Discovery Phase

This is the phase where we do extensive research on our target users, understanding their pain points, observing the environment in which they work and developing insights.

*Here's an illustration of how discovery phase takes place in a web design process*

* **Requirements and Specifications**: The complete set of specifications and functionality of the project is captured here. Once we have the specs clear, we may proceed to further steps.
* **Sitemap**: A sitemap is a high level diagram portraying the general structure and architecture of the website. The objective for a sitemap is to be able to clearly identify the pages, various sections and navigation items that will make up the site.

Design Phase

This is the phase where we start to design page by page. Here, we design interactions, interface elements and also the visual aesthetics of the pages.

*Here's an illustration of how the design phase takes place in a web design process*

* **Wireframe**: Here, we begin by sketching out the general layout of a page, which could also be in the form of paper sketches. A wireframe is simply a black and white model showing the overall placement of the elements on the page. This is the step that decides where the main navigation will go, where the logo will be placed as well as all images, text and media elements.
* **Visual Design**: At this stage, we implement our creative ideas, and we begin to design the look and feel of the website. During this phase, we should be able to capture the essence of the client's business; its culture as well as the products and services.

Development Phase

At this stage, we develop content and bring the website to life.

*Here's an illustration of how development phase takes place in a web design process*

* **Content**: We develop/improve content. Typically, content production begins right after the sitemap has been approved.
* **Front End Development**: This is where we take the finalized design and turn it into the internet’s language, HTML.
* **Back-end Development**: The back-end is the brains of the website. Here is where the site is brought to life by programming all the functionality, creating the database and implementing the site’s logic.

##### Delivery Phase

Post development, we perform a quality analysis just to ensure that what we had designed has come out to pixel perfection when developed.

Here's an illustration of how delivery phase takes place in a web design process

* **Testing**: Since users will access the website from screens with different resolutions, different browsers, phones etc, consistency must be ensured across all platforms.
* **Launch**: Once the site is complete, it is launched as beta version for testing and feedback. Relevant iterations are made and the revamped website will be rolled out.

##### Double Diamond

Created by The British Design Council, the **Double Diamond model** portrays modes of thinking that designers use.

It describes significant robust design, before going on to producing a final solution. Here, the solutions are generally fine-tuned before it is released. This is done because, once a product has been shipped, it becomes expensive to make changes.

##### The phases

It is divided into four distinct phases – Discover, Define, Develop and Deliver.

Unlike 4 D process, stages in this process are either diverging or converging. In a diverging phase, you try to open up as much as possible without limiting yourself and thinking aloud. Whereas in a converging phase, you focus on condensing your findings and narrowing down your ideas.

##### Discover phase

The first quarter of the Double Diamond model marks the beginning of the project. Designers try to gather insights by looking at the world from a different perspective and notice new ideas in their environment.

* Rip the brief (your initial challenge) — Try to question the brief or the requirement document by confronting every part of it and evaluating the focus areas. List as many elements as you can, find traits, define areas of interest and extremes. Think of anything that can be related and explored and list them. This could be places, people (personas) and experiences.
* Before you dig deeper into your research, to get an overview you might need to group your findings into topics and limit your scope of research.
* Dive into your research work. You can apply primary (field) and secondary (desk) research methods.

##### Define phase

The second quarter highlights the definition stage, in which designers try to gauge all the possibilities identified in the discover phase. The goal here is to develop a precise creative brief that addresses the fundamental design challenge. Here’s where designers converge their thoughts to zero-in on the right problems

* Summarize your raw findings and share them with your team
* Cluster knowledge and similarities to themes.
* Find insights (insights are the indications about the consumer’s motivations, wishes or frustrations regarding a specific topic or a task)

##### Develop phase

The third quarter indicates a period of development where concepts or solutions are created, discussed and evaluated. This process of trial and error aids designers in improving and refining their ideas.

The core activities done at this stage are:

* Ideation
* Evaluation

##### Ideation

* This is the most interesting part of the process and is part of the diverging phase. Here, you should not limit yourself and approach ideation with an open mind. You should not make any judgments during ideation.
* Apply a “yes, and…” rather than a “no…” or “yes, but…” mentality. Be flexible with your thinking process and build upon each other’s ideas.

