## What is an Enterprise?

An enterprise is a project undertaken or to be undertaken, especially one that is important or difficult or that requires boldness or energy. Enterprise refers to a for-profit business started and run by an entrepreneur. And we will often say that people running such businesses are enterprising.

People who have entrepreneurial success are often referred to as "enterprising." Entrepreneurs usually start an enterprise – with the associated risks – to make a profit, and for one of several reasons:

- Problem-solving. They see a particular issue that they feel they can solve.
- Exploit ideas. They have a new idea or product they believe will be successful.
- Filling a gap. They see a gap in the market they believe they can fill.
- Competitive pricing. They believe they can produce something on the market cheaper and offer it at a lower price.
- Knowledge-based. Where they believe they can supply specialist knowledge that customers will pay for.

There are two types of enterprise.

- Business enterprises are run to make a profit.
- Social enterprises provide services to individuals and groups in the community.

**Business enterprises**

Many enterprises in your community are small businesses. Sometimes one person owns and runs the business. Sometimes it's a family business. Other businesses are owned and run by partners who aren't related. To earn an income from a small business, the enterprise has to run at a profit. That means some money should be left over for the business owner once all the costs of making the product or delivering the service have been taken out.

Common small businesses include:

- businesses with a workplace or shopfront: eg restaurants, corner shops, hairdressing salons, smash repairers and small factories
- trade-related services that deal directly with the customer: eg plumbers, electricians, builders, cleaners and computer technicians
- self-employed people working from home: eg engineers, designers, caterers, writers, musicians and dressmakers
- medical and health practitioners: eg doctors, dentists, optometrists, counsellors and naturopaths.

**Social enterprises**

Social enterprises are organizations led by local communities. They are small businesses set up for a social purpose. The success of social enterprises is measured in terms of social rather than monetary benefits.

Some examples of social enterprises are:

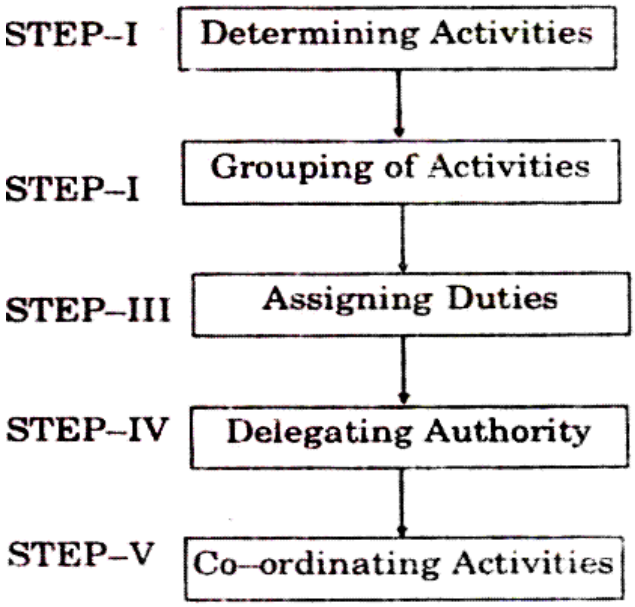
- Community-based child care centers
- Health care centers
- Sports clubs
- Meals on Wheels
- Housing cooperatives
- Charities, Example milaap.

These enterprises must find a way to cover their expenses. Their funds come from various sources. Sources may include government funding, fundraising and fees charged to users of the service.

## The Process of Organizing an Enterprise

the five main steps involved in the process of organizing an enterprise. The steps are:

1. Determining Activities
2. Grouping of Activities
3. Assigning Duties
4. Delegating Authority
5. Coordinating Activities.




**Process of orgaisation.**

**Step # 1. Determining Activities:**

The first step in organizing is to identify and enumerate the activities required to achieve the objectives of the enterprise. The activities will depend upon the nature and size of the enterprise. For instance, a manufacturing concern will have production, marketing and other.

**Step # 2. Grouping of Activities:**

The various activities are then classified into appropriate departments and divisions on the basis of functions, products, territories, customers etc. Similar and related activities may be grouped together under one department or division.

