



**WEIGHING THE VALUE OF
OUTSOURCING HPP VS IN-HOUSE HPP**

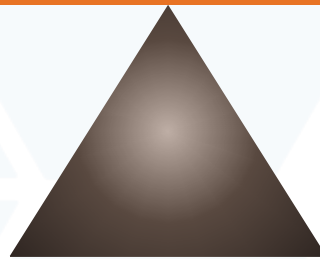
OUTSOURCE VS IN-HOUSE HPP?

What's the best decision for your company?

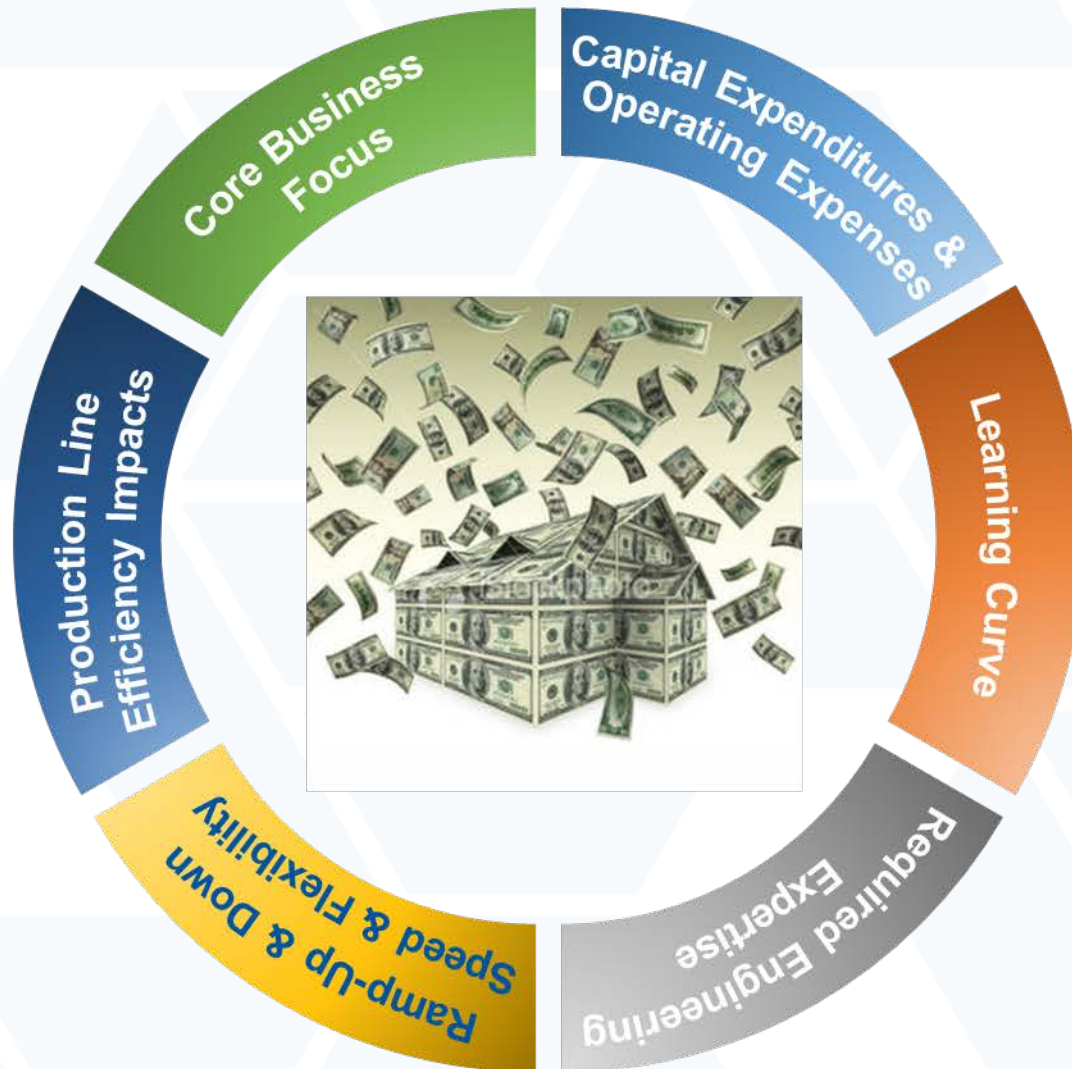
How can outsourcing HPP help avoid business challenges and complexities while saving on CapEx?

Does in-house HPP give us more control and flexibility?

Does in-house HPP help lower our costs?



KEY FACTORS TO CONSIDER



CAPITAL EXPENDITURE

Capex	Industry Average	Comments
HPP Machine (525-L)	\$3MM - \$3.5MM	Recommended that each machine has a back-up, so customer commitments are not compromised
Front & Back End Ancillary Equipment	\$400K-\$500K	Inkjet, scales, hopper, drying system, conveyors, tape machines, carriers, etc.
Retrofit	\$250K-\$750K*	Concrete pad, water, drains, electricity



Can a **HIGHER RETURN** on capital be **ACHIEVED** by investing in your **CORE BUSINESS**, such as R&D / Innovation, Sales and/or Marketing?



