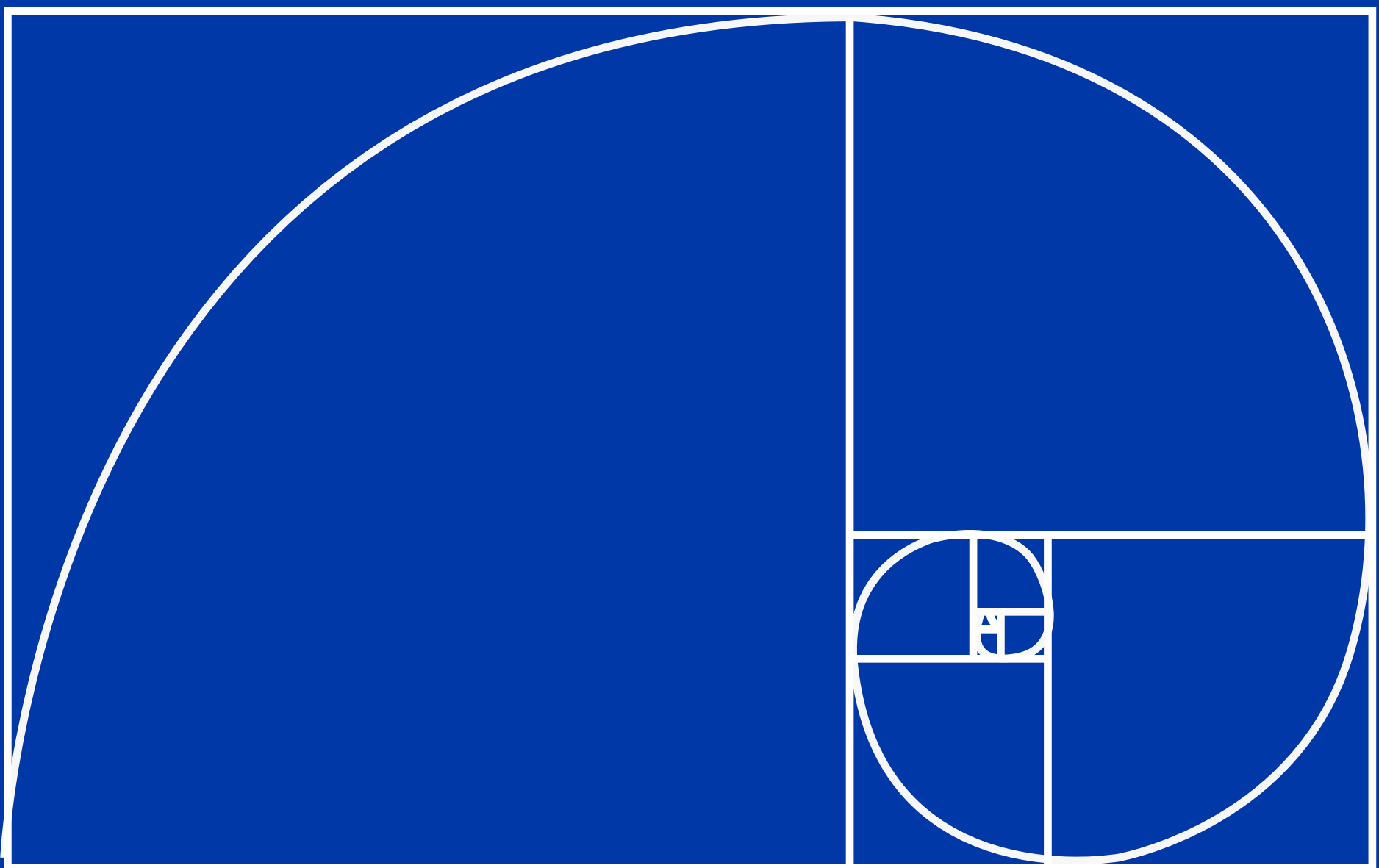


BEYOND USER EXPERIENCE DESIGN

To Achieve Real Success of Digital Product



Fibonalabs

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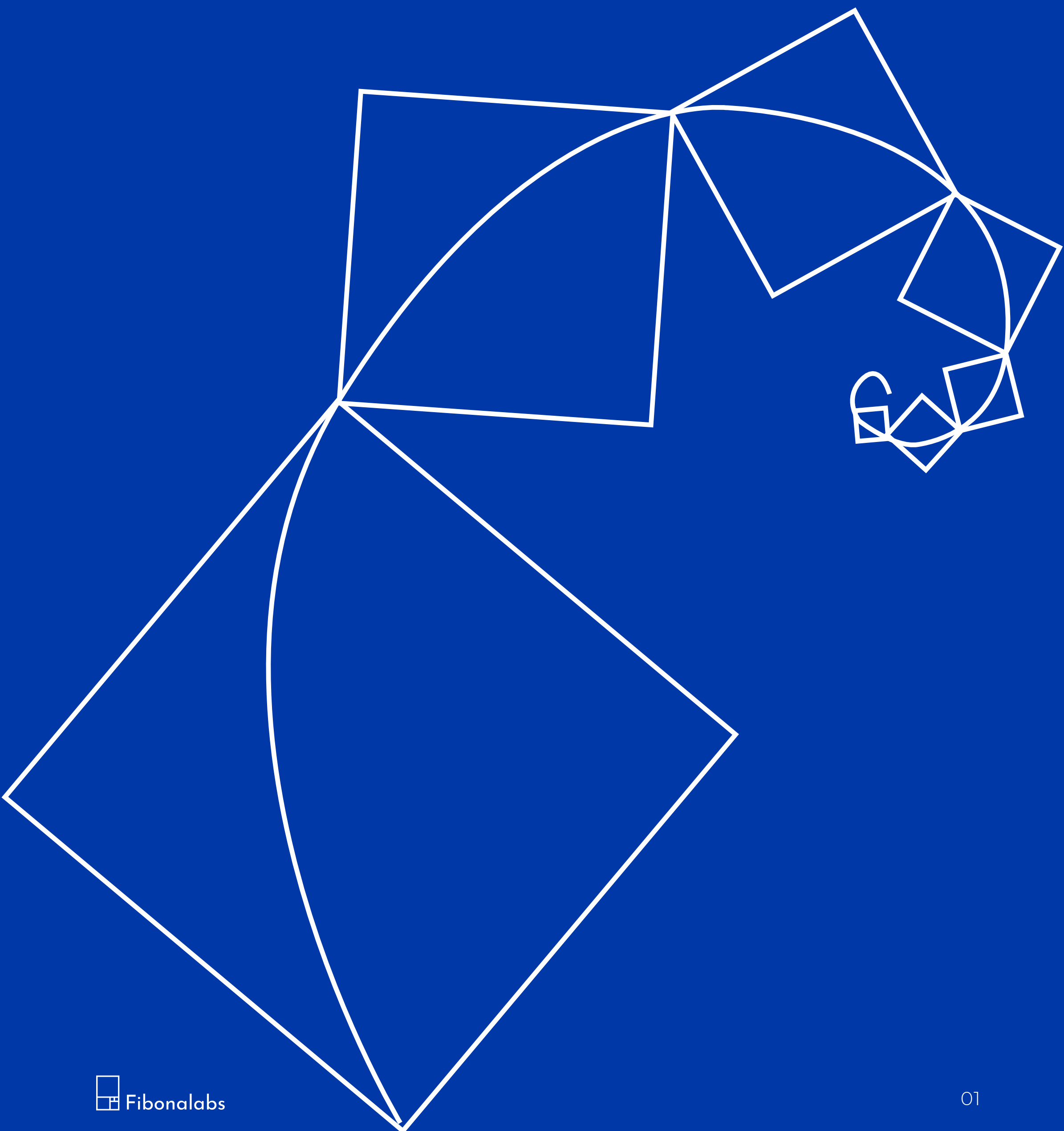
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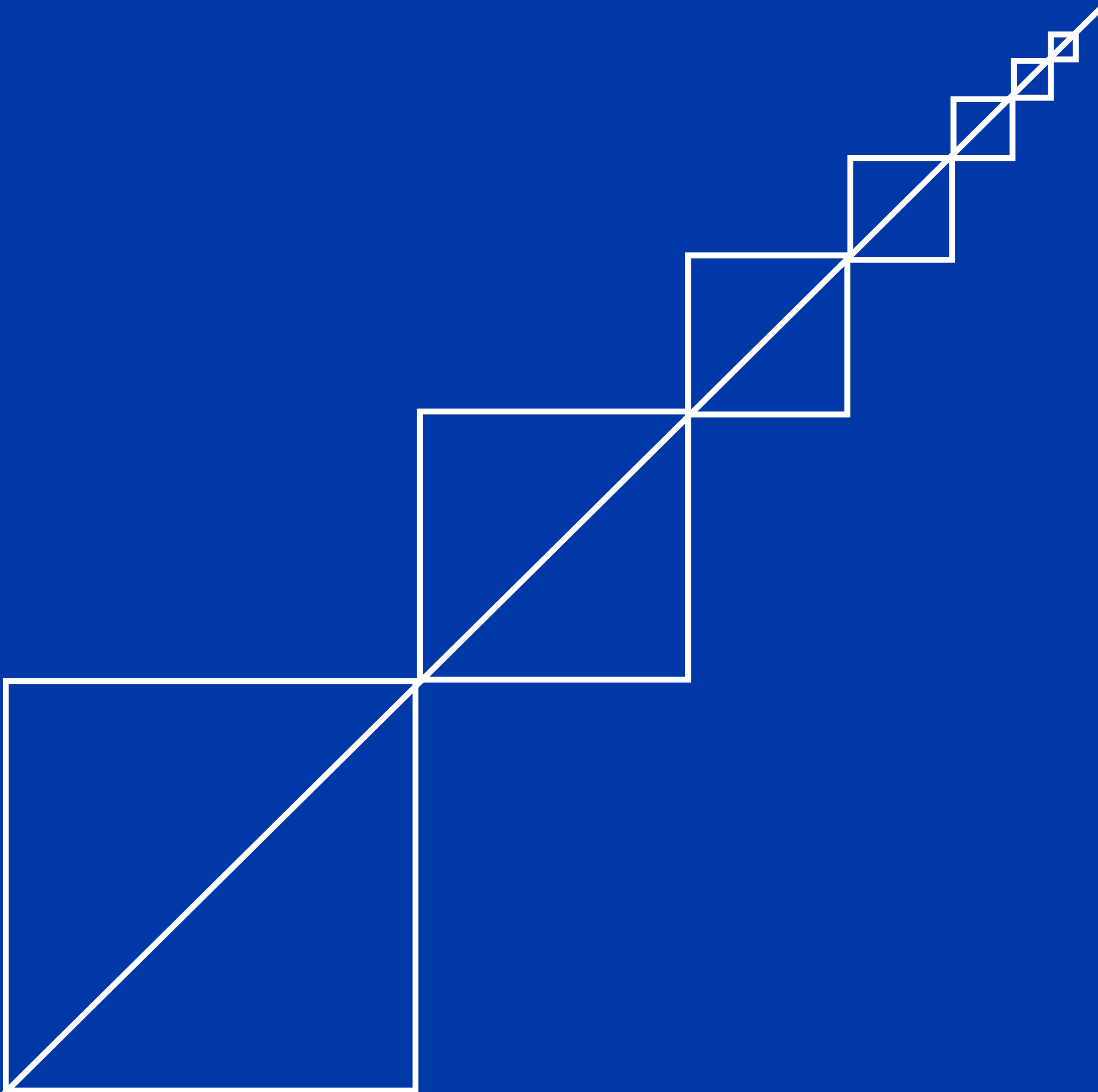
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ABSTRACT



