INTRODUCTION
• This checklist identifies the information and factors that need to be considered in the financial analysis of sourcing decisions.
• This checklist applies to the following scenarios:
  – Manufacturing In-house
  – Interfactory Supplier
  – Outside Supplier
• The financial analysis should always be done from a ‘corporate’ perspective, rather than a ‘unit’ perspective.
• Additional information on make vs buy decisions can be found in the Deere & Co. Financial Analysis Manual.

DEFINE ALTERNATIVES
• The baseline for the cost study is the ‘current’ manufacturing location or outside source.
• Identify alternatives, but keep the number of alternatives to a manageable level.
• Determine the appropriate project life to use in the evaluation.
• Identify the timeline for the sourcing in each alternative.

INFORMATION REQUIREMENTS FOR EACH ALTERNATIVE:

INVESTMENTS

AFE Capital and Expense
• Identify the AFE capital and expense that is required for each alternative (for example, building expansion, machinery, in-house tooling, supplier tooling, and paint system).
  ➢ What is the breakdown of spending by year?
  ➢ Can equipment be transferred from one unit to another?
  ➢ Any expense for rearrangement, refurbishing?
  ➢ Any AFE capital and expense at other Deere units?

Startup costs
• Calculate the startup costs as a % of capital cost or try to specifically identify the amount. This should include such things as learning curve, excess manufacturing costs, salaried resources devoted to project, etc.

Excess One-time Costs (resource pool, closures/downsizing)
• Evaluate the impact on resource pools for each alternative, and also whether any closures/downsizing would be necessary.

Product Engineering Expense
• Calculate any product engineering expense that is required for the identified alternatives.

Working Capital
• Inventory
  The analysis should include the average % of inventory to cost of sales. This consists of Raw Material, WIP and Complete Goods at the factory.
  ➢ Inventory for interfactory components should also be included. (For example, gear cases produced at Iberica for Harvester. If a component study at Harvester includes gear cases from Iberica, then the study should include average
inventory of Raw Material, WIP, and completed gear cases at Iberica in addition to the average inventory in-transit to Harvester.

- Include ocean time when appropriate.
- Use only the direct cost of inventory.
- Any impact of OF objectives should be considered.

- Receivables
  Average receivables as a % of sales. Component sourcing studies usually assume no change to the level of receivables. However, product sourcing studies may have differences. (For example, do we carry more receivables when tractors are sourced from Waterloo for the Region 2 market than if they were sourced from Mannheim?)

COMPONENT/PRODUCT INFORMATION

Product Volumes
- Estimate the production volumes by year for each alternative.

Foreign Exchange Exposure (when decision involves foreign sourcing)
- Normally use current monthly average exchange rates. Standard cost exchange rates can be used as long as they are close to current exchange rates. For major projects (annual business in excess of $10 million), consult with your SBU Finance Director on the appropriate rate to use.
- Breakdown product cost by currency type.
- Provide sensitivity analysis to demonstrate the impact that foreign exchange changes can have on the decision.

Product Price
- Will prices change?
- Can freight/duty reductions be fully realized as improved margins by Deere or will customer expect a portion of this in form of lower price? Will the quality perception be different depending on the manufacturing location?

Manufacturing Cost/Purchased Cost
- Sourcing studies usually start with Company Direct Cost. This means that period overhead at the factory producing the component should be excluded. It also means that the period overhead on parts sourced from other Deere units should be excluded.
- Identify incremental changes to period overhead.
- Determine the impact of freight and duties on the alternatives.
- Understand any differences in accounting for product cost between Deere factories and make appropriate adjustments.
- Only include firm cost reduction. Other future cost reduction should be handled through sensitivity analysis.
- Evaluate the impact of enterprise leverage on other parts/components sourced from suppliers. Are there any capacity concerns at suppliers?
- Is there any direct efficiency improvements to other products produced at the factory?

Direct Material
- Identify the direct material cost for each alternative.
- What parts/components would be sourced from sister factories?
  - Identify the direct material, direct labor, direct & period overhead at the sister factories. The period overhead should be excluded in order to arrive at company direct cost.
  - Identify the freight/duty cost impact to ship the parts/components.
  - Do not include interfactory additive. (In some studies you may need to quantify the interfactory additive if it is significant and there are considered to be income tax implications.)

Labor / Overhead
- Identify the direct labor and overhead cost for each alternative.
- For UAW factories, restate the labor to reflect the new hire wage rates.
- Analyze the period overhead to determine the relevant portion:
• What can be eliminated if exit manufacturing?
• What will be added because of additional production?
  ➢ For many decisions the level of period overhead may be the same.
  ➢ Any capacity considerations?
• Are there explanations for cost differences between the alternatives?

OTHER FACTORS

Tax Rates
• In most cases, use the income tax rate for the country where manufacturing will take place. However, in certain cases a more comprehensive analysis may be required. For example, due to tax loss carryforwards the JD Brazil effective tax rate is 24% vs the U.S. rate of 37%.

Warranty
• Will there be any differences between alternatives?

Service Parts
• Are there issues related to service parts that need to be identified?

Future Cost Reduction
• Is the anticipated cost reduction potential at one factory significantly different than the other?

FINANCIAL ANALYSIS
• Compile the investment and product cost information for each alternative
• Run DCF
• Evaluate results
  ➢ Financial conclusions
  ➢ Consider other factors such as quality, reliability of supplier, factory’s strategic direction, etc.
  ➢ Sensitivity Analysis

TAC (Total Acquisition Cost) ANALYSIS
• Do a TAC(Total Acquisition Cost) analysis on a selected sample of the parts to make sure there is a good estimation of the total cost impact.