

2009 Processing Outlook Report

While at a slower pace than last year, survey respondents show that a strong interest in purchasing new equipment and implementing new technology still persists.

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In looking to get a better feel for processors' perspective on purchasing, and the implementation of new products and operational dynamics, we sent a survey out to the readership of *Chem.Info*. Specifically, we looked for input on:

- Purchasing plans for this year vs. last.
- Ways they had, and will continue, to battle energy costs.
- Their primary maintenance issues.
- New feedstock developments.
- Software functionality.
- Wireless technology implementation.

While you'll be able to access more in-depth information on the report as it pertains to each key segment (Resins & Plastics, Food & Beverage, Fuel Refinement, Pulp & Paper, Pharmaceuticals, Materials Processing and General Chemical Production) within the processing marketplace at www.chem.info [1] and in a subsequent e-mail deployment, the following gives a general overview of the issues most critical to you and your peers.

Purchasing—Safety, Automation & Capital Equipment

In 2008, approximately 40 percent of all plants reported spending more than \$40,000 on safety equipment, materials and related products. Unfortunately, tougher economic times could put more workers at greater risk, as nearly half of those responding said they will spend less on safety programs in 2009.

When it came to automation purchases in 2008, a majority of respondents cited spending more than \$100,000 on automation equipment, but this number will shrink a bit in 2009, with 62 percent admitting they won't invest as much in the upcoming year. While troubling economic times do call for smarter spending, one has to wonder about the fallout that could follow from a lack of efficiency-focused investments, which automation equipment can provide.

In looking at overall capital equipment purchases, about 45 percent of respondents spent more than \$750,000 in 2008. Better than 35 percent said that they will spend the same or more next year, while a little better than half of those surveyed admitted that cuts will be made to capital equipment purchasing because of the state of the economy. Those who will continue to make investments in their

operation cited plant infrastructure and processing machinery as their primary targets, over material-handling and automation equipment.

Energy Costs & Maintenance

While nearly all respondents identified that they were facing steadily increasing energy costs, about one-third felt that their internal strategies were helping to control these costs and keep the overall economic impact flat, even with the system or product investments that were part of these strategies. More specifically, about 54 percent of respondents felt that improving or upgrading their lighting systems played a significant role in cutting energy costs.

Additionally, about 75 percent of readers said that implementing simple climate control procedures like opening windows, running HVAC systems at lower levels or shutting lights off at certain times also helped alleviate rising energy costs.

Keeping with the energy theme, about half of respondents felt that future investments along the energy conservation front would address facility improvements, as opposed to upgrading individual pieces of equipment or adjusting usage patterns.

An overwhelming number of respondents said they had no plans to begin outsourcing maintenance, an approach taken by some facility managers to help cut labor costs. In looking at key issues pertaining to maintenance, about 60 percent cited the upkeep of equipment in need of replacement as their biggest issue. This was followed in order of significance by working to schedule maintenance activities during non-critical production periods.

This offers an interesting paradox, as companies seem aware of the issues surrounding additional maintenance, but economic conditions are preventing them from making more capital investments. One could speculate that the less frequent maintenance, with the products and labor time associated with it, could equate to savings that would allow for new equipment purchases.

Feedstock, Software & Cutting The Cord

Perhaps no other area of technological development offers as much promise or confusion as new feedstocks. In particular, we asked readers about the use of plant by-products, food waste, algae, biomass and agricultural by-products.

While respondents were familiar with all of them, those currently in use showed a dominant trend:

- 48 percent said that they currently use plant by-products as a feedstock, and also feel that this sector offers the most promise going forward.
- Next was biomass at 22 percent.
- Agricultural by-products are currently in use by 18 percent of respondents.
- Food waste and algae were cited by 6 and 5 percent of the readership, respectively.

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Not surprisingly, the most significant obstacle that readers saw with implementing these new feedstocks, and the technology behind them, are costs associated with a young marketplace that doesn't have a complete infrastructure behind it. This could make investments costly, and equipment potentially more difficult to implement and maintain.

- When looking more closely at the way software use has grown in the processing sector, respondents were torn almost equally between inventory management and remote equipment monitoring as the most prized function. Corresponding with these features, the most significant benefit of recent software investments were either added operational efficiency or enhanced quality controls. When looking at future purchases, the leading functionality that will be in greater demand is operational simulation, followed closely by enhanced equipment-monitoring capabilities.
- Staying along the front of adapting newer and more efficiency technology, readers were asked about the use of wireless systems in their plants. The most common is RFID-tracking systems. Following the same trend as software usage, equipment monitoring and data capture were also cited by many as the most important elements of wireless implementation.

When asked about how important wireless compatibility was when purchasing new equipment, respondents were split in regard to whether or not they would require it. Additionally, when asked about retrofitting equipment with wireless capabilities, only 40 percent cited doing so in the last 12 months. Further research will have to determine if this stems from wireless capabilities already being in place, or if the marketplace is still hesitant to embrace the technology.

In terms of benefits, readers were split amongst the greatest perceived benefit—some cited the fewer location limitations wireless-enabled units provide, while others preferred the quicker, easier connections.

Overall impressions would seem to indicate that while the majority of processing plants are taking a cautious approach to capital equipment and technological investments, there are still significant numbers of plants poised to continue investing in their capabilities. This will open up opportunities for more progressive companies who can see success in this marketplace as a marathon and not a sprint.

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