Digital products have penetrated deep and wide into our today's world. It has improved our quality of life many folds. There is a definite direct or indirect effect of these apps in almost every waking minute of ours. On the contrary, in spite of wide acceptance and courtship, these products have lots of room to be improved.

The current UX practices, which have their roots in Don Norman's thought of positing the User and their experience in using a product have given way to the products and the services to take over the user. When this is addressed from the point of view of the huge net of people that these products address, even small glitches have deep impact. This paper tries to make a case for designers to look beyond UX as a possible panacea for this predicament.



INTRODUCTION

Humans have been designing ever since they became humans. Victor Papanek rightfully posits design to be the primary underlying matrix of life (1). Ancient science of Ergonomics (ἔργον (ergo), meaning “work”, and νόμος (nomics), meaning “natural laws”), in an attempt to establish a set of principles aimed at making work more convenient and efficient, sowed the seeds for modern day User Experience Design approach and practices. Subsequent pioneering practices like the research done in 1900 by Winslow Taylor on the interaction between workers and tools aimed at optimizing work, the human centred production systems brought into play by Toyota in 1940 are a few of the important milestones that furthered the cause of User Experience Design (2).

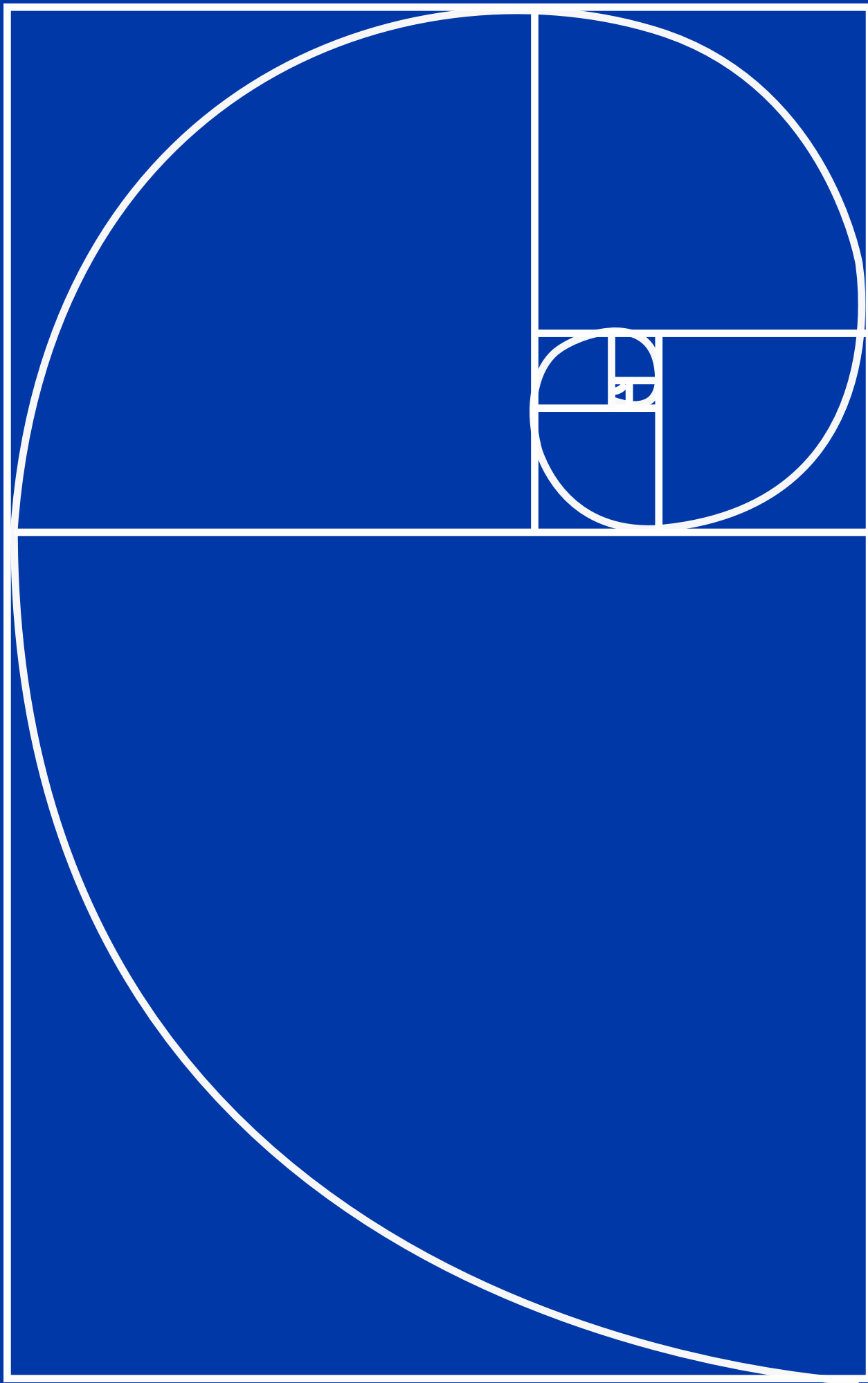
Henry Dreyfuss, in 1955 (3), propounded the thought that the industrial designer has failed in his endeavour if the point of contact between the product and people becomes a point of friction. On the other hand,

he goes on to ascertain that a designer wins, if people can feel safer, more comfortable, more eager to purchase, then they can be made more efficient, or “just plain happier” by contact with the product.

These efforts had given rise to science, Human Factors Engineering or Ergonomics, dealing with the application of psychological and physical characteristics on the design of devices and systems for human use. With the advent of digital products and devices, these building blocks have been well courted and adhered to, yielding effective products that claim to make the user “just plain Happier” in using a product. Are the users really “happy” in using today’s products? Are products designed these days subscribe to this claim? The answer is both Yes and No



HAPPIER USERS





A chance peek at the number of applications, called Apps in colloquial parlance, their production and usage characteristics stand as testimony to the fact that users are happy to have them in their devices and to use them. The iOS App Store launched in 2008 with 500 apps.

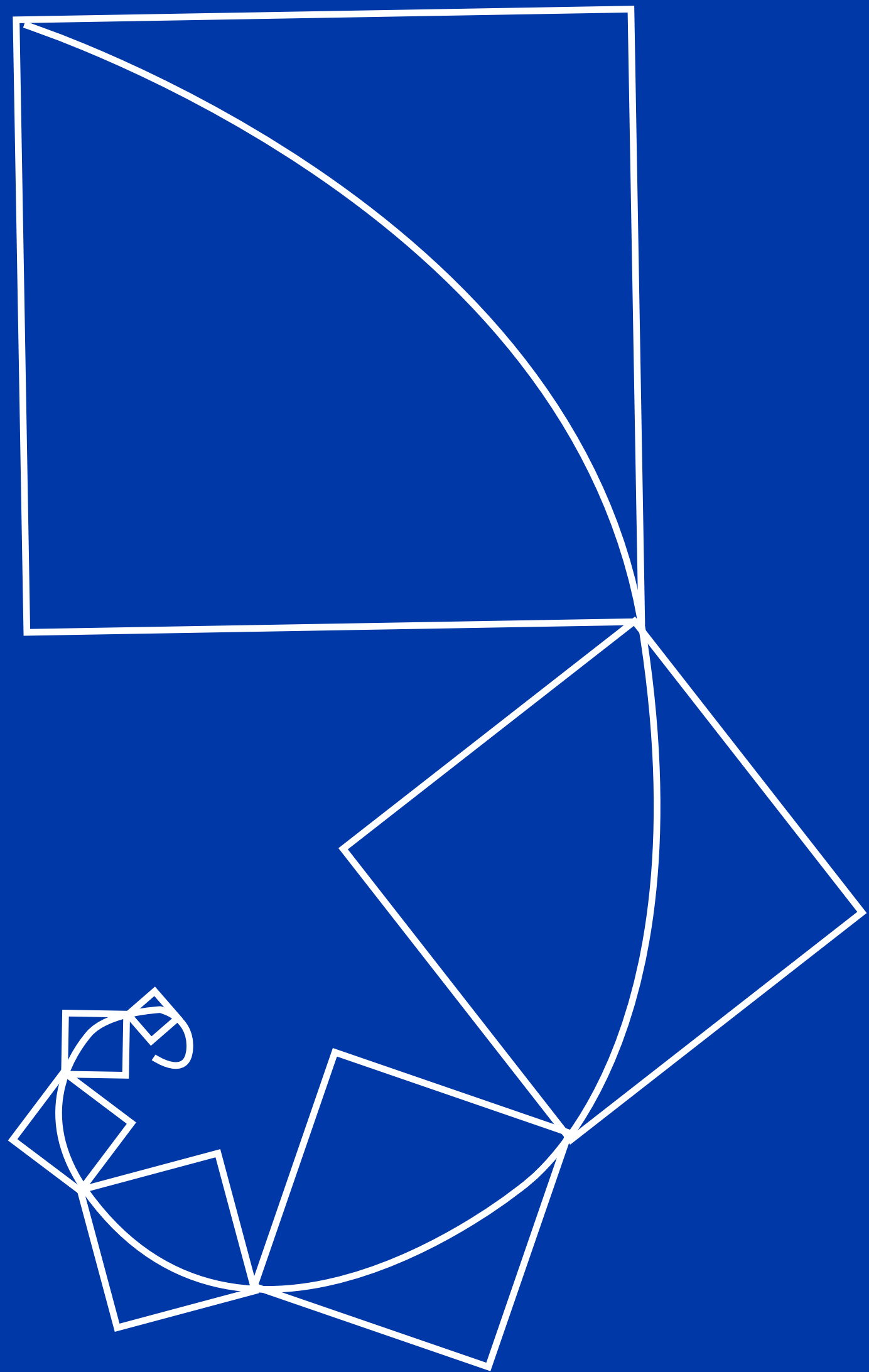
Today, 1.85 million different apps are available for users to download (4). These apps play a huge role in the way we conduct our daily life. They help us do our financial planning, manage our documents, make payments, play games, seek medical assistance, move our goods, book our hotels and entertain us by offering a plethora of games, music and movies

Even in the testing times of the coronavirus pandemic, apps have helped us seek medical attention, access ambulance services and vaccines, maintain social distancing and even offer help to our brethren who are down with the virus. They have helped us to be connected with our relatives, friends and colleagues while being quarantined or in lockdowns.