Grouping of activities helps to secure specialization. Each department may be further subdivided into sections and groups.

**Step # 3. Assigning Duties:**

The individual groups of activities are then allotted to different individuals on the basis of their ability and aptitude. The responsibility of every individual should be defined clearly to avoid duplication of work and overlapping of effort. Each person is given a specific job best suited to him and he is made responsible for its execution.

**Step # 4. Delegating Authority:**

Every individual is given the authority necessary to perform the assigned task effectively. Authority delegated to a person should be commensurate with his responsibility. Through successive delegations a clear hierarchy of authority or chain of command running from the top to bottom of the structure is established.

**Step # 5. Coordinating Activities:**

The activities and efforts of different individuals are then synchronized. Such co-ordination is necessary to ensure effective performance of specialized functions. Interrelationships between different jobs and individuals are clearly defined so that everybody knows from whom he has to take orders and to whom he is answerable.

## BUSINESS ACTIVITY

Business activity is any activity related to the purpose of making a profit. It is often divided into operating activities, investing activities and financing activities. Of these, operating activities tend to be considered the most important as they have the most direct impact on a company's performance.

### Understanding operating activities

The terms "business activities" and "operating activities" are often used interchangeably. This is because "operating activities" refers to all business activities that directly or indirectly relate to the provision of goods and/or services. As such, they have a direct impact on cash flows and hence, ultimately, on income. On an income statement, operating activities are found under the headings Cost of Goods Sold/Cost of Sales and Operating Expenses. Cost of Goods Sold/Cost of Sales reflects the direct cost of bringing goods/services to market. For example, this would include parts and the labor of employees directly involved in creating the goods/services.

### Understanding investing activities

Investing activities refers to activities that are (intended to be) capitalized over more than a year. This typically includes capital expenditures such as the purchase of long-term assets and/or real estate. Modern businesses vary in their use of investing activities. Some businesses still obtain value from investing in assets. These are generally established businesses and/or businesses with more traditional business models.

### Understanding financing activities

Financing activities refers to activities that fund the business, but aren't directly linked to revenues from goods or services. Common examples of funding activities are loans, bonds and share issues. These include initial public offerings, secondary offerings, and debt financing. The section also lists the amount of cash being paid out for dividends, share repurchases, and interest.

## What is a business process?

A business process is an activity or set of activities that accomplish a specific organizational goal. Business processes should have purposeful goals, be as specific as possible and produce consistent outcomes.

Business processes include fulfilling and invoicing a customer purchase order, approving a loan application, completing data entry, onboarding a new employee, and additional financial services, human resource tasks, and business operations.

Business process management (BPM) is a systematic approach to improving those processes, which helps organizations achieve their business goals. If an organization is unable to perform certain business processes internally due to cost or resource constraints, the company might use business process outsourcing. Many organizations contract specific business tasks -- such as payroll, human resources (HR) or accounting -- to a third-party service provider.

**Why are business processes important?**

Defined business processes within the organization are critical to enterprise success for the following reasons:

- They help organizations identify and understand the actual work required to keep the lights on and to achieve organizational objectives.
- They break that work into organized, repeatable steps that workers can follow to achieve consistent outcomes.
- Using repeatable steps to produce consistent outcomes helps organizations to more accurately predict the resources they need, thereby lowering the risk of over or under provisioning valuable resources.
- The consistent, repeatable nature of defined business outcomes helps lower the risk of employees introducing workarounds or individualized steps that can cause disruptions, slow work and increase error rates.
- Being able to better measure the efficiency and effectiveness of the individual steps within the process enables teams to identify and mitigate inefficiencies and bottlenecks to improve performance; this is the foundation of continuous improvement.

## What is Business Process Automation (BPA)?

Business process automation refers to the use of technology to execute recurring tasks or processes in an organization where manual effort can be replaced. It is done to minimize costs, increase efficiency, and streamline processes. Business process automation is not to be confused with business process management, which is a larger discipline involving the management of complex organization-wide processes using different methodologies.

