70 FEATURES TO LOOK FOR IN YOUR NEXT ERP

A comprehensive overview of core ERP features to help you identify requirements for your selection project

GUIDE HIGHLIGHTS

- 20+ core features including analytics, accouting & more
- 30+ manufacturing and distribution features
- Discipline groups such as HR, CRM & more

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CORE FEATURES

1. FINANCE AND ACCOUNTING

Considered by some, mainly accountants, as the true core of ERP. Included are components such as accounts receivable, accounts payable, general ledger, financial reporting, and often payroll.

2. SALES MANAGEMENT

This is where it all begins. Sales orders are entered into ERP and this triggers procurement and production followed by shipping of a product or delivery of a service to a satisfied customer. Tools for quoting are often included in core sales functionality. Customer relationship management tools are also frequently featured in sales modules, either as an integrated point solution or as a part of the ERP system.

3. JOBS AND PROJECTS

Job orders are the most common method used to control production in a manufacturing environment. A job is opened to build a finished product or a subassembly. Material and labor are charged to the job and at the end, a measure of profitability is calculated. Jobs can run for a few hours or a few years in businesses such as shipbuilding or construction so having a record within ERP is essential.

4. CROSS-DISCIPLINE INTEGRATION

Sales, engineering, accounting and other business functions should not live in silos. ERP should keep a common flow of information available to all the singers in the choir and let them all sing from the same sheet even when they are in different buildings or on different continents.

5. THIRD PARTY INTEGRATION

Most ERP systems offer some degree of interoperability with third party software, such as Salesforce for customer relationship management or QuickBooks for accounting. This allows for easier process automation, and easier transfer of data should users wish to move data to and from their ERP.

6. INVENTORY MANAGEMENT

Whether they buy it or make it, businesses need ERP to provide a record of what they have on hand to sell at all times and where it is. It is important to a modern business that inventory be quickly moved to where it is needed and to manage the velocity of those movements within ERP. Too much inventory means cash is invested where it isn't needed. Too little means that production cannot begin or maybe a sale is lost. The value of inventory is a key component of financial statements too.

7. MATERIAL REQUIREMENTS PLANNING (MRP)

Material requirements planning are the processes that allow a business to keep supply and demand in balance with sales and forecasted sales. Sales ERP modules create parent demand for a product someone wants to buy. The top level demand flows through all the subassemblies in inventory or in process to individually-purchased components. Are they in inventory already? Is there another order already requiring that inventory? When can you buy more and have them in inventory? Over the years, MRP systems which helped manage inventory components evolved and developed into ERP.

8. BUSINESS INTELLIGENCE (BI)

Business intelligence has come along way since the ability to download a report to a spreadsheet, where it could be parsed and analyzed, was added to ERP. Today's BI tools include real-time data analysis and employee dashboards where executives and managers can quickly see the condition of their interests in real time and can make adjustments immediately to keep the business on course.

9. ENGINEERING

Your engineering module can perform a number of tasks which make life easier for your engineers. This includes master lists of bills of materials and process routings. Users can track Engineering Change Requests (ECRs) using custom workflows and document revisions to these in real-time. Engineering modules can also create and store user-defined specification templates.

10. MOBILE COMPATIBILITY

Cloud-based ERP can be accessed through any mobile device with a connection to the internet and a browser installed. Some also have native iOS and Android apps which have been specifically designed for use on mobiles and tablets running the respective operating systems.

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

11. QUOTING

Customers want to know how much something will cost and when they can have it. For some businesses this is simply what is on the store shelf right now. For others, this requires detailed estimates of time, materials and subcontract costs with the addition of contribution to overhead and profit. A good quote system is an invaluable ERP CRM function. It will model what is required by the customer and provide a framework to collect and analyze ERP data leading to a good quote. CRM will also track which quotes were won and the reasons why others were not.

12. PROSPECTING

As the emphasis on "user-base" growth continues, prospecting has become an essential process for the customer team. ERP CRM can track who was contacted, how they were contacted and when. CRM will signal what the next point of contact should be and when it needs to happen, making planning your sales strategy simpler.

13. EMAIL SEGMENTATION

Your customer base is likely composed of many different people from many different companies, each at a different point in the sales funnel. Why send them all the same marketing materials? An email segmenting feature automates the process of dividing up your contacts book into groups of similar-stage leads so you can send them materials relevant to your current relationship with them.

14. MARKETING AUTOMATION

A marketing module can centralize your marketing team's efforts, and offers automation of processes and an extensive list of analytics tools. These can help you analyse whether your ads are leading to sales, which media streams are performing best, and whether your marketing campaigns are reaching the right audience.