A sharp jump in app downloads in the first two quarters of 2020, with Q2's total of nearly 38 billion app downloads representing a 9 billion increase in Q4 2019 ascertains that

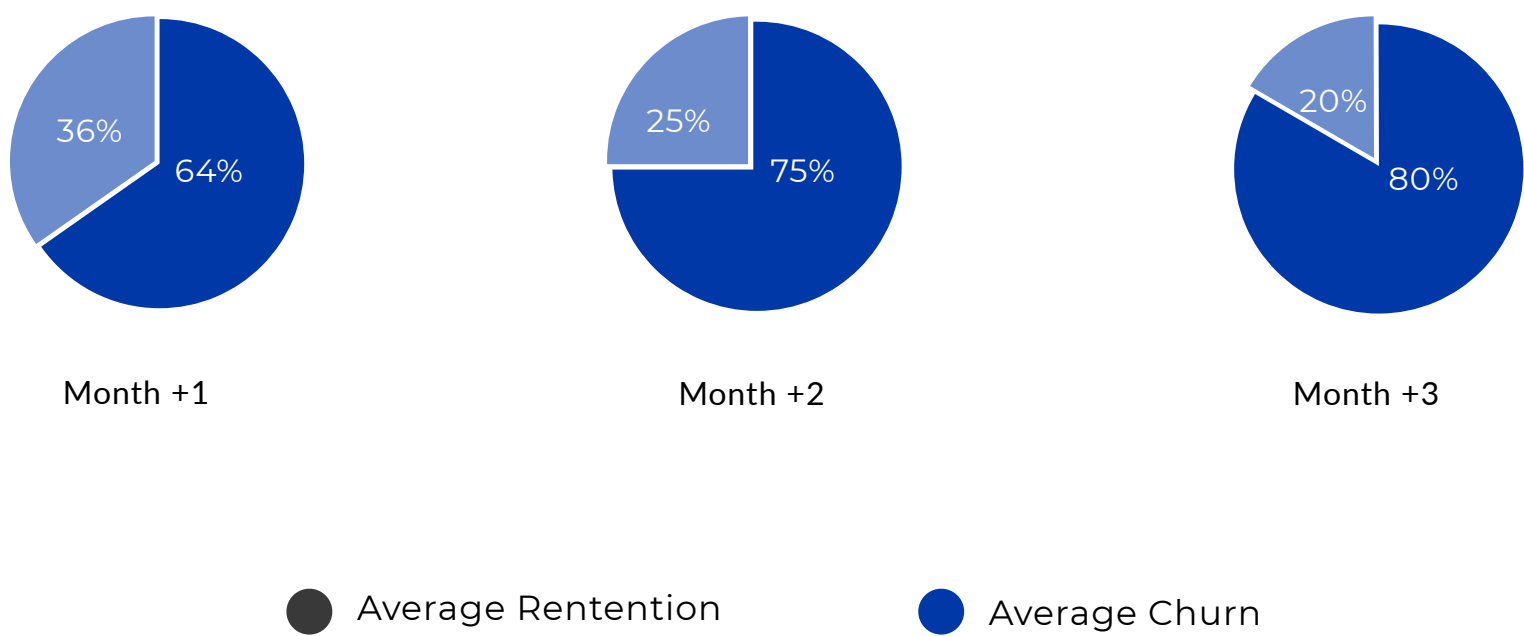
APPS HAVE BEEN ONE OF THE VITAL COGS IN OUR EFFORTS TO ADDRESS THE ABNORMAL CONDITIONS AFFECTED BY THE PANDEMIC.

THE OTHER UNDERCURRENT



Even though digital products have become extensively pervasive and ubiquitous, it is not without minor glitches and grave pitfalls that they have endured. The downside has many facets. The lifetime of an app is a case to be looked into. An app is alive only when it is used and a mere download doesn't ensure its usage. Statistics show that users in the US stop using 80% of their apps after 3 months

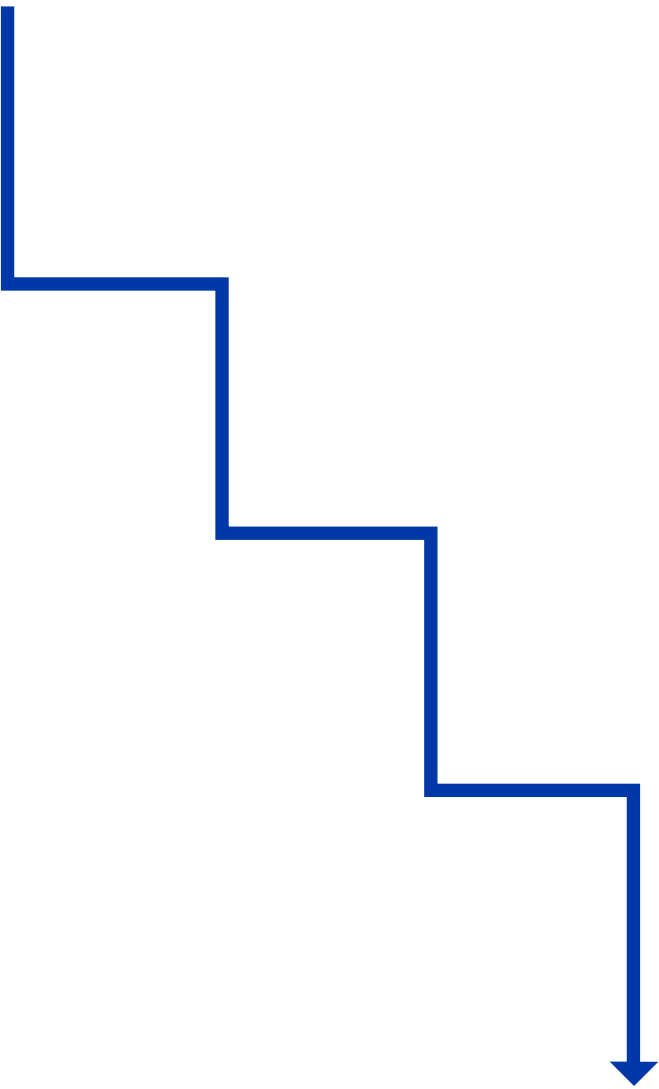
Almost 80% of Apps get churned out in 3 months



The following are the reasons stated to be the

REASONS FOR THE DIGITAL PRODUCTS TO FAIL

- ▶ Poorly Researched Market & Audience
- ▶ Not Choosing a platform Wisely
- ▶ A Poorly Executed App Launch
- ▶ Lack Of Originality
- ▶ Improper Testing
- ▶ Benchmarking App Success
- ▶ Poor User Experience
- ▶ Long Registration Processes
- ▶ Long Load Times
- ▶ Features that are Difficult to Access
- ▶ App performance issues



RESOURCES	Basic App (core platform set, 1 platform)	Large App (complex app design, development & support 2+ platforms)
TIMECOST	\$ 60,000 - \$ 150,000	\$ 300,000+
TIMELINE	3-5 months	9+ months (on going)