OPERATING EXPENSES

OpEx	Industry Average	Comments
Operating staff	7-9 line workers, 1 material handler, 1 QA technician, 1 supervisor	Per shift
Maintenance staff	1 maintenance engineer ~\$100K (fully burdened)	Per Shift
Parts	~\$6.50 per cycle	Not including spare parts inventory
Spare parts inventory	\$150K	Not including spare vessel (\$600,000)
Maintenance downtime	8-12%	Not including unscheduled downtime
Utilization	TBD	20-30 MM lbs. of product required to achieve full utilization
Other costs	Site specific	Utilities, CIP, ink jet, labeling, HPP audits / compliance, rent/space for equipment and product storage



LEARNING CURVE

- › During the ramp up phase, the potential for short or delayed orders are higher
- › 6-12 months is typically required to achieve a steady state for both operations and maintenance
- › HPP equipment is complicated and requires not just higher quality maintenance staff, it requires HPP experience as there is no comparable system in use in the food industry
- › The results of a lack of HPP maintenance experience include:
 - › Excessive use of spare parts trying to solve problems
 - › Excessive down-time
 - › Management distraction that can be material
 - › Adds to overtime of all associated staff, not just maintenance

As HPP machines age and cycles increase, the equipment has multiple levels of PM work that requires an expert to perform these PM needs. These tend to creep up on less experienced technicians and cause major delays in production.



REQUIRED ENGINEERING EXPERTISE

- HPP-specific engineering expertise is required to continuously tune the machine to maintain uptime, improve throughput, and keep the process operating in conformance of specifications so that customer relationships are protected
- Relatively simple equipment issues can result in significant downtime
- A highly qualified and seasoned maintenance staff is recommended to be on-site at all times
- The complexity of HPP operations compared to other in-plant positions creates a high turn-over rate and necessity of higher pay rates



We are in discussion to help a company that owns and operates 3 HPP machines, and, In their own words, are “hemorrhaging” money due to lack of technical experience. They are spending \$1MM annually on parts and have 7 technicians costing them \$450K a year.

RAMP-UP AND RAMP-DOWN SPEED AND FLEXIBILITY

- › Companies often face product demand fluctuations
- › Demand can surge due to successful promotional activities or innovative new product launches, outstripping the capacity of a single HPP machine, which in turn leads to short or delayed orders
- › Alternatively, demand can fall short of expectations due to many reasons such as a shift in consumer tastes, leading to low utilization of an HPP machine
- › Seasonal and promotional items can cause unexpected HPP backlogs. Also, SKU elimination at a retailer or food service company can shut the HPP machine down entirely if this is the reason the investment was made

- ✓ Seasonal peaks
- ✓ Successful marketing campaigns
- ✓ Successful new product launches



- ✗ Loss of product approval
- ✗ Competitive offerings
- ✗ Changing consumer tastes

PRODUCTION LINE EFFICIENCY IMPACTS

- Operational efficiency of a flow process production line is reduced with the batch process HPP operation, potentially reducing production throughput and/or requiring higher inventory levels.
- Production delays in areas outside of the HPP process can create a subsequent demand surge which outstrips the capacity of the HPP machine and staff, leading to short or delayed orders.