**Business process automation examples**

**1. Employee onboarding**

Although hiring employees may seem like a fuss-free process, it involves multiple tasks. Filling out employee information forms, setting up induction sessions, arranging training sessions, setting up bank accounts, collecting relevant documents, and assigning mentors are just a few of the activities involved.

Without automation, the entire process can become quite chaotic and result in:

- Endless paperwork
- Missing out on some tasks
- Employee dissatisfaction
- Low productivity

**2. Purchase orders**

Purchase order requests are recurring processes in most organizations. The requesting team fills out a form and sends it to the purchasing team. The approving authority then examines the request and rejects the request in case information is inadequate or if there are budgetary constraints. It is then sent back to the requesting team. If approved, a purchase order is created and copies are sent to the supplier as well as the inventory team.

Without automation, the following issues could crop up:

- Delayed PO approval
- Impacted productivity
- Incomplete records
- Errors in the PO
- Errors while taking delivery of the supplies

**Why should you automate business processes?**

Here are some compelling reasons to automate your business processes.

**Stepping stone to digital transformation**

Digital transformation can seem like a lofty overwhelming goal to organizations that aren't on that path. Business process automation can be a stepping-stone to adopting that culture of continuous transformation. You can start with a few processes that are clearly in need of course correction and gradually work your way up.

**Get more clarity**

Automation demands a certain amount of clarity about the process right at the designing stage. If you don't know the tasks involved and the people responsible for running the process, you can't design and automate the workflow effectively.

**Streamline processes**

One of the great outcomes of a process automation system is streamlined processes. Clear accountability, customizable notifications, valuable insights, and faster turnaround times make it easier to eliminate wasteful activities and focus on enhancing tasks that add value.

**Get compliance records**

With business process automation, every detail of a particular process is recorded. This information can be presented to demonstrate compliance during audits.

**Standardize operations**

When you automate a business process, you can expect a consistent standard of outcomes every time. Standardization helps position your organization as reliable, which in turn can help increase your customer base.

**Increase customer satisfaction**

Customer satisfaction is a key differentiator in any industry. Focusing on process and operational excellence helps you exceed customer expectations with ease. When you consistently meet promised standards, customers are more likely to develop a preference for your company.

## What business processes should you automate?

Business process automation is not restricted to a handful of functions. Some factors that can indicate the need for automation include

1. High-volume of tasks
2. Multiple people required to execute tasks
3. Time-sensitive nature
4. Significant impact on other processes and systems
5. Need for compliance and audit trails

Some commonly automated processes in organizations.

- E-mail and push notifications
- Creating customer accounts
- Employee leave requests
- Helpdesk support or Call center processes
- Sales orders
- Time and attendance tracking
- Payroll
- Invoicing
- Product launches

**Benefits of using business process automation tools**

Once you have automated your business processes, you can expect to see multiple benefits.

1. Boost in productivity brought about by enhanced access. Cloud-based business process automation tools store your data in a central database. This helps you access data from any location or device whenever you need it.

2. business processes will become much more transparent, easily trackable and monitor processes while they are running, which can improve accountability and visibility.
3. The ability to monitor processes on the go will also helps to keep a lookout for errors, fixing them as they occur. Performance reports will arm you with insights so you can take preventive measures against recurring errors.
4. From a long-term perspective, begin to notice faster turnaround times and a reduction in costs due to fewer manual interventions.