15. CUSTOMER HABIT ANALYSIS

ERP CRM can track what kind of products a customer orders and which options are selected. It can track by customer specifically or across all customers. ERP can also detect seasonality in orders and make that data available for improved forecasting.

16. BOOKING

This is the moment a customer order is placed. It is the result of the prospecting and quoting that preceded. When the order is booked, the ERP system transfers demand to other systems and begins the planning of materials and capacity to manufacture the order or deliver the service.

17. CONTACTS BOOK

Simple, but essential. Sure, you could have these on a separate spreadsheet, but why bother when you can store them in a fully-integrated CRM module where you can link them up to all sorts of useful forecasting and analytics features? Keeps track of names, phone numbers, email addresses and job titles all in one place.

ANALYTICS & REPORTING

18. DATA MODELING

Data modeling features allow ERP users to create and test data models in simulated environments. These can include regression, clustering, time series and classification.

19. PROFIT REPORTS

These reports allow you to analyze the products and services you sell. Look at how much profit you generate from each and figure out whether you are investing too much, too little or in each of them.

20. DATA MINING

Data mining is the analysis of large amounts of data searching for patterns, trends, anomalies, and dependencies. Knowledge of these can lead toward improved decision making and a better competitive position in competitive markets, such as by allowing users to query data on specific input fields like customer location or production time on order. Look for an ERP which offers an integrated database which supports open queries.

21. DATA VISUALIZATION

ERPs offer several data visualization options, which help inform key planning decisions and forecasting activities. These can include decision trees, parallel coordinates and a wide range of charts and graphs.

22. FINANCIAL PLANNING

ERP can be used to automate your financial forecasting and budgeting activities using the data from your accounting module (or third party software). Plan out how much you should spend on materials or shipping, and get automated predictions on how your sales revenue might look in a few month's time.

23. WORKFLOW ALERTS

ERP systems today can send alerts when certain events happen. These can be sent by email, SMS, phone calls or however is best for the situation. The alert might be a warning that a process is behind schedule. It could also be a positive message that you achieved a business goal.

24. USER ACCESS CONTROLS

Not all data is created equal. Access to some types of data - such as financial reports or sensitive employee information - should be limited to limit the likelihood of a dangerous and costly data breach. ERP user access controls allow you to decide who gets to see what.

25. KPI IDENTIFICATION

Key performance indicators are the metrics used as a regular measuring point to check on the health of the business. ERP analytics can identify those metrics, by analyzing which are closely linked to performance in different areas of your company.

HUMAN RESOURCES

26. RECRUITING

A business needs to recruit, both to fill positions left by employees that leave, and to hire new positions created by growth. Recruitment functionality in human resources ERP can track applicants and their qualifications for a job they applied for, analyze applicant demographics and assist in succession planning. It will also help with governmental requirements such as equal opportunity laws.

27. PAYROLL

People like to be paid. Some are paid on time and others on their ability to manage targets or perform certain tasks. Payroll processing in an ERP system should ensure all get their pay on time and accurately. It should also include related requirements such as enrollment in health insurance and payment of payroll-related taxes.

28. WORKFORCE PLANNING

This component of HR modules is one of the most valuable. It requires tracking of the skills each employee has and those they develop. Then it matches those employees who best fit requirements of jobs as those requirements evolve.

29. SUGGESTION BOX

This tool is often included in ERP human resources modules. It provides employees with a virtual 'suggestion box' wherever they are and can categorize the suggestions for management actions. This features is often integrated into an employee forum.

30. FORUMS

A forum within your ERP human resources modules is like a social network but within the business. People collaborate on projects and learn of requests for help that might be in another discipline or geographically separate location. This social collaboration is becoming increasingly available among modern ERP systems.

31. REVIEWS AND PERFORMANCE MANAGEMENT

Whilst no-one looks forward to performance reviews, employees do want to be treated fairly and evaluated by the same criteria as everyone else in the organization. Within an ERP, everyone in the enterprise will use the same tools and the same yardstick to evaluate employees. Managers can be tracked to ensure their evaluations are on time and consistent with other departments.

32. TRAINING AND PERSONAL DEVELOPMENT

People want to develop their existing skills and add new skills. Management can plan what skills are expected in the future and employees can develop their skills along the same path. Both sides can monitor progress within ERP and managers can analyse the impact on staff turnover rates, succession planning and more.

33. ORGANIZATIONAL CHART

Whether a business is managed with a hierarchical, command and control structure or a flat matrix of employees, staff will need to know how they relate to others in the business. An organizational chart should be central to an HR module as it provides a starting point for many HR processes such as leave approvals and recruitment.