DIGITAL PRODUCT FAILURE

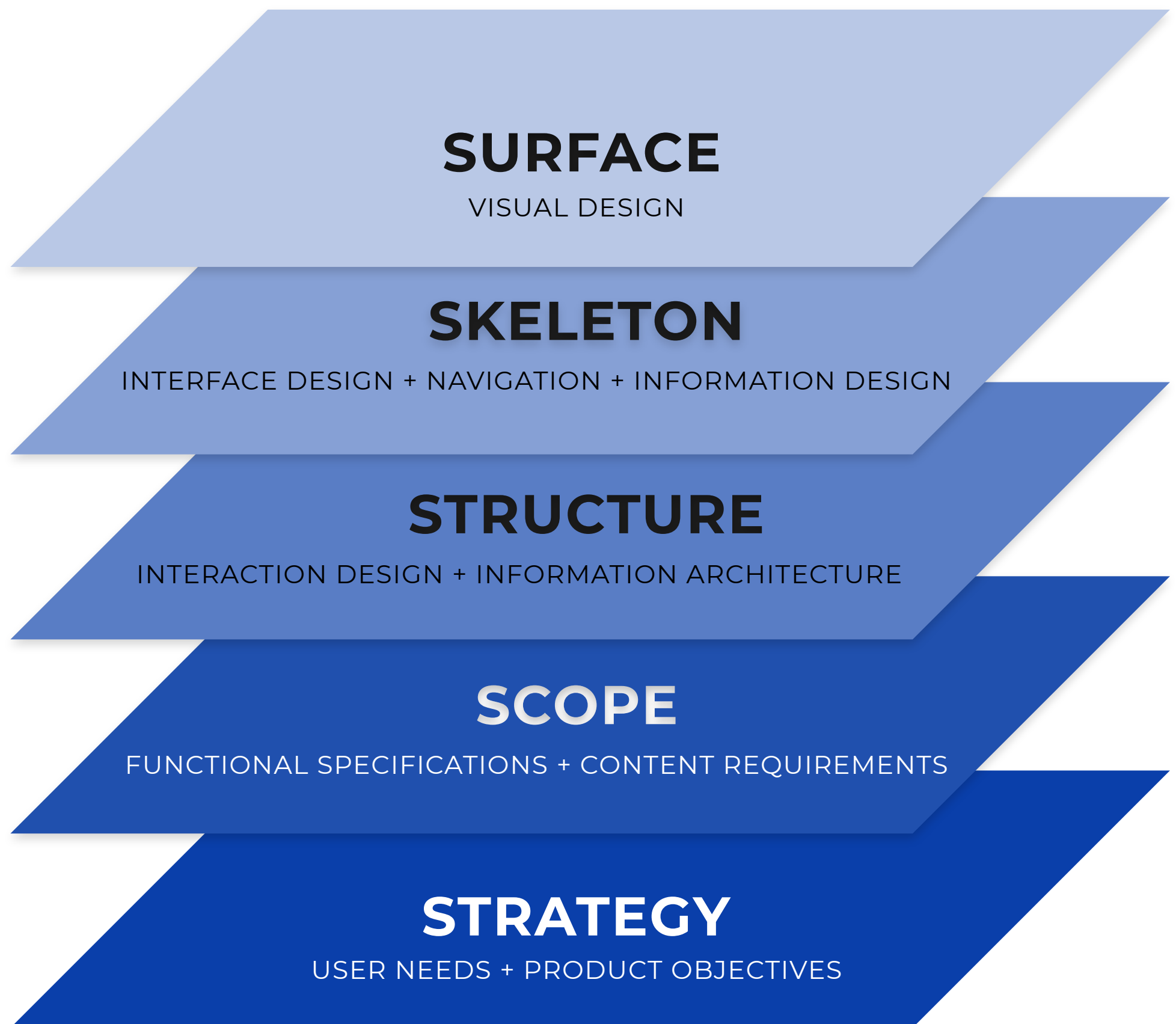


Of the several reasons which can be attributed to the failure of a digital product, Poor User Experience undoubtedly remains one of the biggest reasons. Of all the things that a product embodies, what really gets stamped on the minds of users is the experience of using the product. They revisit the products that evoke some emotions while the interaction takes place. A good or bad UX can predict the future of any product.

Products that have done well are known for two things primarily: features and details.

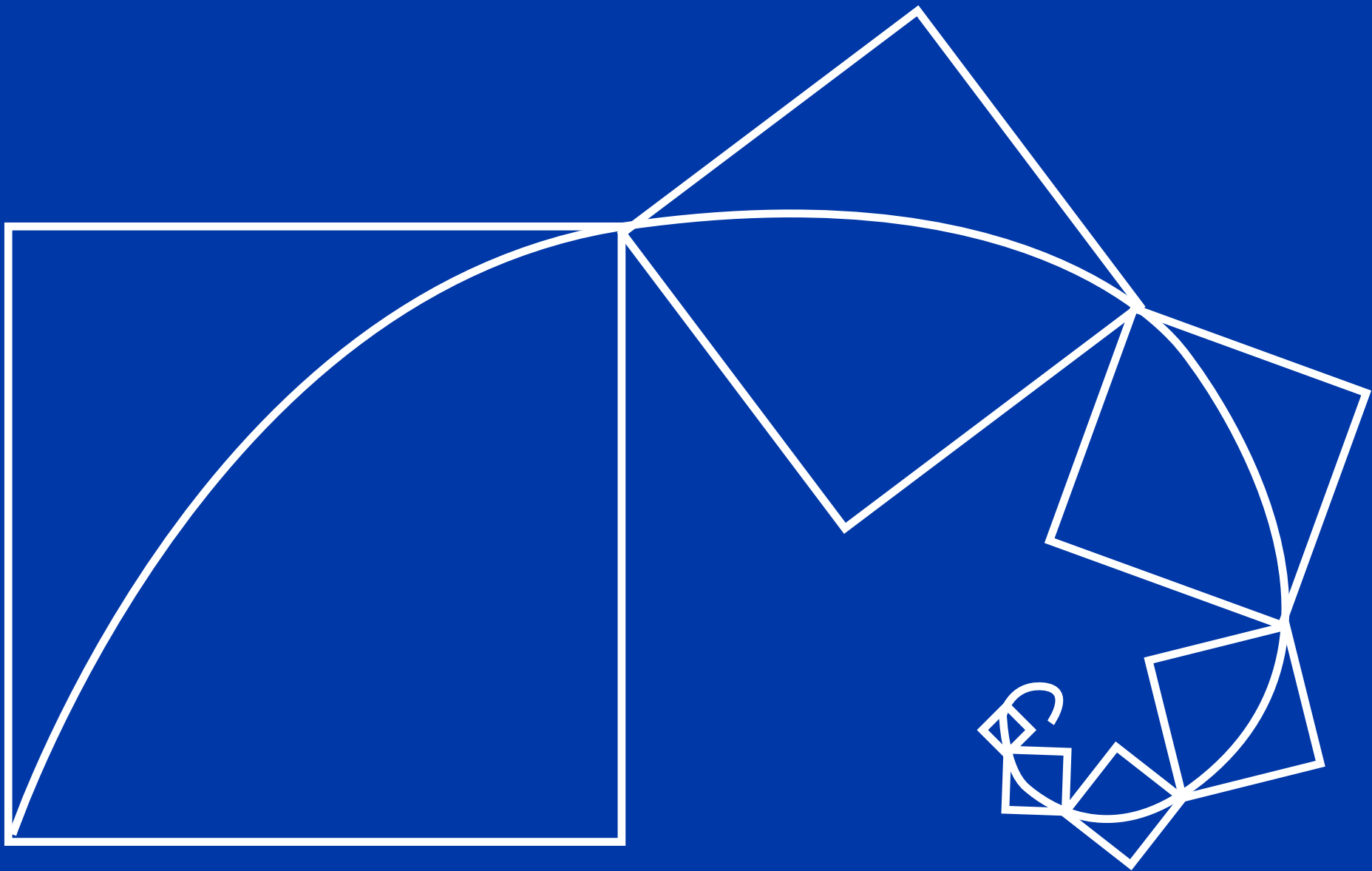
Features are what make people interested in the app.

Details are what keep them engaged. UX brings a logical flow to the product that focuses on getting tasks done in the easiest and smartest way possible. UI adds life to the flow by combining elements, colours, thought process and customer's behaviour.



Don Norman who gave the term “User Experience” to the world, defined it to experience that emanates out using a product that exactly satisfies his or her need through easy and simple use and gives the joy to own and employ. This would need the effective functional realization of the information flow and presentation that the user wishes to use. It requires an interplay and deep interaction between the task-oriented elements and the information-oriented elements of a product. This aspect is ascertained by Norman’s claims that “User Experience Design” is a process, an intimate collaboration between engineers, designers, and clients. The fact has been courted well resulting in sustained practices and elements of the framework that have yielded effective experience outputs for the users. It has yielded a robust framework when adhered to in spirit does result in experiences that are a joy to use and own.





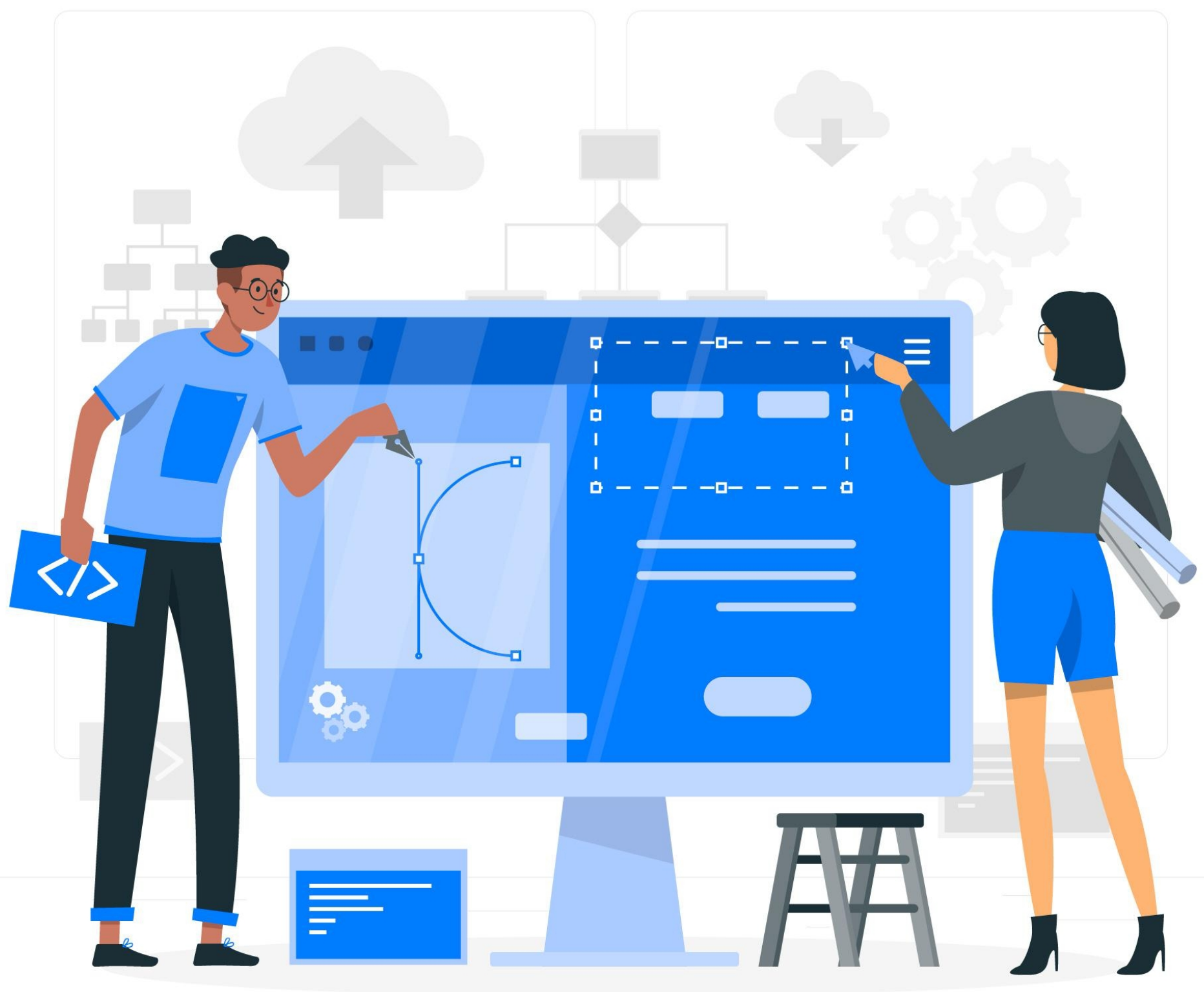
UX DESIGN: **WORK IN PROGRESS**

The practices of functional realisation of information processing and presentation have become well entrenched as well as established in production facilities that they can churn out effective and flawless user experience designs. Nevertheless, errors and bad design do show their head in products that have been released resulting in their bad show.

