Custom Research

A Simple Guide to Successful Business Process Automation

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Introduction: A Best Practices Approach to Business Process Automation (BPA)

Businesses large and small are constantly looking to improve, streamline, and adjust their working practices and processes, often through automation. Whether it's to help meet new regulations, reduce costs, or improve customer and employee experiences, projects to implement or improve process automation often go awry, run over budget, and either fall short of expectations or are abandoned before they are completed.

Business process automation (BPA) projects can seem complex, but when done correctly, they are straightforward exercises that can deliver incredible improvements and value to your organization. In this report, we provide practical advice to guide you toward successful BPA by helping you avoid common pitfalls.

What Is Business Process Automation?

As the name suggests, BPA is the technology-enabled automation of business processes. It can automate repeatable tasks and multistep business transactions, helping organizations digitize, simplify, and optimize business processes. Identifying the who, what, where, and why for the business change related to implementing BPA technology should be your focus. That's why we recommend tackling BPA projects as change management projects based on thorough business analysis instead of approaching them as technology projects.

The BPA Technology Stack

Understanding the components of the BPA technology stack can be challenging due to the diversity of this field and the wide selection available to organizations. The term BPA is applied to hundreds of software products because they automate manual work activities, but their scope and approach vary depending on the application. Here's a quick guide to the commonly used tools in the BPA technology stack.

→ **Business process management (BPM)** platforms provide the means to execute work tasks and orchestrate and manage multiple activities. They are the workhorses of complex process automation. Purists argue that the terms BPM, BPA, and "workflow" mean slightly different things. But BPM is a term many BPA vendors used before essentially rebranding as BPA technologies. "Workflow" is the term most commonly used before BPM.

→ **Low-code development** platforms provide a means to develop and manage automation and business applications with minimal coding. This can speed up development and, perhaps just as importantly, make it easier to involve subject matter experts, breaking down the traditional barriers between IT and the business.

→ **Artificial intelligence (AI) & machine learning (ML)** are different technologies, but AI has become the umbrella term for any software that "learns" over time, often replacing the use of ML to describe this element of continuous learning within the technology. Whether described as AI or ML, this technology is invaluable for BPA.
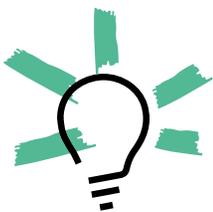
The term BPA is applied to hundreds of software products because they automate manual work activities, but their scope and approach vary depending on the application.

Processes and organizations change and evolve; business automation must grow in parallel to stay accurate and relevant. AI (or ML) provides a way to learn and adapt to changes. In addition, AI's sophistication and power provide the means to undertake far more complex automation projects than would previously have been possible.

→ **Case management** is essentially a means to coordinate and centrally manage all the different components of a "case." For example, in the world of insurance, if a claim is filed then multiple documents, images, and, potentially, video files will need to be pulled together to assess the claim. Similarly, in healthcare, multiple records associated with the same patient need to be managed. Case management software ensures that disparate files are dynamically assembled and coordinated, the relationship between each is managed, and, often, that they are secured within a single folder or "case."

→ **Robotic process automation (RPA)** is probably the most confusing term, as RPA tools don't involve robots, nor do they automate processes! Think of them as "repetitive task" automation tools – they automate things that are done the same way every single time. For example, if a customer has entered their name and address on a business form, an administrator may need to read that information on one screen and manually type it into another computer application, increasing the risk of potential data errors. Repetitive tasks like this are widespread and are a significant target for automation projects. RPA can eliminate the redundant effort and risk of human error by automatically populating other screens, forms, and applications with the correct data. For example, RPA tools enable ecommerce websites to pre-populate your account information or replicate information from your initial bank loan application to fill in additional forms.

→ **Business rules management systems (BRMS),** aka rules engines, work based on logic and are configured by defining a series of rules. For example, "when" a banking customer asks for a loan, "if" that loan exceeds a certain amount "then" it will be declined. The logic is simple, but the rules deployed can be highly complex. Rules engines should not be underestimated as automation tools; they are widely used and vital in many business transactions and operations.
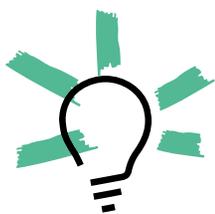
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The Fabric of BPA:
Processes, Tasks, and Procedures

BPA is all about processes, tasks, and procedures, so it's important to know the differences between these terms. It's common to hear them used interchangeably, but that is a recipe for confusion. The following are practical definitions:

→ **Processes** are the end-to-end series of activities carried out to meet a specific goal. An example would be the process followed to manufacture pharmaceuticals in the life sciences industry.

