of labour and overheads was then added based on defined rules. A simple system generated proposal was also built into the tool. The Cost Estimation System (CES) was developed using MS Excel.



There was a clear distinction between fixed and variable data. The fixed data was inbuilt into the CES itself and simple input forms were developed for variable data. A detailed CES User Manual on the lines of a software user manual was prepared. The CES also provided a formatted, readily printable proposal document which picked up the values from the CES directly. The CES went beyond normal cost calculation by including a significant portion of the engineering calculations also. Detailed training and support was provided by the MaGC team to the client staff.

#### Finally...

The client was able to obtain most of the features of fully fledged software at a fraction of the cost. The CES is being used extensively by different branches of the client. The CES gave the client the required knowledge to implement ERP in a more efficient way.