34. LEAVE MANAGEMENT

ERP can track leave earnings or allowance and deduct as time is used on vacations. It can also track when accumulated time is exceeding a limit. For management, it helps ensure that people take time away from work both for their own benefit and for an opportunity to measure any changes while they are away.

35. TIME AND ATTENDANCE

Time and attendance modules allow employees and managers to log work hours and days missed due to vacation, illness or personal leave. This can usually be integrated with both the payroll feature outlined above and external software to automate payroll processes.

36. BENEFITS ADMINISTRATION

Ensure your company meets an ever-evolving and expanding set of benefits compliance regulations (especially with regards to the Affordable Care Act) by automating your benefits processes. This is a particularly useful ERP feature for organizations with heavily-unionized workforces with complex benefits needs.

DISTRIBUTION & WAREHOUSE

37. WAREHOUSE MANAGEMENT SYSTEM (WMS)

A warehouse management system is much more than a glorified inventory module in a typical distribution ERP system. It is intended to facilitate high-volume, rapid picking directly for sales orders and for shipments to retail stores.

39. ORDER TRACKING

Orders shipped to customers will often use third-party carriers such as UPS. ERP tracking functionality can link directly with the carrier's systems and allow you to provide customers with accurate updates about the status of their order.

40. SUPPLY CHAIN TRACKING

This allows you to track the status of inbound products, parts and materials. Keep tabs on where both your domestic and overseas orders are, and when they will arrive, through trucking in the originating country, overseas shipping in a container, movement through one or more customs, and finally in-country shipping by truck or train.

41. INVENTORY OPTIMIZATION

Distribution ERP is designed to model the flow of goods and materials to keep your inventory as smartly stocked as possible. In particular, products made for the B2C retail market have a limited shelf life as technology advances and demand changes from season to season. Optimizing inventory allows fast-paced distribution outlets to have the right amount of the next product ready to sell, and to move end-of-line products out the door in time to squeeze the last drops of revenue from them.

42. TRANSPORT MANAGEMENT SYSTEM (TMS)

Transportation management systems can be stand-alone or integrated within a WMS module. They will help develop the best routes to service stores along the route. This is particularly useful for making your distribution activities more efficient by, for example, demonstrating whether one

truckload services more than a single store, or finding something to backhaul to avoid an empty truck returning to the distribution center.

43. YARD MANAGEMENT

Often there are thousands of trailers parked around a distribution center. Which one has the SKU needed to ship to stores for next week's sales? Which door is closest to the point you want to store the goods? You may want to signal the next trailer needed at that door within seconds of the last trailer leaving to keep the door working continuously. You may want to bring an empty trailer to the shipping door immediately after a truckload leaves the door. These questions should be answered within the yard management functionality of your distribution ERP.

44. ASSEMBLY INSTRUCTIONS

Final assembly of a product is frequently done at some point along the distribution line. The manufacturer might make a smart phone and ship the chassis to a distribution center. They will ship different color cases separately, and as customers select colors at the retail site, the distributor will package the phone in the fastest-moving color cases. ERP allows you to centralize instructions for assembling your products into one place, making the process more efficient and resulting in fewer breakages.

45. POS INTERFACE

Point of sale interfaces will connect the distribution center to all retail stores in a chain. Distribution ERP will track which items are selling and automatically generate pick orders and truck scheduling to replenish those items in the right stores.

46. BARCODE / RFID SCANNING CAPABILITIES

With the speed and accuracy needed to fill thousands of orders per hour there is no room for errors in handwriting or reading. Integration of RFID devices with ERP provide quick, guaranteed mistake-free processing of orders and inventory.

47. AUTOMATED CYCLE COUNTING

ERP can also select a statistically valid sample of inventory products to check every day. You will work with your ERP to set the sample size at a level that is small enough to ensure system load is not excessive and large enough to be meaningful. With this in place, a worker can locate and count the sample in as little as fifteen minutes a day.

48. CROSS-DOCKING AUTOMATION

Are you cross-docking products every time you get the opportunity? Or do you only identify these opportunities when it is too late? ERP can help you match incoming supply orders with outgoing customer shipments and trigger a cross-dock every time.

49. SLOTTING AUTOMATION

Is every SKU in the optimum bin for the day's shipments? Too often, businesses fail to keep up with difficult to identify day-to-day changes, missing out on the opportunity to make workflows run more efficiently and save money. ERP can automate these processes and eliminate the opportunity for error.

