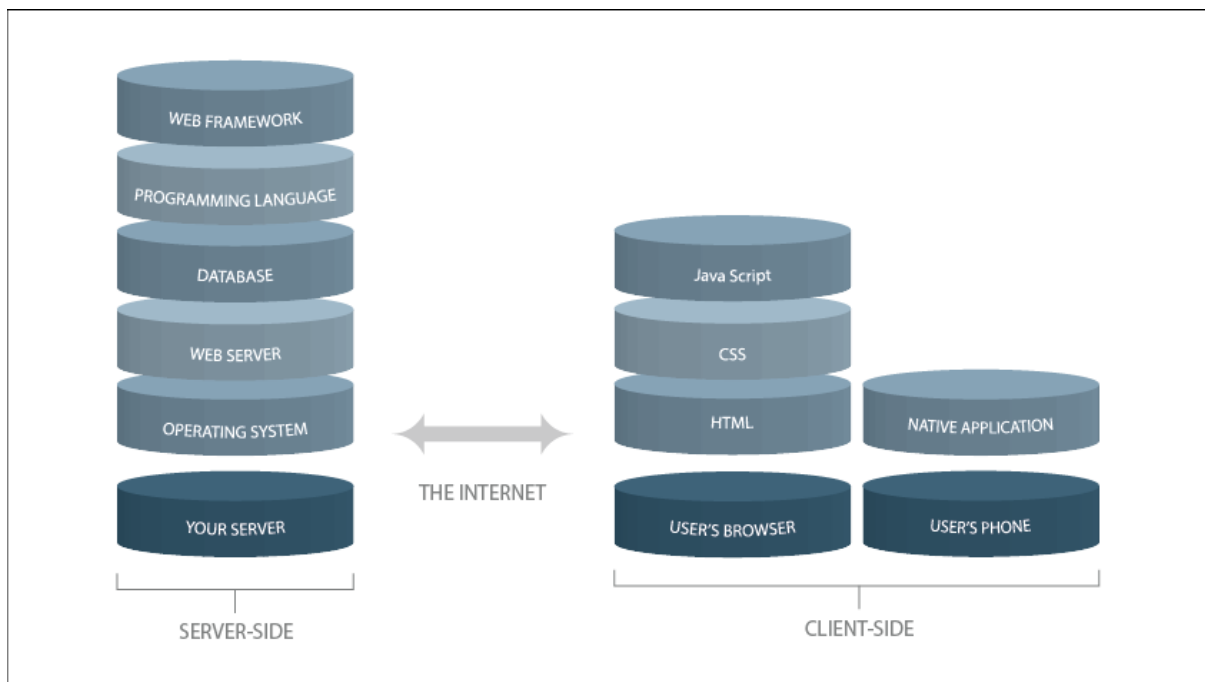


How to make excellent technology choices during product development

Technology development requires a feasibility study of detailed product architecture and usability and functionality that will be required. Product development as a process is quite elaborate and one of the important steps in it is during the product ideation process. The feasibility process as a natural extension veers the question towards the technology that would be used as a base for creating a product. These days most products are built online in a schema which is created factoring all requirements. It has to be approved in the virtual scenario before it can be built into an expensive prototype. In technical jargon this is called as the **tech stack** of a product. It is important for founders with a non-technology background to understand the different technologies available which are usable, affordable and will fulfil the requirements to really understand the appropriate technology.



Let us look at what a tech stack is and how it helps us. Tech stack in simple language is a combination of different set of technologies and languages along with software product that can be used to create a functional web for mobile application. When creating a web application, there are two important sides to look at. There is the backend , commonly known as the server and then the front-end or as commonly known as the client side. Stack is built when one layer of application is created on top of another with the providing means of interlinking security and language protocol and hardware modules which can range from being very common and generic to very specific ones.

Picking up very specific technology can be confusing for many founders and sometimes even the technology teams need to weigh in the pros and cons of different applications for the product build up and the product promotions. If the client side of the application requires CRUD (create, read, update, delete) operations then there a simple website and database operations and applications

that can be utilised. One of the most commonly used backend stack as of now has been LAMP which is an abbreviation for Linux, Apache, MySQL and PHP.

The front- end that is the one which interacts with the client and most of the technologies are a combination of HTML – the markup language, CSS – the style sheet and Javascript – browser scripting language.

A lot of factors need to be taken in consideration before deciding a technology they can be such as the schema of the front-end and the depth required to interact with the client, also information required from the client will determine the technology at the backend.

1. Status and the product of your business - certain businesses required specific regulations to be met. Finance and business domain require certain criteria to be approved for which languages like Java or .Net (C#) are most beneficial. The factor of the pace and stage of business, time to market has to be the shortest also affordability are important criteria. The learning curve for the technology thing has to be short and realistic and has to be capable to allow scalability for future use.

2. Talent available for a specific type of programming and required future scalability of the product concerned is important. Unless they are very specific and extreme specifications are required, almost all languages are able to handle most program building for a product availability. For a developer the different levels of skills which are available around your business area are important. There might be specific languages in which a lot of programmers might be available but they might not be of much use to you to see the current programming languages.

Selecting Technology for a New Product Development in Manufacturing

The process of manufacturing new product development is based certain parameters. As given by industrial designers Society of America where, "professional service of creating and developing concept and specifications that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer." Industrial designing combines the art and the engineering process of choosing the technology, understanding different kinds of available technologies, and blending the human meaning. Expression of the product ideation is important through the form of colour, texture and mechanical realities of the required functioning. A good industrial design can give birth to various other product benefits that might have not been thought of in the ideation stage. Selection of materials and architecture of design are important processes of choosing the right technology. While creating a product development plan, an industrial designer would make use of basic engineering, manufacturing, fabrication, processing and marketing practices to select a technology suitable for a new product.

Product development for new markets requires certain specific feasibility factors to be encountered. It can be regulatory or social factors that might dictate the need of choosing the technology. For example many countries are now moving towards the green technology and green revolution for environment and health. Nissan declared its electric vehicles program way back in 2008 which was lauded by environmentalists but at the same time was also derided by the auto industry because it created a different name for itself. Electric vehicles have now become an accepted product within the car industry with bigger manufacturers toeing the line. Nissan Leaf which became the world's top selling plug-in electric car and was legally accepted across countries has reached a global sales of

nearly 200,000 by 2015. The technology that it committed to had to be created and also explored at that point of time to make it commercially successful.

Thus, the choice of technology is dictated by various factors of marketing, target segment, social infrastructure and regulations. It is also by and large driven by the level of innovation in that particular industry and support of local regulations to such innovations.