→ **Tasks** are the activities undertaken to do specific pieces of work within that broader process. For example, a task within the pharmaceutical manufacturing process might be adding the correct labeling to a package of pharmaceuticals before they go to market.

→ **Procedure** is the term used for how a series of tasks fit together to accomplish part of a process. For example, in the process of manufacturing a pharmaceutical, there is a procedure for labeling the package. This procedure includes not just the example task mentioned above, but also the preceding tasks such as producing the information that goes on the label and verifying the accuracy of the completed label.

Figure 1 shows how tasks and procedures fit together to make up a process. Understanding these fundamental differences is essential. Most BPA projects are focused on automating specific tasks or procedures. BPA projects concentrating on completely reimagining and changing an entire business process through automation are rare.

Figure 1

How Tasks and Procedures Make Up a Process

Process
Manufacture a Drug

Procedure
Label packaging

Task 1 Research
Task 2 Write
Task 3 Check for errors
Task 4 Produce
...

Procedure 2
Task 1
Task 2
Task 3
Task 4
...

Procedure 3
Task 1
Task 2
Task 3
Task 4
...

Procedure 4
Task 1
Task 2
Task 3
Task 4
...

Drug sent out
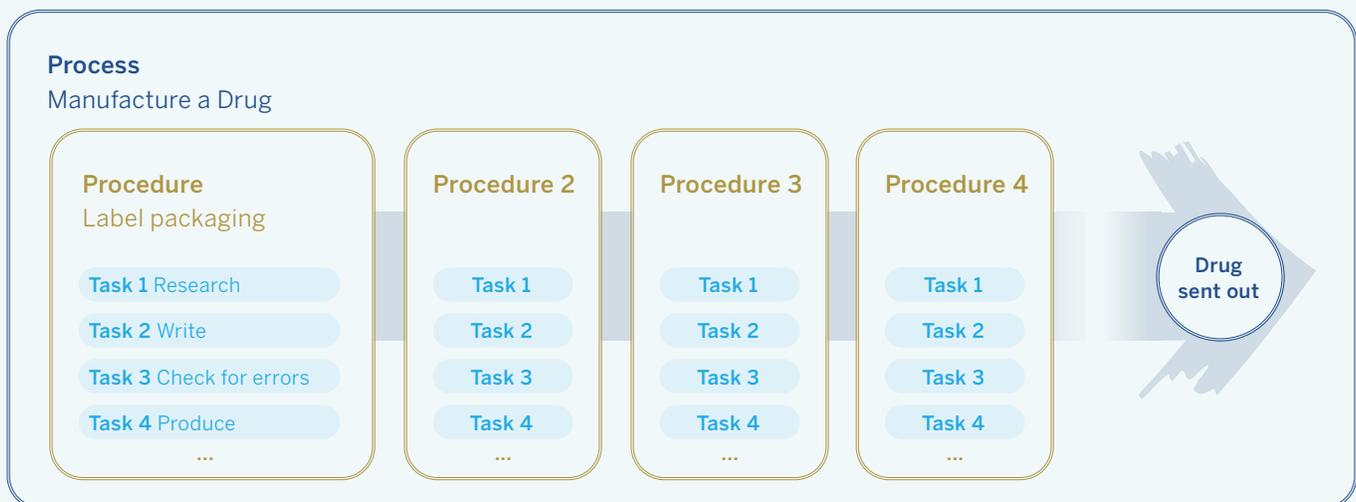
Reaping the Benefits of BPA: Metrics

Implementing effective BPA solutions provides many business benefits, often beyond what was initially identified as part of the business assessment and project plan. Being clear about why you want to automate in the first place is critical.

Based on our experience, we recommend staying away from common goals like headcount reduction as a metric. Instead, focus on process improvement metrics to measure the success of your BPA solution. The following are effective metrics when it comes to implementing BPA:

→ **Reduce error rates.** Basic errors such as mistyped zip codes, quantities, values, and descriptions plague business efficiency. They are costly and time-intensive to fix and resolve. Reducing errors by just 10-20% can reduce processing costs by 20-30%.