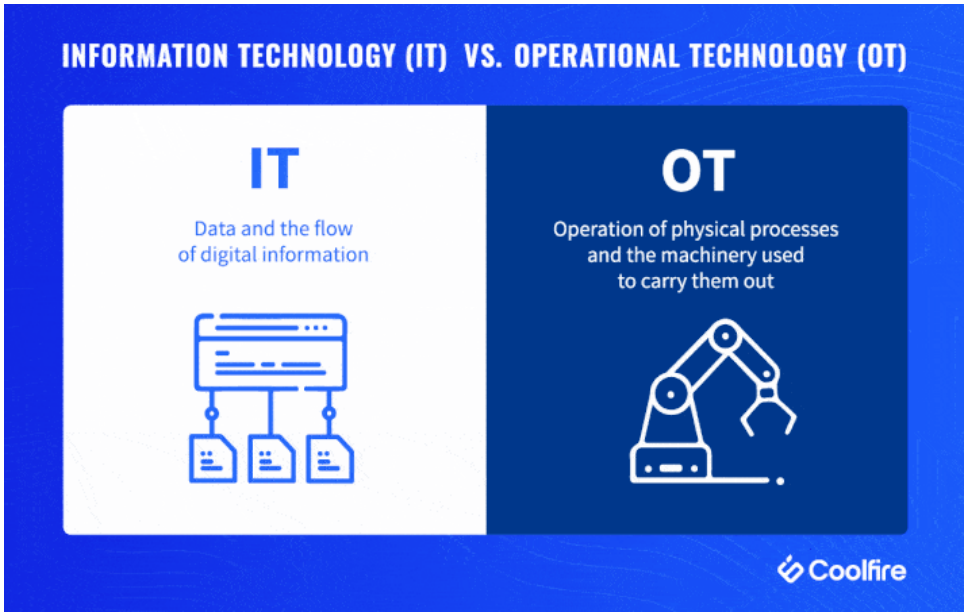
**What is digital transformation?**

Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing how to operate and deliver value to customers.Digital transformation is imperative for all businesses, from the small to the enterprise. That message comes through loud and clear from seemingly every keynote, panel discussion, article, or study related to how businesses can remain competitive and relevant as the world becomes increasingly digital.

## What Is The Difference Between IT and OT?

In short, IT deals with information, while OT deals with machines. The former manages the flow of digital information (read: data), while the latter manages the operation of physical processes and the machinery used to carry them out.

A good (though increasingly inaccurate) shorthand to represent this distinction is the office (IT) vs. the factory floor (OT). Another good (and perhaps even less accurate) juxtaposition would be that of software (IT) vs. hardware (OT).



In a broader sense, IT is defined by its programmable capacity. That is, while certain technologies are designed to perform a static set of functions (think: a piston), IT can be adjusted, augmented, and re-programmed in countless ways to fit the evolving networks, applications, and user needs. Moreover, IT encompasses hardware — computers, physical servers, and network equipment, to name a few types — and software — applications, operating systems, and virtualization capabilities among others.

At the most basic level, OT refers to technology that monitors and controls specific devices and processes within industrial workflows.

Compared with IT, OT is unique in that related hardware and software is usually (historically) designed to do specific things: control heat, monitor mechanical performance, trigger emergency shut offs, etc. Typically, this is done through industrial control systems (ICS) and supervisory control and data acquisition (SCADA).


## Digital Transformation Success Stories

### Passport Seva, Government of India

Passport Seva is moving towards eGovernance or in other words, they are aggressively adopting digital in the government departments.If they talk in measurable terms, they were providing passport-related services to 20-25,000 people per day before digitization. Today, they are able to serve 50,000 people per day. So, with digitization, they are able to serve double the people in a day.Till 2011, they just had 37 passport offices as

far as reach is concerned. Today, they have 37 passport offices plus 100 Passport SevaKendra, so the reach has increased significantly and they now cater to 23 states and 64 cities across India.

These numbers would not have been possible without digitization. In addition, if they wish to improve something within the department or do a trend analysis, all this information is now available at a single click due to digitization.

**McDonald's**

As one of the world's best-known fast-food chains, the Italy division of McDonald's sought to optimize their procurement process and move to manage all of their supplier relationships across the entire supply chain online from selecting their vendors to contract negotiation through digital transformation in procurement.

They decided to use an online portal to facilitate collaboration and communication between themselves and suppliers and to digitize all of their documentation. They've got about 400 suppliers registered through the portal to handle all of their food and promotional products as well as construction and renovations of new restaurants.