PRODUCTION SCHEDULING

51. FORWARD SCHEDULING

Forward scheduling tools allow you to define a start time for the production job and ERP will calculate an estimated completion date and time. The more advanced this module is, the more variables are included in the scheduling algorithm; from available workforce to machinery occupation.

52. BACKWARD SCHEDULING

Unsurprisingly, backward scheduling tools allow you to define a completion time from which ERP will work backwards in time to determine the date and time you need to start. Again, the more advanced this module is, the more variables it will factor into calculations. What variables have the greatest impact on your production schedules?

53. ROUTING

This is the sequence of steps or operations needed to complete production work. ERP production modules can be programmed with template routes. Schedule these routes and create inspection or quality assurance points along the sequence.

54. RESOURCE MANAGEMENT

Resource management covers the staff, tools, or equipment required to complete a production run. Each step in the routing can be assigned resources within an ERP production module. More advanced functionality enables these resources to be shared by other jobs to be scheduled and completed.

55. WASTAGE REPORTING

One of ERPs biggest advantages is that it can flag up areas which are dragging your revenues down. Wastage reporting features are particularly useful in this respect, allowing users to see how much waste each job generates and whether this can be reduced.

56. MATERIALS FORECASTING

Materials needed to complete work are planned by ERP at a quantity per planned completion for the job. Those materials might all be issued at the start of the job or be issued as required by certain operations in the job.

57. DESTINATION PLANNING

Jobs are used to supply a unique customer order. A good manufacturing ERP will allow you to link a series of jobs to an order to supply demand, allowing one job to feed to another. A job can also be used to supply a part to inventory.

58. FINITE SCHEDULING

A fixed resource, such as a machine can only operate 24 hours in a day. Finite scheduling allows ERP to cap the scheduled load on that resource and push remaining work to the next available day.

59. INFINITE SCHEDULING

Some resources are flexible. Your usual shop crew might be a team of ten. On the other hand, their capacity can be extended through overtime or temporary workers, so production ERP with infinite scheduling enabled will schedule as many hours as needed to complete jobs.

60. SHOP LOAD REPORTING

This is the total number of hours required to complete work on a schedule. Any production ERP module worth its salt should track and report on this metric. Management will look at this over a single day or a range of days such as a week or month. Management can look at the entire shop or at a single resource to see different views of shop load.

61. SHOP CAPACITY REPORTING

This is the theoretical amount of hours you can schedule for the entire shop or any resource. When capacity is greater than load, ERP should look for additional work to schedule. When load exceeds capacity ERP should look for work that can be rescheduled or alert users when additional work is planned.

MANUFACTURING

62. SUPPLY CHAIN MANAGEMENT

A business has many items they purchase and each can have its own supply chain. The business itself is part of their customers' supply chain. Some chains include third parties such as warehousing or transportation providers. Your manufacturing ERP should provide you with a transparent view of your company's supply chain whilst co-ordinating each link in the chain.

63. ORDER MANAGEMENT

Orders are a generic term that combines some categories of supply and demand. A sales order represents a demand; a customer has placed an order requesting delivery of a certain quantity be an agreed-upon date. A purchase order is a request on a supplier to deliver component materials. ERP can manage these orders whilst monitoring key metrics which can help with forecasting and decision making.

64. KITTING

Kitting is the process where component materials for a production order are collected from the warehouse and delivered to manufacturing to begin production. Often materials for an order will be delivered all at once and other times only the components for a particular operation will be delivered. Manufacturing ERP systems can manage component stock and delivery as part of kitting functionality.

65. MTO

'Make to order' processes arise when production exists only to satisfy customer demands. Often the product is specifically made for a single customer and there would be no reason to build ahead to inventory and hope for the next order. This requires its own processes within an ERP distinct from those used in MTS manufacturing including supply and demand reporting, and finite scheduling.

66. MTS

'Make to stock' is a kind of manufacturing where production is completed and the finished items are moved to inventory waiting for a customer order. These products usually have an ongoing demand and the risk is manageable. This method is used where customers require delivery with a lead time shorter than necessary production time. MTS manufacturers should look for strong inventory controls and sales forecasting tools within ERP.

67. SUPPLY AND DEMAND REPORTING

Planning is an ongoing process in any manufacturer. The planner's job is to balance a continuously changing state of supply and demand. A PO delivery is late; how do you need to react? A customer asks to place an unexpected order with an immediate delivery; can you satisfy their request? Manufacturing ERP systems will signal these out-of-balance situations and can even offer suggested solutions.