→ **Automate eligible tasks.** Few business applications are used how they were designed to be used; employees identify problems in the application and tend to work around them. You should not focus on the fact that workers aren't doing what the system tells them to do, but try to understand *why* they are doing things differently. In many cases, it is the application that needs to change, not the employees. For example, if employees, suppliers, or customers need to email information to each other to complete a task in an application (potentially injecting new errors), the application is not working well; that's something you can improve through automation.

→ **Normalize recurring exceptions.** Even in the most straightforward work processes, there will be exceptions to the rule. Exceptions are usually time-consuming to resolve and require human intervention. Thorough business analysis often reveals regular and recurring exception types, and adapting the system (potentially by using AI to spot and normalize these) to address those exceptions can deliver major time and cost savings.
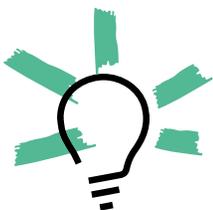
Focus on process improvement metrics to measure the success of your BPA solution.

→ **Enable straight-through processing (STP).** Many BPA projects aim to enable STP. Advances in BPA, particularly AI, make STP even more possible than ever before. Its purpose is similar to normalizing recurring exceptions, but its focus is on speed. Getting things done as quickly as possible may mean eliminating exceptions (by normalizing as mentioned in the previous bullet point) or simply addressing them quicker. You must choose carefully where you attempt STP, as in almost every instance you will need to improve the existing process and eliminate the possibility of errors before you can move ahead. STP takes a couple of seconds to execute without human intervention. A few examples include automated invoice processing, payment transfers, background verification in the insurance industry, etc.

→ **Improve customer and employee experiences.** This may seem a soft goal, but studies show that enhanced employee and customer experiences pay huge dividends. Identifying customer frustrations with current processes and prioritizing those issues for BPA can generate immediate and measurable benefits such as increased customer satisfaction.

→ **Enhance competitive decision-making capability.** BPA increases the visibility of processes deployed across the enterprise. This in turn equips leaders with tools for making informed decisions that help their organizations to thrive in a competitive market.

→ **Increase profitability.** Increased profitability and revenue are far better goals than "cost-cutting," as cutting costs in one location can often increase costs elsewhere, albeit unintentionally. Focusing on improvements like error and exception reduction, automating workarounds, and, where possible, applying STP is far more likely to reduce costs and increase profitability than making profitability itself the starting point of your BPA efforts.

→ **Improve resource efficiency.** By reducing time spent on repetitive, mundane tasks, you can make better use of resources, freeing up time for more impactful activities like innovation, strategic projects, and other tasks that contribute to the company's growth. Through more streamlined processes and low-code development, you can also reduce the burden on IT.
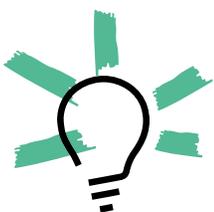
... Reducing errors by just 10-20% can reduce processing costs by 20-30%.

Factors in BPA's Success or Failure: Challenges and Opportunities

There are some common challenges and opportunities presented by BPA technologies and systems that ultimately impact an organization's ability to successfully implement a BPA solution. If you're unprepared to address these challenges or seize opportunities for the greatest impact, the implementation of your BPA solution may fail or fall short of your initial plan. To set yourself up for success, we recommend paying close attention to the following challenges and opportunities.

Hard Coding

One of the biggest challenges of process automation is that initially hard coding a process (i.e., ensuring it works the same way every time) can eventually lead to problems down the road. Customer requirements and regulations, for example, change over time. Lessons are learned, and a newer and better way of working may supersede the initial approach to a specific activity. These regular but unpredictable changes can ultimately render a BPA system obsolete as it was not designed to cope with change. This is where AI's adaptability can play a role, and if used smartly in designing new BPA systems, it can help extend their life and even improve automation over time.