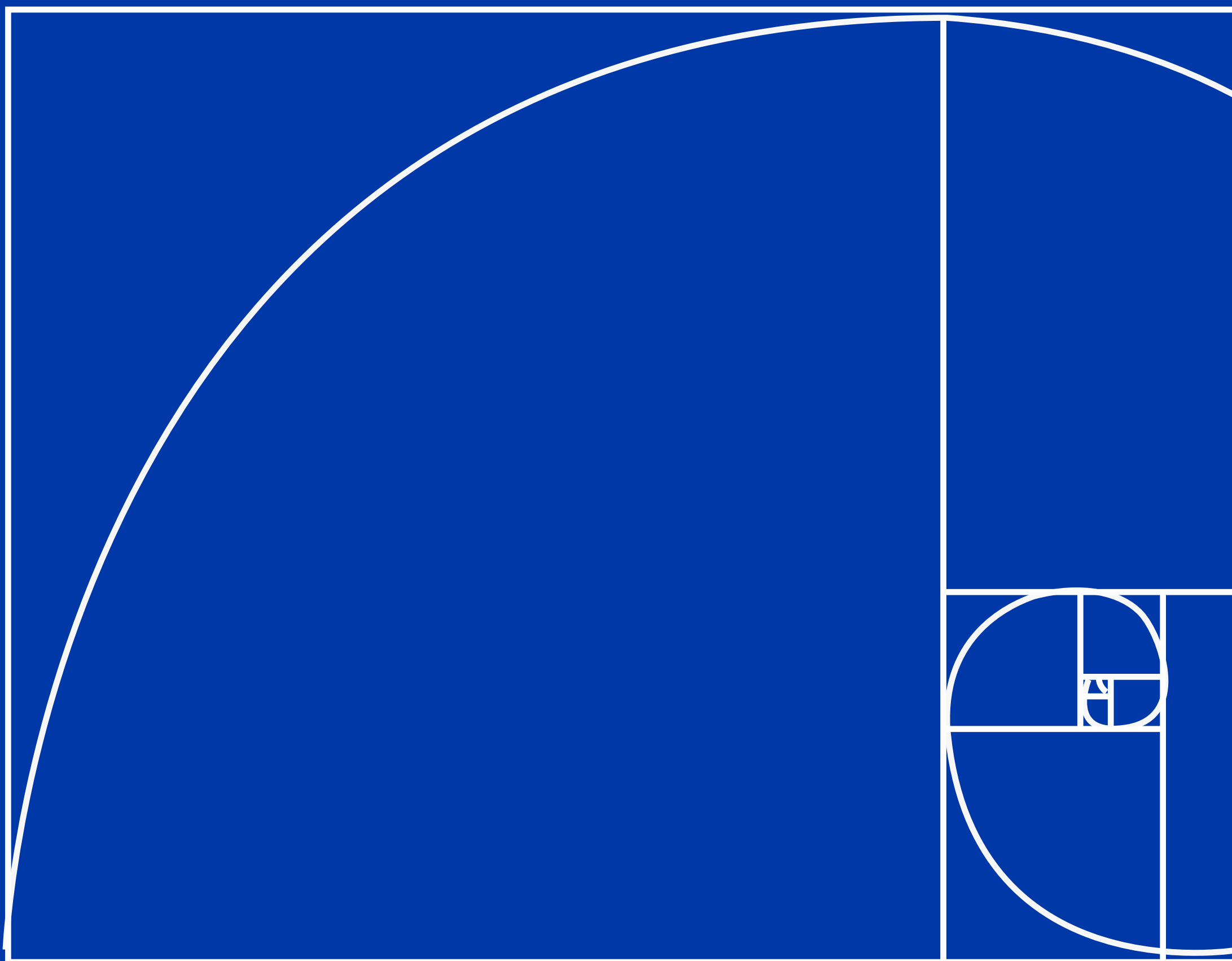
If the basic elements of the user experience design are identified as defined and their interactions are designed as the information flow entitles, the user experience spawned as such, should meet its desired goal. Of the many products that have not been so successful, bad User Experience has been identified to be one of the major contributing factors.

When digital products started making their presence, User experience glitches were mostly because of two factors. One is the elements that contribute to a meaningful User Experience were still being identified and understood. The responsibility was more on the technological aspects of the product. Even the technology backend was evolving. This evolutionary process had its own ingrained learning curve resulting in technical surprises being realised in the field, bringing down a good interactive experience however robust it was designed for. This was the second reason. So, the problems were mostly related to incomplete UX designs or technological shortcomings.

Currently, the elements and their interactions have been well established and the technological counterparts have evolved to be effective. If the interactions are designed well backed up by true interaction architecture that is borne out of exhaustive research, backed up by the right and best-fit technology and platform, it should result in providing the envisaged User experience



PERVASIVE DIGITAL PRODUCTS



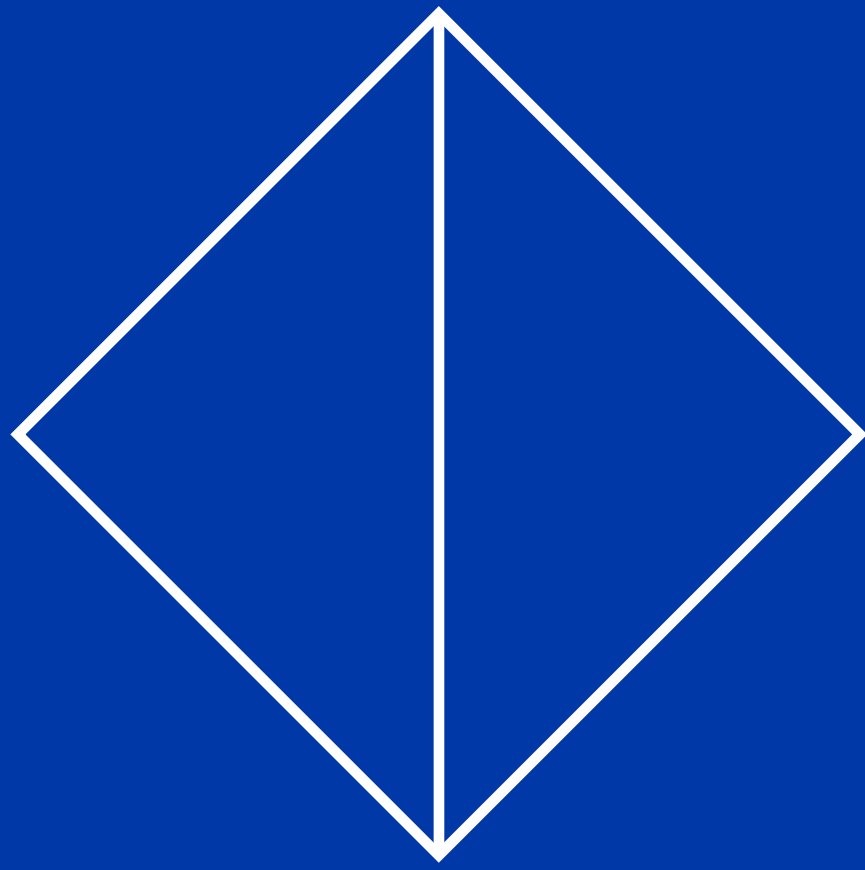
The deep penetration of digital products in our daily life is a testimony to this evolution. They have reached such a phase that, designers can devise solutions cross-culturally. An Asian team can design and deliver a digital product to an American or European audience. Cultural differences like language, societal norms, and practices, business boundaries have been overcome by well-designed digital apps

A common, tacit language of interaction has been established. For e.g, the onboarding process is very similar to almost all applications. The evaluation heuristics of a successful design are also applicable to all digital products irrespective of the place where they were produced or where they are being used.