**Kotak Mahindra Bank**

Our digital product Jifi, which seamlessly incorporates social networking platforms like Twitter and Facebook with mainstream banking, has received an extremely encouraging response from the customers. Features such as Hashtag banking, Personal Finance Management solution called MoneyWatch, referral program, and free credit score have seen good usage.

With Kotak rewards, they have built eCommerce and mCommerce shopping experiences within banking. With these initiatives, over 90% of our savings account customer transactions have moved outside the branch to various self-service channels including mobile and net banking.

**Walt Disney India**

Few years back, everyone relied on tapes for recording, which were then given to editors for editing. As this was a cumbersome and time-consuming process, we went ahead and digitized these activities in 2013. Today, all our internal work processes, as well as content coming from third parties into our facility are digitalized. We store them on our server and then do all kind of work—editing, packaging, adding different languages, and animations.

**Coca-Cola**

Arguably the most iconic brand in the world, the drinks giant implemented a transformation strategy that aimed to address the numerous changes in shopper behavior as the world has gone digital. Their goal was to update the Coke brand "for a generation that doesn't see a line between the online world and the offline, reality and augmented reality."

## CASE STUDY

### ASIAN PAINTS: DIGITAL TRANSFORMATION IN INDIA

Asian Paints, India's leading manufacturer of coatings, has digitally transformed its business step by step. The firm has been able to maintain fast growth and globalize while increasing efficiency and reducing its impact on the environment. In the early 2000s, as part of an effort to reduce debt and increase internal efficiencies, the firm implemented an enterprise-wide ERP and advanced Supply Chain Management system. This helped to create an enterprise-wide platform that was the basis for further improvements in sales and customer processes. The change also liberated working capital that helped fund acquisitions in emerging markets. Asian Paints gained further efficiencies by linking subcontractors and suppliers on a B2B portal.

In 2003, the firm invested in a CRM system. In 2010, Asian Paints centralized its order taking process into a single corporate call center. This change helped the company further improve operational efficiencies and sustain its growth. In customer-facing processes, the move entailed much more than just creating the call center. Retailers were encouraged to place orders through the call center, where they could receive a more consistent service level than they could through the firm's 100 local depots.

Centralized data also enabled delivery of products to large institutional customer job sites, giving the company a capability that competitors could not provide. The biggest change resulting from centralizing order taking was in the way salespeople interacted with retailers. Liberated from routine order collection, the sales team could focus on building stronger relationships. To enable a more meaningful dialogue between the sales team and each retailer, the company provided salespeople with vital customer data in the field using mobile devices.

A rollout of tablet devices, which is currently underway, will further mobile-enable the sales staff. Asian Paints' digital transformation also extended to internal production processes. High growth in paint demand creates the need to set up new manufacturing plants every three years. Given the scale and size of these plants, the firm has begun to focus on creating highly automated plants.

Automation has led to greater scalability, better quality and stronger safety and environmental protections. The new plants are fully integrated from an information management perspective. Data from shop floor control systems and automated warehouses are linked seamlessly to the ERP. This has helped to further sustain the firm's operational efficiencies.

In India, Asian Paints has begun to sell services (such as a painted wall) instead of products (a can of paint). The services strategy has benefits beyond new revenues. Selling services helps to ensure that high-end products are applied properly, thereby improving customer satisfaction. Services also help the firm to get closer to the end-consumer, understand core consumer choices, and launch high end texture finishes. Additionally, having a contractor in a client's house yields information that marketing staff can use to understand both customer preferences and potential demand.

The firm is in the first year of a new portfolio planning process. "We have enjoyed great equity with the business because we have delivered solutions. But seeing so many projects coming at us, we felt that now we need to establish processes to match expectations and resources whilst taking on innovative projects," says Mr. Manish Choksi, CIO and Chief of Strategy. Asian Paints' investment in strong IT capabilities, combined with organizational and process changes intended to leverage those investments, will serve as a foundation upon which the organization can continuously envision and implement new forms of digital transformation.