Humans in the Loop (Human Intelligence)

In AI, the term "human in the loop" (HITL) is widely used. Keeping humans in the loop and involved in any BPA work is critical to success. This may seem obvious, but many projects fail as organizations overestimate technology's power and underestimate their workforce's knowledge and skills. Nobody knows your business processes, procedures, and tasks better than those doing the work. A work activity seen from afar can seem straightforward, but up close, it can reveal countless exceptions, workarounds, problems, and opportunities. Managers and consultants can do an excellent job of stitching together the various procedures that make up an end-to-end business process but will never understand the minutiae involved in undertaking specific tasks.
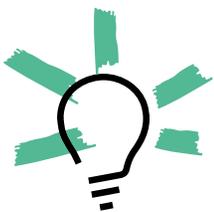
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Task Mining

Thorough consultation with employees directly involved in your BPA projects is crucial, as they often possess valuable insights on areas that could benefit from automation. Utilizing tools like task and process mining tools can significantly expedite the business analysis process.

For some BPA projects, all you need is process mining, and for others, just task mining, but increasingly, they are used together to provide a good understanding of what is happening at the desktop and within the computer system. For example, a customer support person enters the details of a call into a help desk ticketing application, or a customer enters details of a new order into a system that triggers further actions such as invoicing, payment, and delivery. You can leverage task mining at the desktop level to understand the clicks, mouse moves, and keystrokes required, and process mining at the system level to understand the impact and flow of that work.

Administrative Task Automation

Any successful BPA project starts with understanding the tasks and procedures involved in a process. Most processes start with administrative tasks, which are usually where many inefficiencies can be identified, making it a good place to begin your BPA project work. These non-glamorous yet mission-critical actions can include scanning documents, filling in forms with manual key entry, gathering data, and initiating or receiving documents.

Think of it this way: any tasks involving receipt and routing of information (an invoice, contract, order, etc.) require the software or employee to understand content form and function and be able to assess completion and compliance. These tasks often lead to secondary tasks with initial human interaction, primarily involving simple information checks to ensure the process was initiated correctly and to anticipate any exceptions. No matter how small you start, if you begin by automating and improving the initial data creation or ingestion point, you will ensure that the quality of the data and information to be processed further down the line is optimized.
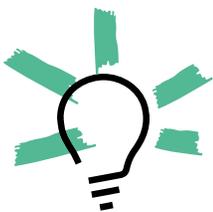
Any successful BPA project starts with understanding the tasks and procedures involved in a process.

What's crucial to recognize is the pivotal connection between information and automation. Automation is a tool to activate business information by extracting specific data from a database or document or transporting an entire document to its next needed location. It allows processes to be intelligently created, managed, and executed. Information processing should validate its completeness based on organizational standards and a blend of human and machine intelligence. Successfully extracting and processing information from content items to initiate subsequent actions without secondary triage steps enhances speed and accuracy. Getting things right at the initial data creation or ingestion point helps avoid secondary triage.
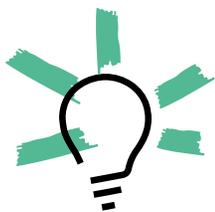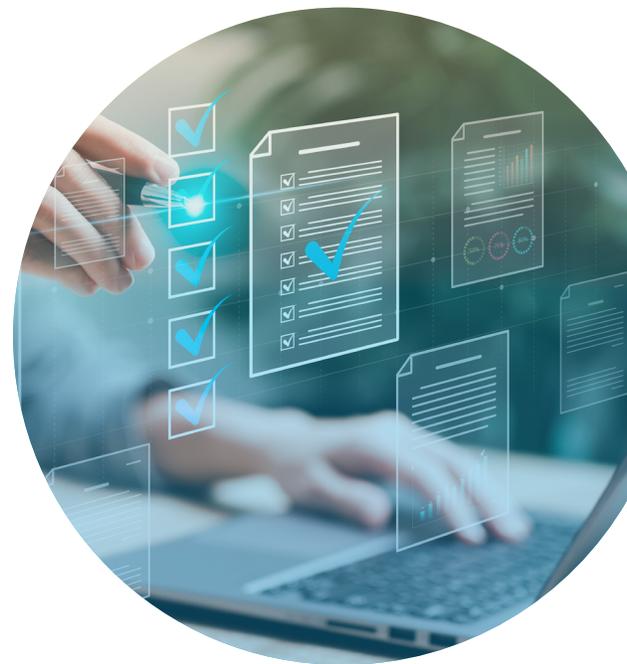
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Case Study:
Bank Customer Onboarding

A real-world example helps to show how BPA works in practice. Let's look at the process of setting up a new customer account at a bank. This often feels burdensome for customers because of the amount of time and information required, and it can overwhelm the staff, who must ensure compliance while delivering a smooth experience.