68. SCHEDULING

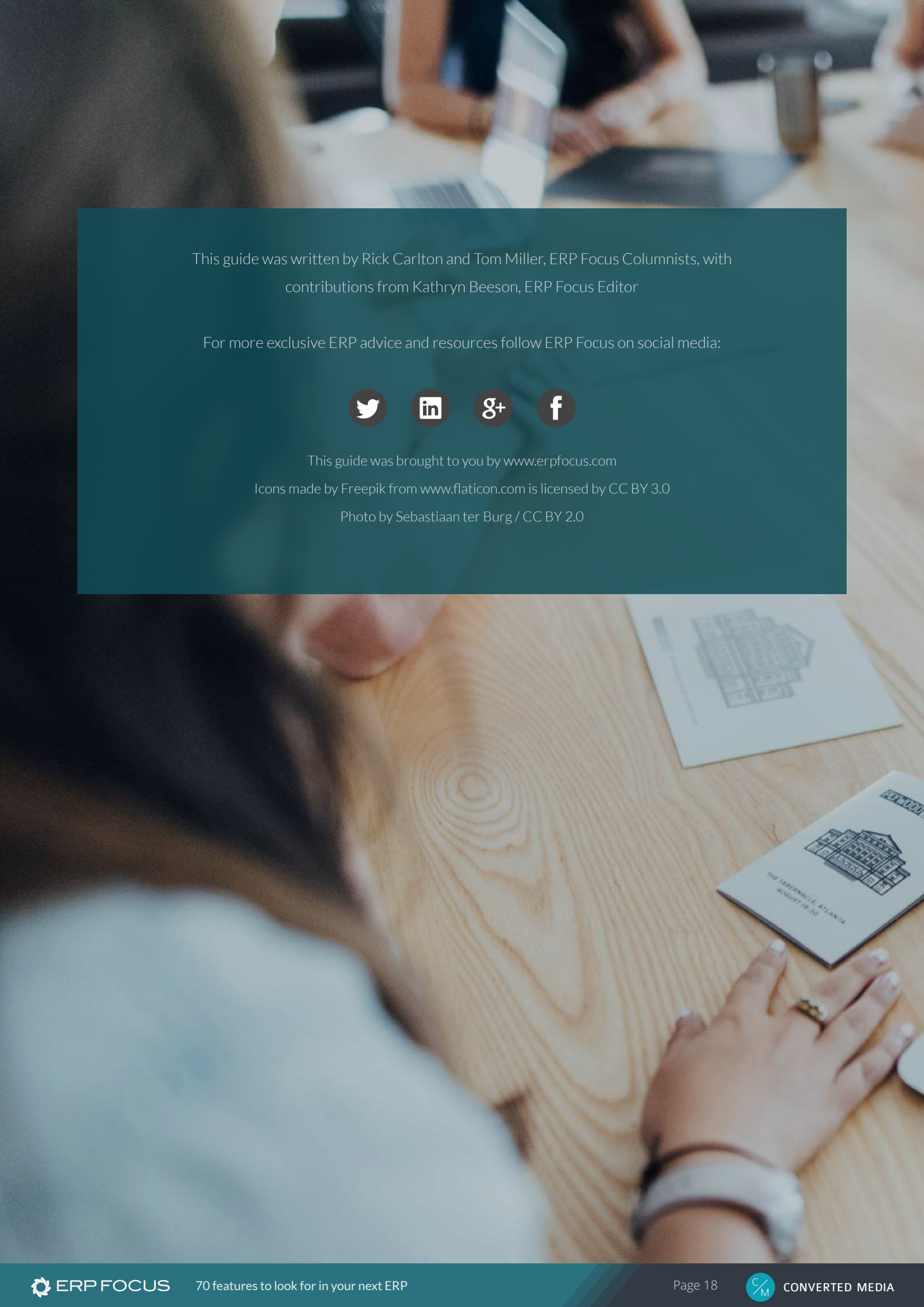
Scheduling is a subset of planning for manufacturers. Given a set of customer demands and materials on hand now and due to arrive soon, what is the capacity of machinery and trained people to produce the order? Bottleneck processes need to be kept fed at all times. Some orders might be run on older equipment to free up the newer equipment for orders that cannot be moved.

69. LOT NUMBERS

A serial number is assigned to a single, discrete unit of production. A lot number will be assigned to all the output on a given day, or on that day's output that was made from a particular batch of a supply ingredient. In many industries there is a need to track every component material and person who worked on a particular item sold within the manufacturing ERP system. If there is a failure in wiring of an airplane, the manufacturer will want to know every plane that was built with that specific batch of wire.

70. PROCUREMENT

Intrinsically linked to supply chain management and demand forecasting, procurement ERP features include a supplier database, supplier relationship management tools as well as integrations with design and engineering for material requirements planning.



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