## What is Design Thinking

Design thinking is an iterative process in which you seek to understand your users, challenge assumptions, redefine problems and create innovative solutions which you can prototype and test. The overall goal is to identify alternative strategies and solutions that are not instantly apparent with your initial level of understanding. Design thinking is more than just a process; it opens up an entirely new way to think, and it offers a collection of hands-on methods to help you apply this new mindset. In essence, design thinking:

- Revolves around a deep interest to understand the people for whom we design products and services.
- Helps us observe and develop empathy with the target users.
- Enhances our ability to question: in design thinking you question the problem, the assumptions and the implications.
- Proves extremely useful when you tackle problems that are ill-defined or unknown.
- Involves ongoing experimentation through sketches, prototypes, testing and trials of new concepts and ideas.

# FULL STACK DEVELOPMENT

Full stack development refers to the end-to-end application software development, including the front end and back end. The front end consists of the user interface, and the back end takes care of the business logic and application workflows.

A full stack developer is functional in the following categories:

- Front end development (visible parts of a website or application)
- Back end development (code, databases and infrastructure)
- Full stack development (inclusive of both). Full stack can apply to a web stack, mobile stack, or a native application stack (software programmes for specific devices)

Full Stack development is classified into two domains:

**Front-end development:**

Front-end development consists of the entire user-facing parts of software development. It is the responsibility of the front-end developers to implement visual elements, for example, how the software or an app will look, interact and operate with the user.

**Back-end development:**

Back-end development is done to make a program function well. Developers who work at the back-end spend a lot of time creating and working with databases.

A full stack developer is proficient in both the technical domains. Also, they know how to work on front-end, back-end, database queries and various operating systems.

To become an expert in full stack development, a developer should have knowledge of the following technical skills:

**1. Programming languages**

A skillful full-stack developer must be proficient in multiple programming languages like JAVA, C#, Ruby and PHP. It is crucial to be a master in the language syntax and be familiar with how to design, structure, test and implement the programming codes.

**2. Development frameworks and third-party libraries**

Programming languages are generally accompanied by a good development framework like Node.Js, Express.JS, Hibernate, Python Django, Java Spring, MyBatis and PHP Thinkphp. Therefore, it is essential for full stack developers to understand the development frameworks and third-party libraries.

**3. Front-end technology**

Understanding of front-end technologies is essential for full stack development. The full-stack developer should have some basic knowledge of front-end technologies such as HTML5, CSS3 and JavaScript and should have good command over frameworks such as JQuery, LESS, SASS, AngularJS, or REACT.

**4. Database and cache**

Every software product needs a database to store the data. A full stack development expert should understand the concepts of the databases and know how to interact with it seamlessly. MongoDB, MySQL, Redis, Oracle are some popular databases that are being used by the developers to develop the backend for dynamic applications.

**5. Basic design ability**

When it comes to basic design utility, it is crucial for full stack developers to understand the basic principles and skills of prototype design, UX and UI design.

**The Irresistible Rise of Full Stack Developers**

The world of technology is constantly changing, with a growing demand that technology reinvent itself to provide customers with faster and more cost effective products that employ efficient software and applications. With more and more people moving towards the digital space, businesses and enterprises need to have a strong online presence as well.

A full stack developer brings together skills and roles for what we traditionally knew as web designer and web developer. While the web designer worked on design, the web developer worked on code. But as the web grew to be more complex, customers are now seeking more complex solutions for their on-line presence, making the two roles so specialized and technical that they get inter-linked, resulting in the emergence of the full stack developer.

A full stack developer excels in:

- Front end code optimisation in Java, HTML, PHP, JavaScript and more
- Creating, understanding and working on Query database
- Back end code written in Ruby, Java or Python
- Having better working knowledge of system infrastructure
- Understanding hardware and operating systems.

## User stories with examples and a template

A user story is an informal, general explanation of a software feature written from the perspective of the end user. Its purpose is to articulate how a software feature will provide value to the customer. User stories are a few sentences in simple language that outline the desired outcome. They don't go into detail. Requirements are added later, once agreed upon by the team.