To ensure compliance, the organization must standardize the processing of each application and its accompanying materials. Any deviation from compliance rules could be questioned during an audit, so everything must be meticulously documented. Staff are under pressure to deal with exceptions flagged by the current fragmented management systems while trying to offer a positive customer experience. Meanwhile, the customer may become frustrated because the employee can't accept a document, or comes back with a lot of questions, or if the process drags out.

Most of the initial employee workload involves processing the paperwork submitted during account setup, including verifying that all necessary handwritten or electronic forms are correctly filled out and meet compliance standards. Institutions often have to deal with both formats simultaneously, which adds complexity.

The work is further complicated as compliance regulations evolve (e.g., anti-money-laundering rules). Another challenge arises from the varied formats of supporting documentation that new customers provide, such as passports. These may come in different layouts, and the copies submitted can be scanned, photocopied, or photographed using mobile devices, each presenting subtle differences.

A few years ago, this type of situation was difficult to fix. Paper documents were still common and complex to eliminate. The best technology could offer was scanning a document and creating a searchable electronic version. Capturing data from forms was troublesome and often unreliable and inaccurate.

Today, we can improve this situation with BPA technologies, and advances in AI have made this type of situation ideal for automation. The bank customer onboarding process can be improved with the following BPA technology:

➜ Intelligent document processing (IDP) will be the likely starting point for any BPA project as it uses AI to read, understand, check, correct, and pre-process customer data, whether it comes in on paper, an electronic file, or an online form. The employee won't have to do this.

- → RPA tools (or bots) can automate customer data ingestion in any required application, eliminating the need for manual key entry. Again, a win for the employee.

- → From then on, broader process management platforms or business applications can leverage accurate customer data and required documentation. The bank employee simply needs to deal with any irregularities or exceptions and focus on the customer relationship.

Figure 2 illustrates where each of these three technologies just discussed – IDP, RPA, and broader ERP applications – can play a role in improving the customer onboarding process.

The organization would likely undertake this work using a low-code development platform that allows subject matter experts (bank employees in this case) to develop applications to automate tasks. This will modernize and enhance customer data ingestion at the inception point (e.g., submitting an application). The result will be to dramatically reduce errors and exceptions (e.g., verifying a candidate's address fails and human intervention is required), speed up transactions, and in turn improve customer satisfaction because the process will appear seamless and efficient.

Figure 3

OpenText Process Illustration – Customer Onboarding
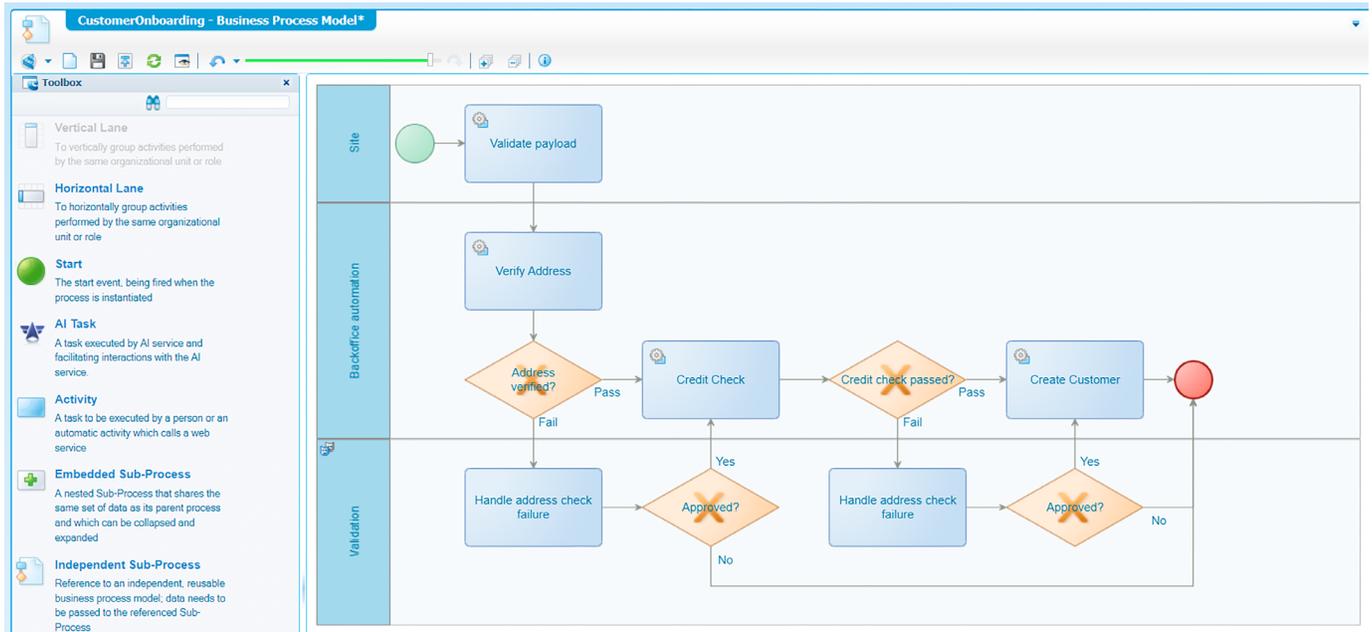
As another example, Figure 3 from OpenText illustrates a fully automated procedure within the overall customer onboarding process. The "Create Assignment" procedure includes automating the assignment of a new customer to the various internal systems that need to register this new customer.