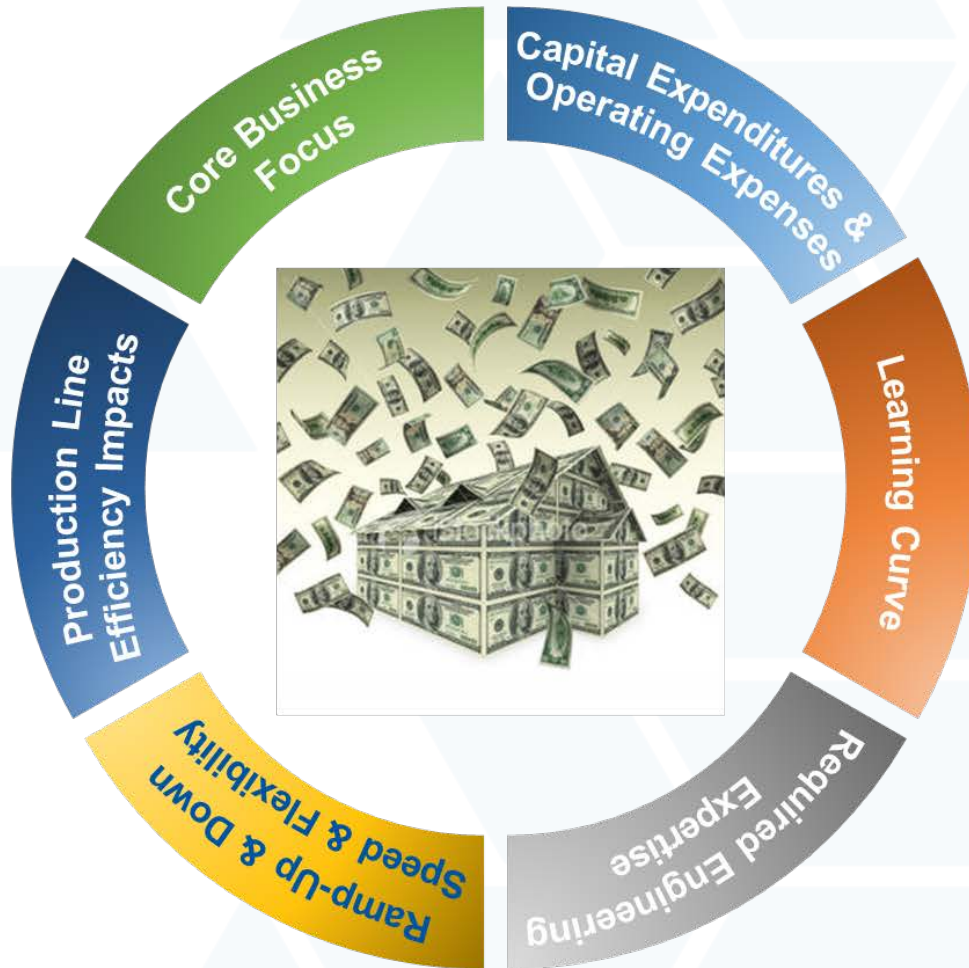
CORE BUSINESS FOCUS

- › Is in-house HPP a distraction today?
- › Could outsourcing HPP free up space and labor for further production initiatives?
- › Does saving on CapEx allow for further marketing and R&D exploration?



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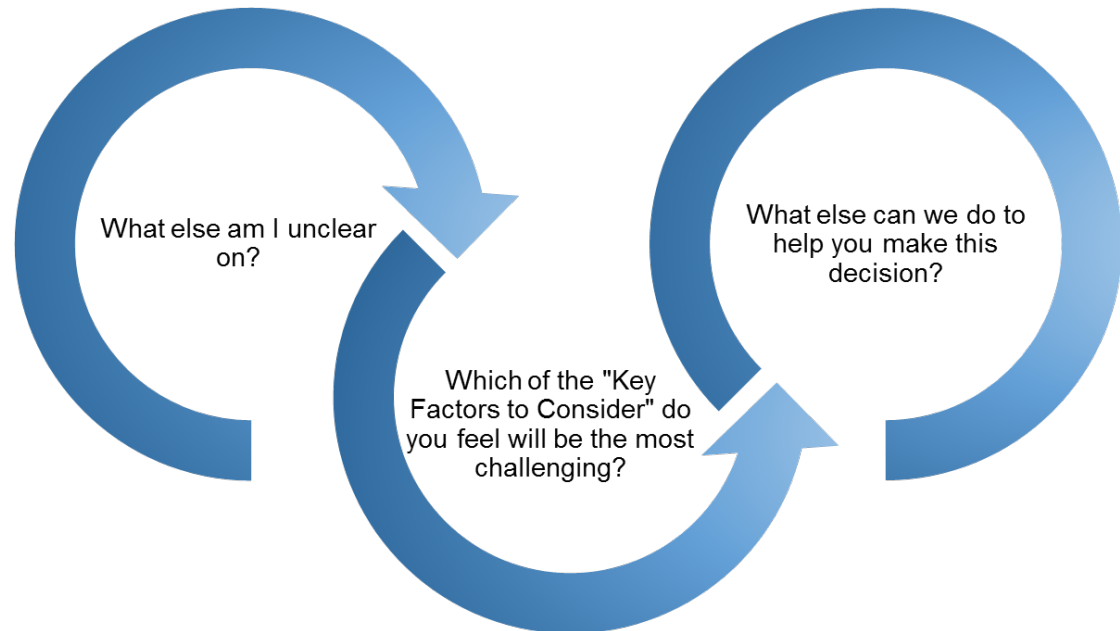
- Do the investments and operating costs support a solid business case to perform HPP in-house?
- What steps will be necessary to mitigate the risks of meeting your customer commitments?
- Does performing HPP in-house support your core business focus?

VALUE IN A PARTNERSHIP

- Let the service provider manage the burdens of volume influx, down time, and the “unknowns”
- Avoid the upfront and OpEx costs
- Maximize your core business
- You maintain ultimate flexibility to ramp up or down quickly, ensuring your customer needs are met while also protecting you from the cost of underutilized equipment
- Multiple manufacturing sites would make in-house even more complicated

Q & A SESSION

What other information can we share or discuss to help you make the best decision for your company?



THANK YOU!