**User stories serve a number of key benefits:**

- Stories keep the focus on the user. A to-do list keeps the team focused on tasks that need to be checked off, but a collection of stories keeps the team focused on solving problems for real users.
- Stories enable collaboration. With the end goal defined, the team can work together to decide how best to serve the user and meet that goal.
- Stories drive creative solutions. Stories encourage the team to think critically and creatively about how to best solve for an end goal.
- Stories create momentum. With each passing story, the development team enjoys a small challenge and a small win, driving momentum.

**How to write user stories**

Consider the following when writing user stories:

- Definition of “done” — The story is generally “done” when the user can complete the outlined task, but make sure to define what that is.

- Outline subtasks or tasks — Decide which specific steps need to be completed and who is responsible for each of them.

- User personas — For whom? If there are multiple end users, consider making multiple stories.

- Ordered Steps — Write a story for each step in a larger process.

- Listen to feedback — Talk to your users and capture the problem or need in their words. No need to guess at stories when you can source them from your customers.

- Time — Time is a touchy subject. Many development teams avoid discussions of time altogether, relying instead on their estimation frameworks.

## What is a project plan?

A project plan, also known as the project management plan, is the document that describes how the project will be executed, monitored, and controlled, and closed. This outlines the objectives and scope of the project and serves as an official point of reference for the project team, larger company, and stakeholders.

### Why is project planning important?

Project planning is a crucial stage that comes right after initiation in project management phases. Through proper planning, you streamline the entire project into a series of steps and ensure the availability of all the resources on time.

### How to create a project plan online

Follow these nine project management steps, how to plan a project online but to execute your project successfully.

**Step 1: Identify all stakeholders**

The project have several stakeholders, and not all of them will be involved in every detail of the project. Project stakeholders include

- your customer,
- the end-users of the product,
- the company and its leaders,
- and the team working directly on the project.

**Step 2: Define roles and responsibilities**

Once the stakeholders are identified, then the organization needs to determine the core project management skills and competencies required for the project.
Remember that a role is not the same as a person.

- In some cases, one person can fill multiple roles, such as having a designated emergency contact, a role that adds few additional work hours to a person's schedule.
- In other cases, multiple people may hold identical roles, as when your project requires multiple software engineers.

**Step 3: Hold a kickoff meeting**

The kickoff meeting is a

- chance to bring all stakeholders together,
- cast a vision for the project that everyone can get behind,
- and an opportunity to make introductions and establish good working relationships.

At this stage, the specific details of the project haven't been determined, so you should include a discussion on the project scope, budget, timeline, and goals in your meeting agenda. This is also when roles are announced and a communication plan is explained. The kickoff meeting sets the tone for the working relationship among stakeholders for the duration of the project.

**Step 4: Define project scope, budget, and timeline**

After the official kickoff, it's time to define three important concepts:

- the project scope,
- budget,
- timeline of your project.

Each of these items is worthy of its own in-depth explanation, so we'll just define them briefly here.

**a. Scope:**

Project scope tells you what are we going to do (and not do)? Given the requests of the customer and the vision discussed by the team, what are the objectives of this project?

**b. Budget:**

Taking into account the scope and the resources required to meet the project objectives, what is the expected financial cost of the project?

**c. Timeline:**

The project timeline itemizes the phases of your project and the length of time you can reasonably expect them to be completed.

**Step 5: Set and prioritize goals**

Once your team understands the objectives of the project and you've identified the phases to meeting those objectives,

- break down the big picture objectives of your project into individual goals and tasks,
- prioritize tasks according to importance and dependencies,
- and put a system in place to ensure corrective actions when goals aren't met on time.

You may need to adjust your timeline in light of your goals.

**Step 6: Define deliverables**

A deliverable, as defined by the Project Management Institute, is "any unique and verifiable product, result, or capability to perform a service that is produced to complete a process, phase, or project". In other words, a deliverable could be,

- a product,
- result,
- or capability.