As we've discussed earlier in this paper, the technology isn't magic – it needs human intelligence (HITL) to draw out the benefits of automation and AI capabilities. In this case study (Figure 3) for example, employees are still needed to supervise and manage the BPA technology to ensure success. Employee insights are also essential to designing and building the BPA system in the first place, which is key to completing the thorough business analysis also mentioned earlier in this paper as the critical first step of any BPA project.

Conclusion

BPA is a set of modern technologies and a means to manage, automate, and understand business process activities and procedures across your organization. It balances human insight, skills and knowledge, and cutting-edge tech. Ultimately, BPA is an approach that can bring significant and long-term improvements to your organization.

When BPA projects fail, it's seldom because of the technology; it's almost always because the project was overly ambitious and there was insufficient understanding of the requirements and challenges before starting. The best way to begin is with small critical administrative tasks, building on automation improvements as organizations identify additional needs and areas where automation can have a significant impact on business goals.

To recap, the following steps are essential for successful implementation of BPA:

→ Identify areas where BPA would make the most impact in your organization.

→ Develop realistic goals and metrics for the BPA implementation.

→ Ensure that the data and information flowing through a business process is accurate from its inception.

→ Involve your employees and workplace experts throughout the project.

→ Explore the range of BPA technology options available at each step. A technology such as RPA that will work well for one situation may not be the right tool at another stage.

BPA projects can seem – and be – complex and daunting, but they certainly don't need to be. With any BPA project, a little common sense and insight can go a long way toward achieving success and measurable business benefits.

Glossary of Terms

→ **Artificial intelligence & machine learning (AI & ML):** how machines "learn" and adapt to changes, enabling automation of processes.

→ **Business process automation (BPA):** the technology-enabled automation of business processes.

→ **Business process management (BPM):** another (older) term for BPA.

→ **Business rules management system (BRMS):** a system used to define decision logic as a business rule. A BRMS abstracts and externalizes the definition and management of business rules from application code.

→ **Enterprise resource planning (ERP):** software that provides the application to automate processes such as HR, supply chain, finance, and procurement.

→ **Human-in-the-loop (HITL):** the vital act of having a human worker monitor automated process output to correct mistakes.

→ **Intelligent document processing (IDP):** software solutions that perform tasks like document capture, data validation, and categorization, automating what would otherwise typically be manual data entry and capture based processes.

→ **Procedure:** the sum of tasks and activities to complete a goal.

→ **Process:** the end-to-end series of activities carried out to meet a specific goal.

→ **Robotic process automation (RPA):** tools that automate repetitive actions – i.e., those that are done the same way every single time.

→ **Tasks:** the activities making up a process.

→ **Workflow software:** a system that provides a platform to streamline repetitive but complex business processes and tasks.

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