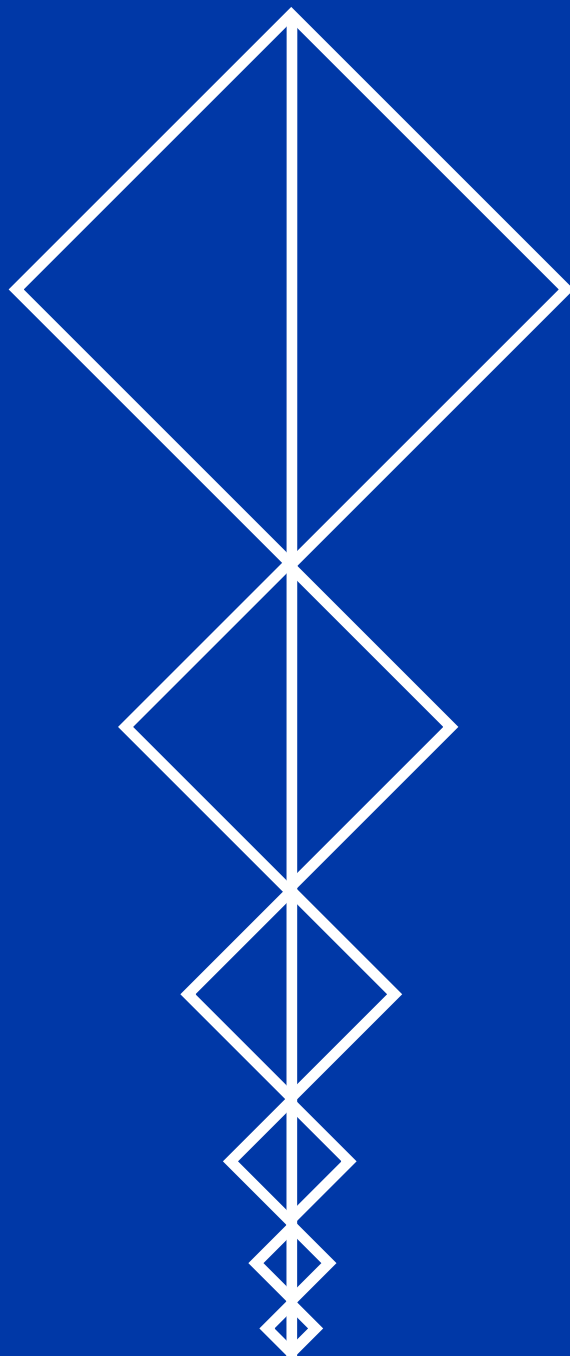


Products that have not completed the proper development cycle are also a huge contributor. Products that have not completed their full test cycles have been released, causing surprises to crop up. Another major contributor to failure is that the problems that digital products address today are way much different and complex from those that were being dealt with before. For E,g, previously apps were designed specifically for money transfer from say A to B. Now, these transactions have become a part of a bigger elaborate, and complex ecosystem like an e-commerce application or an insurance application. A plant manager who had an app through which he could see the meter reading is able to control the entire plant using his app.

In spite of the well-established design practices, problems occur and a majority of the apps fail to live up to their promised potential. The reasons are multi-fold. With digital products almost reaching omnipresence, the time to market has become a telling factor in incomplete designs being pushed to the market in a premature stage. Almost 40% of the apps that have not done well are because of bad UX experience borne out of incomplete UX design. Business houses and project managers cut corners during production, resulting in designers overlooking key action points or use cases.



PRODUCTS OUT BALANCE THE USER



This remarkable evolution has given forth to a churn in the elements that make up for effective User Experience Design. The apps are now acting as an interface or a window of interaction to a service rather than as a single task accomplisher. For example, the entire service of a bank, an insurance agent, a sales agent in a store are abstracted as an app in our palm held device. This brings along new non digital touchpoints into play which are apparent to the user. These interactions when not addressed properly account for a bad user experience.

In Don Norman's domain, the "user" is the most important actor whose experience is to be properly designed to ensure happier interaction time. This approach has yielded impressive effective designs. However, it has reduced the focus to be just on the dyadic user-device interaction to a great extent. Also, with an extensive influx of apps, the user-device interaction approach has been overtaken by the product narratives. That is, there is a shift from "it is all about the user" to "it is all about the product". Currently to address the bad user experience events that mar product success, we need to bring back the focus on the user and extend it to "users" who make up the entire system under study.

UI/ VISUAL DESIGN

screen layout, look & feel

INTERACTION DESIGN

architecture & behaviours per service, per device

INTERUSABILITY

interactions spanning multiple devices with
different capabilities

INDUSTRIAL DESIGN

physical hardware : capabilities & form factor

SERVICE DESIGN

customer lifecycle, customer services, integration
with non digital touch points

DESIGNING WITH DATA

using data to drive insights & intelligent system
behaviours

PRODUCTISATION

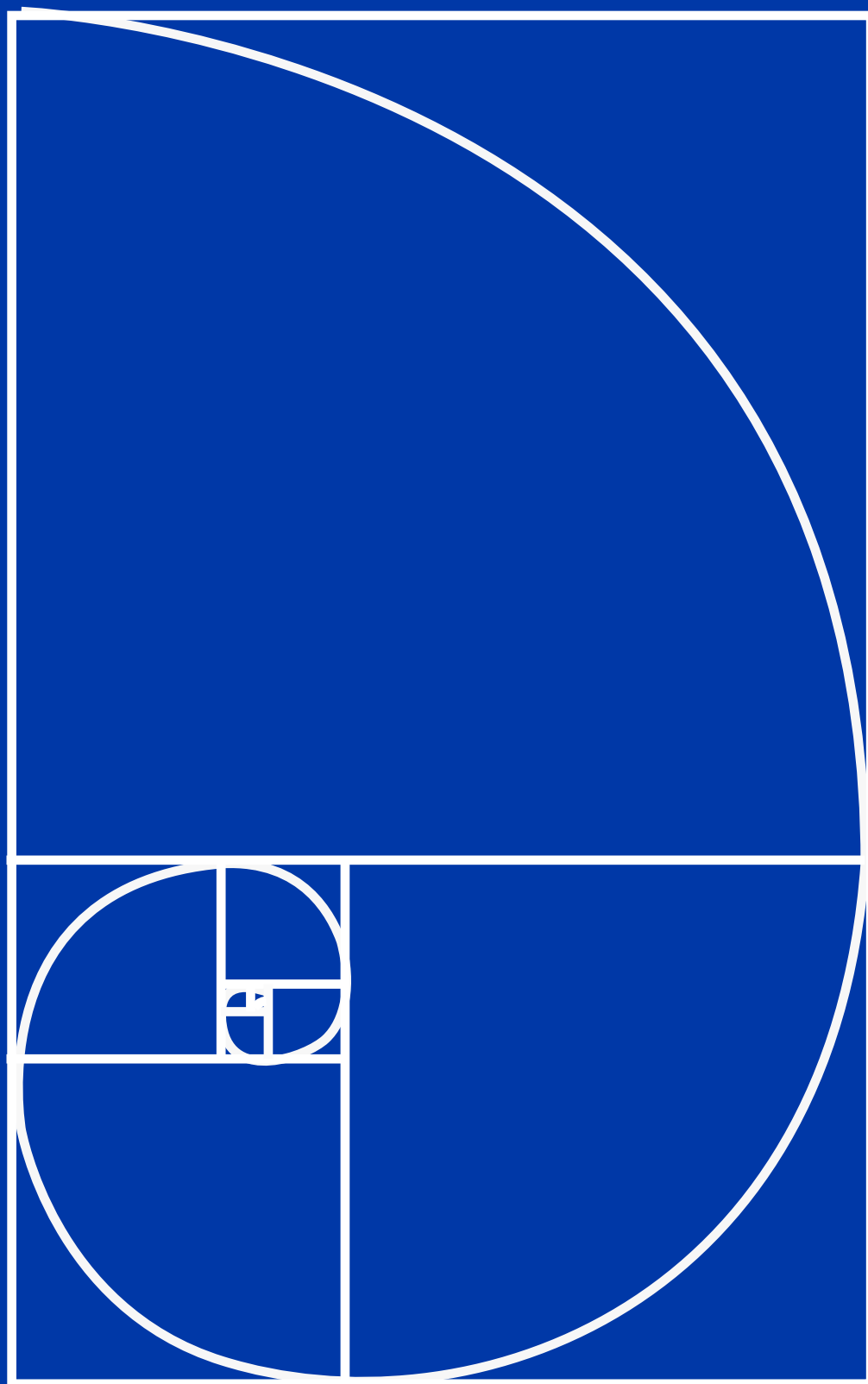
audience, proposition, objectives, functionality of
a specific service

DESIGNERS SHOULD DIG DEEP

We must start looking at the entire community of users who make up the system and account for each of their individual as well as collective experiences while designing. In addition to apps playing the role of abstracted services, the ecosystem to be designed as well as the system that is running is influenced by deep analytics and data driven AI engines. The core of interaction is “action”, an activity that acts as a means to a cause. Hence to meld the predominant classical User Experience theories that are in practice with the theories that attempt to address the problem would need the bigger societal canvas.

Organically, these advances are in fact spawning new paradigms and practices which are evident in the new theoretical narratives that are emerging. Customer Experience Design and Service Experience Design are couple of the new paradigms that are being discussed now.

CUSTOMER EXPERIENCE



Customer Experience design differs from User experience design by including the tacit interaction a User has with the product when not actually using it to accomplish a task.

The situations interaction of the user before the product is in his/her hand and after she/he has finished using it is also considered as an experience to be designed well. In simple words, the experience that a user has when he decides to buy a product, the process of homing in on the right fit, buying the product, using the product, and the experience of owning it, all account for customer experience.

In a nut shell CX is a super set of UX, brining into account, the experiences a user has when not interacting with the product. This improvement brings into focus on additional aspects of CX.

For example, in addition to the existing UX metrics, factors like overall experience, the likelihood that a user will recommend it to others, the possibility that the user will continue with this product become parameters that account for good customer experience and there by a wholesome product user experience. The CX aims to provide the user a pleasant, professional, helpful interaction and feel generally positive about the overall experience with the product. In addition to the extension of user experience beyond product usage and handling CX nudges a paradigm shift to see the product as an interface to an organization, its representatives and everything associated with it.

Even though it has transformed the User to a Customer and the focus is on an individual, it has attempted to bring forth more individuals that make the collective service into picture. This would involve people who are directly as well as indirectly involved in the product function, production and its usage. It is a minor step towards treating the apps as a service.



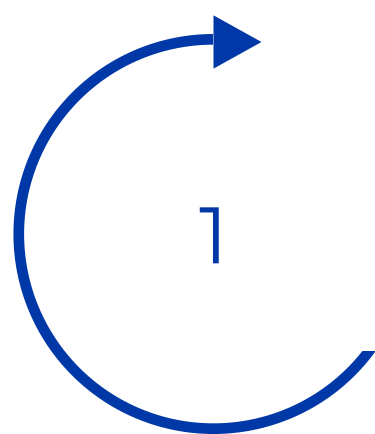


SERVICE DESIGN

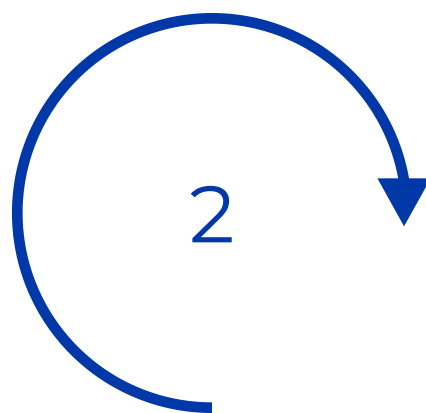
With digital products becoming windows of interaction for services that are complex entities, an understanding of the service complex and its dynamics is important. A service is an intangible instantaneous interaction that we have to complete a task or a transaction. This does not result in ownership. Thus, the aim of service design should be to make the user a sense of joy to use (as ownership is not in question). As emphasised earlier, current digital products have started to offer complex user experiences and are breaking often because of organizational shortcoming in the services for which they act as a front-end interface. This is a very vital link in the ecosystem that results as disruptors in fruitful user experience and wide product acceptance.

