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EFFECTIVE IT UPGRADE STRATEGIES FOR PRECASTERS

To improve productivity and capability, precasters typically consider investments in of the following technology options:

 ➢ General business systems (often called ERP or Enterprise Resource Planning) for accounting, financial reporting, job cost/project accounting, production management, material management and management information
 ➢ Specialty application for Customer Relationship Management (CRM), estimating, project management, scheduling and document management,
 ➢ Engineering technology that will automate drafting and eventually provide 3D parametric modelling abilities.

This bulletin comments on management issues related to general business systems (ERP) and specialty applications. See the bulletin on engineering technology for a summary of issues relating to engineering systems.

Some questions to ask:
 ➢ Are you aware of the trade-offs, strengths and weaknesses of the software solutions that are available to the precast industry?
 ➢ Are you aware of the benefits, costs and steps involved in selecting and implementing new IT systems?

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➢ Do you have a business plan for the long-term use of IT with a clear expectation of the benefits IT can bring to your organization?
➢ Are your IT priorities in alignment with your business priorities?
➢ Is your IT program business or technology driven?

Management Issues in General Business Systems (ERP) for Precast

Many precasters use older IT systems that:
➢ Have limited capability
➢ Do not automate certain functions
➢ Lack integration
➢ May use obsolete technology where ongoing support is a problem.

As a result, some are considering investments in new technology and improved systems that offer features such as:
➢ Better information to manage projects and costs
➢ Stronger tools to schedule projects
➢ More integration to avoid duplicate handling of information
➢ More business information and less accounting information
➢ More timely information.

The objective is to achieve benefits including:
➢ Better project controls
➢ Productivity improvements – access to information, eliminate redundant entry of information, automate manual tasks
➢ Better management tools including trend analysis
➢ Access to historical knowledge – estimates, project history

Are solutions available to meet the needs of precasters?

Broadly, precasters face two choices for IT solutions:

1. Purchase individual "best of breed" software applications from different suppliers then create the links that tie these applications together. Some examples are ICE or Timberline for estimating, Primavera for project

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management, P3 for schedules, ELiPLAN for production. These applications are then "integrated" to a financial software suite. This may provide the best "solution" but can require more investment and a strong IT department.

2. Commit to one supplier for an integrated suite of software, typically an ERP or construction/GC type system. Some choices of ERP for larger companies include JD Edwards and Oracle; for mid-size companies choices include Microsoft (Navision and Great Plains), Best, Visual Manufacturing and many others.

Either of these options may require custom programming to achieve the desired level of functionality. Additionally, Microsoft products such as Excel, Outlook and Project often form part of a solution. When it comes to integrated software suites precasters face another choice: focus on ERP systems or to also examine systems developed for the AEC-construction segment such as Timberline, Penta and others.

Some key differences are noted in the following table. This table is worth reviewing because it highlights the weaknesses in many ERP systems in estimating, project costing, production, project scheduling and construction functionality.

ERP and Construction Software Comparison

Function	ERP Systems	Construction systems
CRM	Usually available	Usually not available
Estimating	General purpose "product configurator"	Link to spreadsheet or provide GC type functionality
Project Management	Limited	Usually provide linkage to third party software
Scheduling	Provide a repetitive manufacturing oriented scheduling ability	Usually provide a linkage to third party scheduling software

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Production & Shipping*	Usually limitations – unique products (piece marks), shipping etc.	Not provided
Automated bill of materials integration	Possible with modifications	Usually not provided
Job costing	Manufacturing oriented, some project reporting limitations for precast	Provided, usually quite flexible
Construction needs – retainage, change orders, billing, WBS, % complete, project to complete	Can be a weak spot and require customization	Good
Financial	Usually very good	Good

(*Note: production management, scheduling and shipping capabilities must be very carefully reviewed because many of the ERP systems struggle with the high volume of unique products (piece marks) that are a fact of life in precast production.)

Costs

New IT systems require a large investment and a substantial commitment of internal resources. ERP systems are priced based on the number of users, for example a mid-range ERP system for 50 or so users could cost between $100-200,000 for software licences. An ERP software reseller will likely quote a fee for implementation services that is in the range of 1-3 times the cost of the software licence. Costs for hardware and other items are in addition.

Specialty Applications

Precasters with solid core financial and business systems may be looking for individual applications to improve productivity in sales (customer relationship management), estimating (automate estimating process, store historical estimated and actual costs) or scheduling (automate, detect conflicts). Again success requires a solid understanding of your objectives, needs and the tradeoffs

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amongst the various choices. Particular attention should be paid to technical issues related to integrating the specialty applications with core financial and business systems.

Conclusions

Precasters can achieve many business benefits from an investment in upgraded IT capability. However, many critical choices must be made. The bottom line is that an ideal solution for precasters does not yet exist so trade-offs will be encountered.

Some keys to success are:
  ➢ Carefully define your IT objectives and plan from a business point of view, not a technical point of view
  ➢ Develop a good understanding of the IT needs of your business. Think about both the short and long term IT needs, as the system you select could have a lifespan of 10 or so years.
  ➢ The business management team should fully understand and be committed to the benefits of an IT investment
  ➢ Conduct a thorough review of the options and fully understand the tradeoffs before making choices.

Remember too that IT upgrades present an opportunity to map, revamp, upgrade and streamline core processes and to drive standardization.

MJS Management Services can assist you to gain the benefits available from IT by helping to:

  ➢ Develop a successful IT strategy.
  ➢ Assess current IT capabilities and identify opportunities for improvement.
  ➢ Assess, map and streamline current processes
  ➢ Document IT needs.
  ➢ Identify, evaluate and select suitable software solutions.