##### Evaluation

* As we approach the end of an ideation phase, your ideas should be evaluated and out of these, you may select your favorite ones.
* There are two tools that can come handy- dot-votings (each team member votes for ideas) or impact/feasibility matrices (a matrix that puts feasibility in relation to a potential impact of an idea).

##### Delivery phase

* In the final quarter of the double diamond model, the final idea(s) is assessed and it is at this stage that the resulting project (a product, service or environment, for example) is finalized, produced and launched.
* An agile approach consisting of the following three steps may be used:
* 1. Build/Prototype
* 2. Test/Analyze
* 3. Iterate/Repeat
* Always aim for MVPs — Minimum Viable Products/Prototypes that offer enough tangibility to find out whether they solve the initial problem or answer the initial question.

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##### Bootcamp Bootleg - An Introduction

Proposed by Stanford d. school, this methodology is one of the wholly defined methodologies that is very complete and recommended for complex design works.

***Empathy is the key here in this five stage process.*** These are

* Empathize
* Define
* Ideate
* Prototype
* Test

##### Empathize with the User

Here, the focus is to gain an **empathic understanding of the problem** you are trying to solve by putting yourself in the shoes of the end user. This involves:

* Consulting with experts to find out more about the area of concern.
* Observing and engaging with people to understand their experiences and motivations.
* Engrossing yourself in the physical environment to have a deeper personal understanding of the issues involved.

Empathy is crucial in design thinking. It helps design thinkers cast aside their assumptions and gain insights about the user and their needs.

##### Define the Design Challenge

At this stage, you **aggregate the information you have created and gathered during the Empathize stage**.

You can then evaluate your observations and synthesize them to define your core problems identified until now.

You should seek to re-define the problem as a problem statement in a human-centric manner.

To illustrate, instead of describing the problem as a requirement or the company's need, “you will need to increase the cereal product market share among children by 5%.” A better way to re-define the problem would be, “Children need to consume cereal food to stay healthy and disease-free .”

##### Ideate Prospective Solutions

It is at this stage of the Design Thinking process that **designers start generating ideas**.

By this time, you would have matured enough to understand your users and their needs that was done at the Empathize stage. You must have also analyzed and synthesized your observations in the Define stage, and come up with a human-centered problem statement.

With this solid background, you can start thinking outside the box and identify new solutions for the problem statement in hand. You can also look for other possible ways of viewing the problem.

##### Prototype Solutions

Now, the design team will **create a number of economical, scaled down versions of the product or definite features found within the product**, so they can investigate the problem in solutions generated in the previous stage.

You can demonstrate and test prototypes within your team, or with a small group of people from a different team.

The aim here is to **identify the best possible solution** for each of the problems identified during the first three stages and being an experimental phase, continuous iterations may take place.

Towards the end of this stage, the design team will have a better idea of :

* The constraints deep-rooted within the product
* The problems to be handled
* How end users would think, feel and behave when interacting with the end product.

##### Testing the Product

This is an iterative process and the final stage of the five stage-model. The insights developed during the testing phase are often used to redefine the problems.

Designers or evaluators meticulously test the complete product using the best solutions identified during the prototyping phase.

##### Key Takeaways

Design thinking is not particular to designers alone. All great innovators in art, literature, science, music, engineering, and business have practiced it.

It should not be seen as a concrete and inflexible approach to design; the component stages in all methodologies serve as a guide to the activities that you would typically find. To gain good insights for your project, you can follow these stages in a different order, can conduct the process concurrently or repeat several times to expand the solution space, and narrow down on the best possible solutions.

Having said that, these methodologies assure a structured and disciplined approach to problem-solving. However, it is not mandatory to follow the standard design processes. You may have a custom design process put to use. Some world-renowned firms do operate on their native design processes and have become unique and successful.

**Design thinking is more about doing than about thinking. So get started and start acting!**