Service design emphasises on the activity of effectively planning and organizing the people, properties, and processes of a business to directly improve the daily experience of its employees. This is believed to indirectly reflect in good customer experience. The entities of service are broadly categorized into frontstage elements and backstage elements. The frontstage is usually the arena in which interaction with the customer happens. The ambience of the place, the people who greet and direct a customer, the person at the desk who helps you with the transaction, the lounges, and the coffee machine, all make up the front stage. The backstage is the place where actual systems governed by the technology and policies service the request received in the front stage. Both the stages are vital for the complete service to work resulting in a good user/customer experience. The dynamics of this system are such that for the stipulated time within which the user customer is using the service through the front stage, various participants/elements of the service in the front stage as well as in the backstage get recruited dynamically to accomplish the requested service. Most of the issues happen when this interaction does not happen as intended or as planned. A service blueprint gives a snapshot of the services and the external as well as internal interfaces that are play at each instance when the service is being rendered.

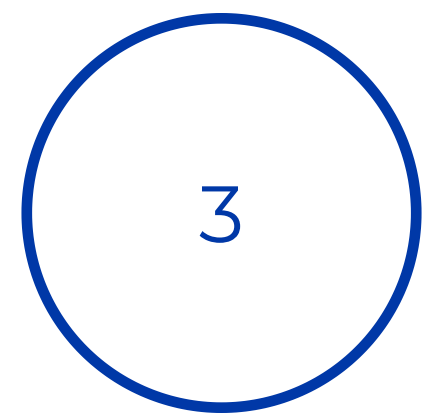
In this time course, the most important thing to notice is that there is a change that gets effected across the system. This change has tacit as well as explicit impact on the functioning of the system. Existing service design framework have posited three lines of interaction. The first one between the customer and the front stage, the internal system being visible through the front stage actors being called as line of visibility and the interface between the front stage and the back stage. These three interfaces have to work in a service system for a pleasurable experience for the customer.



customer &
front stage



internal system
being visible through
the front stage actors



front stage
& back stage

EVERY DIGITAL PRODUCT IS A SERVICE

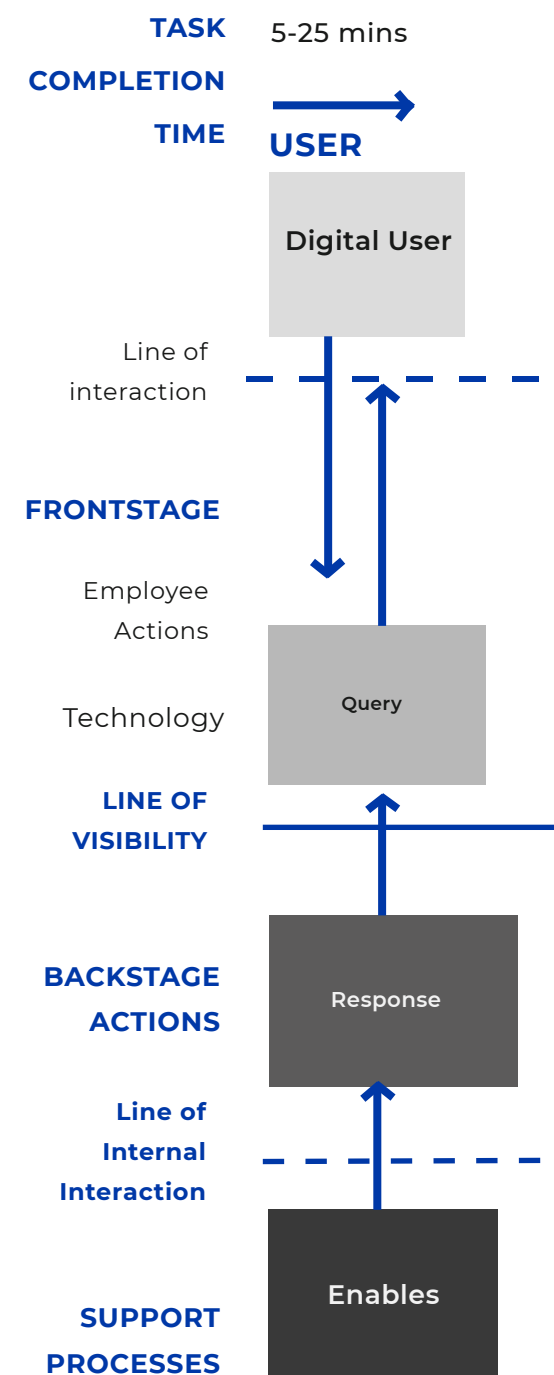
In the case of present-day digital products, the designed interfaces work as the frontstage for the services in the backend. The onboarding process to an app is a corollary to the line of interaction to the front stage. The subsequent requests that we make in the app are the abstractions of the front stage actors in a service. The vast network of people and technological framework that this request invokes into play is the service backend that comes into play. This backend functioning and interfacing have become a vital contributor to pleasurable user experience. Failures in this end has resulted in majority of the apps being churned out.

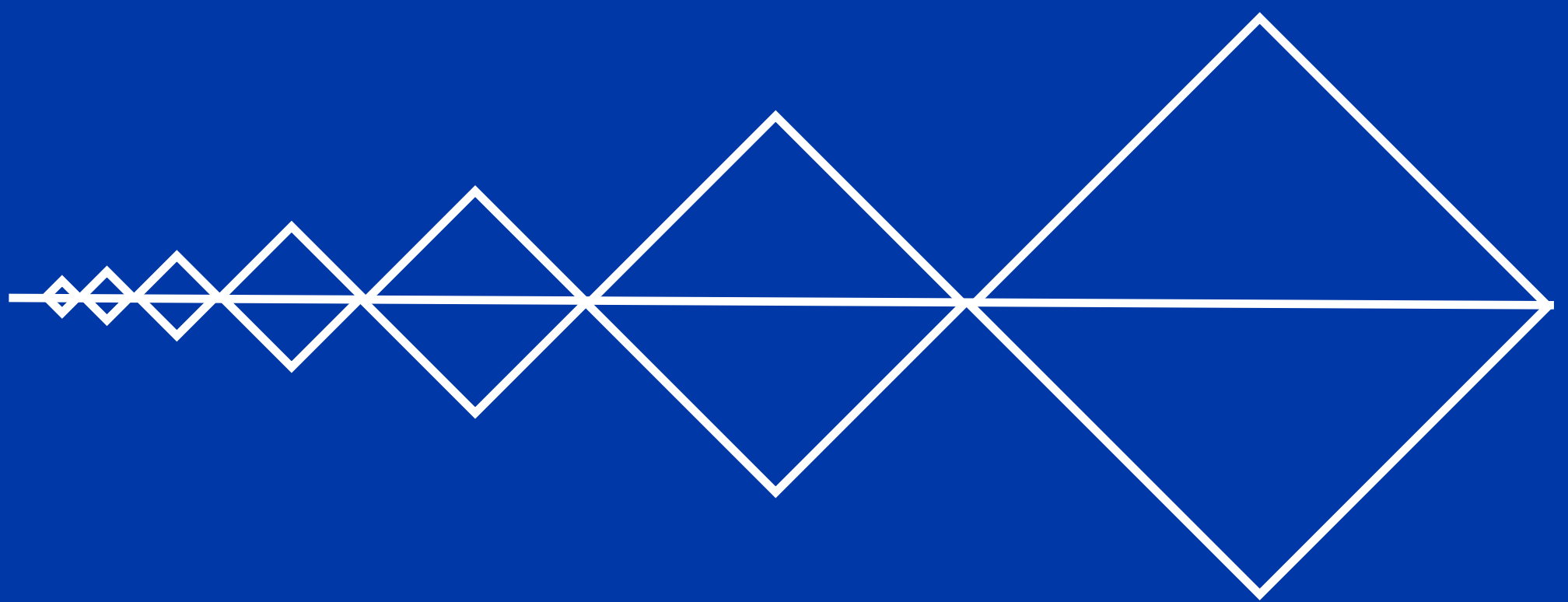
This calls for digital product designers to extend their reach beyond user experience design to explore the underlying services for which the digital product will act as a frontstage.



A CASE

In an ecommerce digital product, a financial transaction is one of the core transactions that are present. For this to happen, there are service hops that are done to give an integrated service of buying for the user. In the current scenario, these service hops are inevitable since the banks that facilitate the financial transactions are interfaced either directly or through an intermediary service. These interactions when they come into play are being notified to the user through messages and popups. Designers could strive to design an even more seamless transaction and by effecting changes through collaboration between the ecommerce service provider, the banking service system and the intermediary system if needed.