Project deliverables are determined by the project objectives and are an essential part of the project plan. If the customer's objective is for end-users to manage their own content, for example, the deliverables might be a piece of software that enables users to manage content as well as training materials for employees and end-users on how to use the newly created software.

**Step 7: Create a project schedule**

A project schedule is a document that details

- the project timeline,
- the organizational resources required to complete each task,
- and any other information critical to the team management.

Needless to say, it must be comprehensive and easy to understand.

- further, divide the phases of your project into individual tasks and activities,
- determine dependencies,
- sequence the activities,
- and estimate the required resources and duration of each task.

**Step 8: Do a risk assessment**

A risk is a problem that may or may not arise over the course of your project. It's important to identify risks in project management and mitigate them at the project planning phase rather than be caught off guard later. Hold a meeting or ask for insight from all team members about the risks you should consider.

Areas of risk include:

- Project Scope
- Resources (personnel, financial, and physical)
- Project delays
- and Failures of Technology or Communication

There's no way to control for all potential risks, but thinking through them ahead of time can save you from project failure.

**Step 9: Communicate the project plan**

Once you've compiled your project plan, make sure to communicate it clearly to the team and all other stakeholders. You may have created a project communication plan when you put together your project schedule. If not, do it now!

Establishing solid communications channels and expectations for project communication is crucial. As a project manager, be sure to model the kind of communication you expect from all stakeholders.

## What is a product backlog?

The Product Backlog is a list of all the updates and requirements required to develop the product. It acts as a single source of requirements for all the changes that have to be made to the product. A Scrum professional called the Product Owner is responsible for handling the Product Backlog, which includes the content, availability, and ordering of the Product Backlog items. A Product Backlog is always unfinished and is never complete as the new Product Backlog items are regularly added to it. Initially, it contains the basic requirements necessary for the product to function and release it in the market during product development.

A product backlog is a prioritized list of work for the development team that is derived from the roadmap and its requirements. The most important items are shown at the top of the product backlog so the team knows what to deliver first. The development team doesn't work through the backlog at the product owner's pace and the product owner isn't pushing work to the development team. Instead, the development team pulls work from the product backlog as there is capacity for it, either continually (kanban) or by iteration (scrum).

**What's in the product backlog?**

The Scrum Guide is fairly prescriptive about what can be in the product backlog, which is helpful for keeping unnecessary items out. The product backlog contains:

- Features
- Functions
- Requirements
- Enhancements
- Fixes

It's not just a simple to-do list, though. Each item in the product backlog:

- Adds value for the customer
- Is prioritized
- Is estimated

There should be no low-level tasks in your backlog (like sending emails), and the backlog itself should be a living document that's regularly rearranged.

**How to create a product backlog**

It's common for product backlogs to be presented in the form of a spreadsheet, but there's a big problem with that: Spreadsheets aren't meant to have their rows constantly moved. Plus, you'll find yourself dealing with formatting issues and the ensuing migraine.
While creating the product backlog, consider using a more flexible software solution such as Jira Software or Lucidchart. Lucidchart's product backlog template is the easiest way to start building your scrum product backlog—it's a living document that's easy to share with stakeholders and rearrange however you'd like.
Whatever solution you use, follow these steps to start your scrum product backlog.

**1. Add ideas to the backlog**

Stakeholders will typically be approaching you with ideas for product improvements

**2. Get clarification**

Once you're approached by a stakeholder with a product addition or fix, make sure you understand:

- The reason behind the addition or fix
- The amount of value it contributes to the product as a whole
- The specifications of the item

**3. Prioritize**

The backlog should have clearly defined, high-priority items at the top and vague items that are not a priority at the bottom. If an item has no value, it should not be added to the backlog.

**4. Update the backlog regularly**

The backlog is a living document; make sure you're constantly prioritizing, refining, and keeping the backlog up to date. There might be hundreds of items in backlog as ideas for product improvements are suggested. Some of these items may be discarded, but many of them will begin making their way up the backlog for further refinement and, ultimately, development.