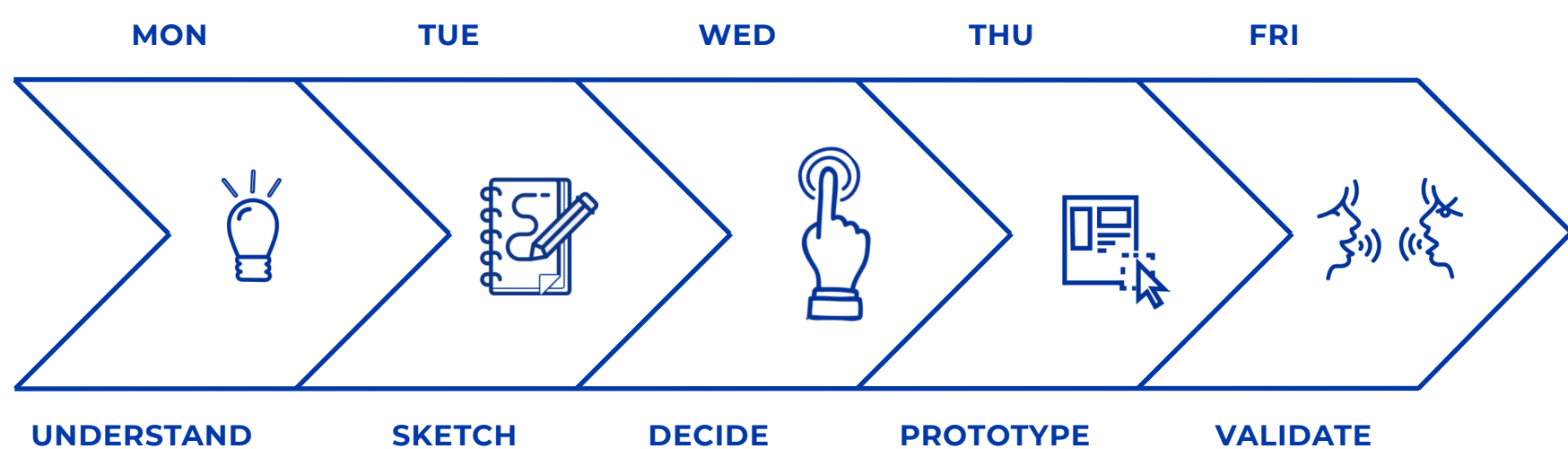


A CALL FOR DESIGN SPRINTS

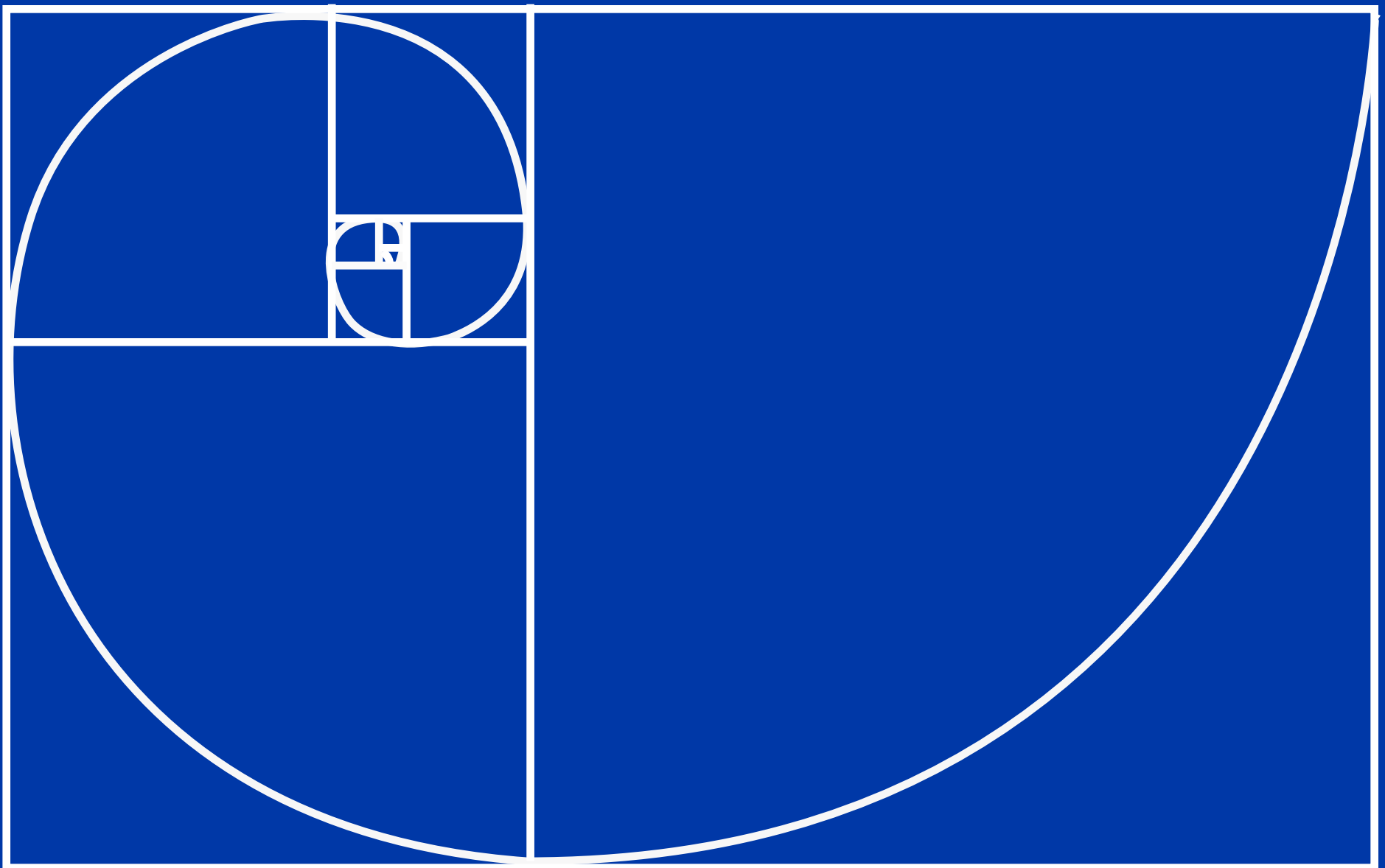
As with the digital products that have evolved to keep up with the changes, design processes have also shown streaks of changes to accommodate this need for constant and rapid understanding, creation, and validation of digital product innovation.

DESIGN SPRINT IS A PROCESS THAT HELPS TO DIVERGE, IDEATE, AND CONVERGE TO A POSSIBLE GOAL AND VALIDATE ITS FUNCTION IN A MATTER OF A WEEK WITH ALL PARTICIPANTS OF THE SYSTEM OF SERVICE.

The Divergent phase would involve mapping all the subsystems of the service, the inter and intra network interfaces that come into play, and sketching of the front end or the front stage in the case of a digital product should offer valuable insights for the designer about the action points in the entire service system to address. The prototyping and validation phase will enable the designers to have a first-hand experience of these points playing a role in the product's functioning. Valuable insights could be offered by designers through this process, to the service creators as well as owners about the challenges that the points of interactions will create in the finished product if not addressed during development.

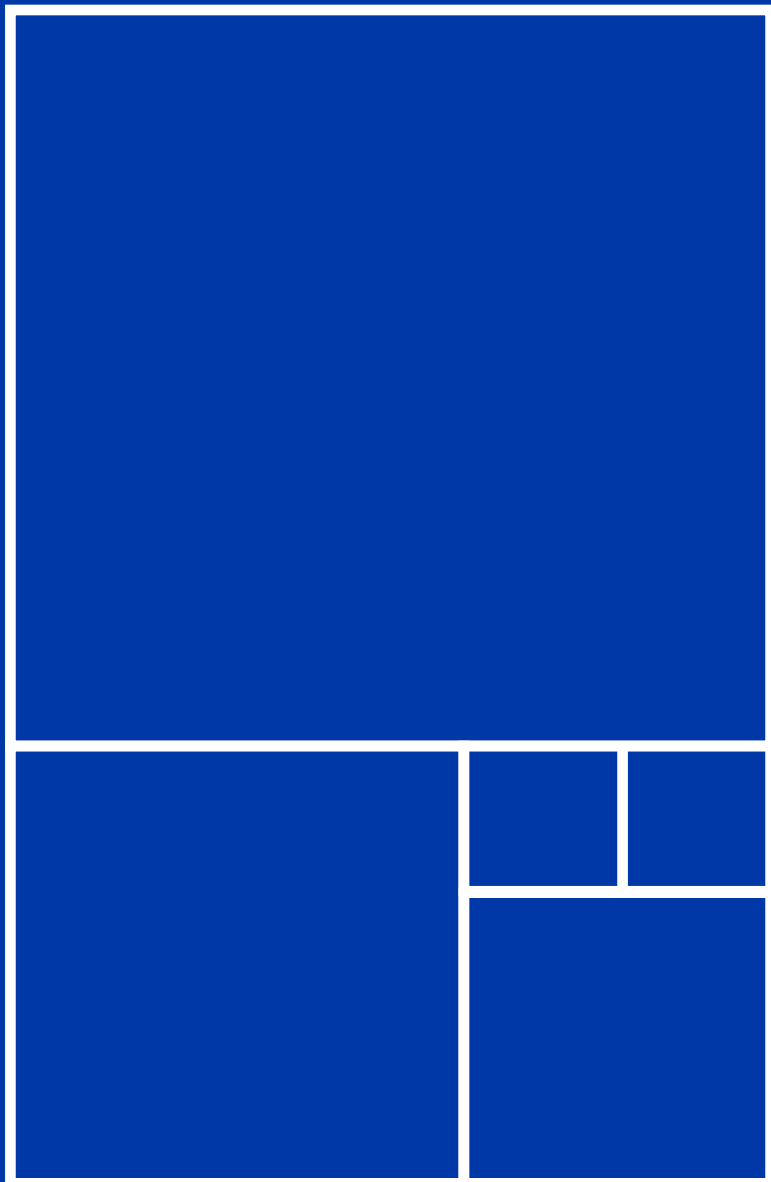


CONCLUSION



Digital products are becoming very ubiquitous and encompassing huge societies under their services, so it is vital to look at user experience beyond the user machine interactions. Of late, the talk about customer experience (CX) is gathering an audience, but the elements of it portray it to be just a hybrid of user experience. In a broad sense, CX talks about pre-interaction and post-interaction scenarios as well as employing or stretching the same tenets of UX. However, designers will have to go beyond these dyadic or closed group ecosystem view to a broader community/ societal view of the system so that they can design sustainable and healthy digital products that improve the quality of life of the community in an equitable way.

Victor Papanek's terms design to be a "conscious effort to impose a meaningful order". Order can be achieved only if the contradictions that make up a system are understood and are balanced. When this effort is aimed at providing a better quality of life that is sustainable, it becomes meaningful. Service design along with existing UX practices which take care of the user, front-stage and back-stage interaction is the right mix to design meaningful and sustainable digital products.



ABOUT FIBONALABS

Fibonalabs is a design led digital & data solutions company transforming Financial Services, Retail, E-commerce, Logistics and Healthcare industries. We have architected & built scalable digital products for brands like IBM, BNY Mellon, Coca-Cola, Deloitte, Bosch, and top startups/unicorns like Loadshare, Fintso, BlackBuck.



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