



**Robosoft Technologies®**  
EMOTION ENGINEERING & DESIGN

# OTT Streaming for Highly Engaging (and Profitable) Emotional Experiences

## 10 Design Recommendations to Move Beyond Transactional OTT



# OTT providers are in a fast-evolving market, where competition is high



**As the medium evolves, bandwidth improves, and fresh content emerges every day, the competition is only getting hotter**

It's been less than two decades since Netflix launched their streaming video service, changing television forever. OTT has taken the world by storm, becoming the most popular form of home entertainment. Today, viewers are familiar with the medium and expect more. OTT providers must respond with content that's personalized, relevant, and diverse in form, genre, and language.



**The big players cannot become complacent.** The big players like Netflix, Amazon, Disney Plus are focusing on delivering better experience and retention, and new content libraries. They're also exploring novel ways of engagement through Watch parties etc.



**New entrants and smaller players have to fight it out.** They are targeting niche audiences with curated, localized or interest-led content or alliances to provide variety and choice to viewers, or be acquired by larger players.



**Traditional media giants must innovate to stay relevant.** We see interesting, even surprising collaborations between non-OTT and traditional media and entertainment companies. [Microsoft and Sony partnered](#) in 2019 to offer next-gen gaming consoles, and the [Google Stadia and YouTube](#) integration that kicked off in during late 2021 lets users live stream directly on YouTube.



## **The OTT medium is ever changing: engagement, retention and convergence at play.**

To be a serious contender in this market, OTT providers need to shape new, engaging experiences by using design and technology better.

# Viewers want more from their OTT experience



## OTT providers must win the war for viewers by offering varied, sustained experiences and building loyalty

Now comfortable with being in control over what they watch, viewers' palates have expanded. They want new forms of content, regional and global language shows, more interactivity, and live shows. They want OTT to become their only source of news and entertainment, whether its sports, gaming, fantasy sports, comedy, or reality.

By reimagining the way consumers interact and are entertained, technology opens up an ocean of opportunities for OTT providers to engage with them.



**Seamless cross-platform experiences** – Watching shows on the go, viewers expect a uniform and seamless experience across devices



**Flexible and easy content purchases** – With so much choice, viewers want to easily access content according to their changing preferences, whether by video-on-demand, freemium or pay-per-view



**Live streaming** – Viewers want the excitement of attending events which were typically in person, like sports, music concerts, pageants or talk shows



**Interactivity** - Giving viewers a way to participate or contribute to the content, or giving them a choice of how the narrative flows offers a new immersive experience



**Voice search** – OTT viewers want a better way to navigate, and voice search can offer a deeper interaction



**Gamification** – OTT providers can change passive viewing through gamification engines; for example, the thrill of watching a live event is elevated with contextualized/personalized consumer engagement such as a pop trivia quiz or poll

# OTT providers who plan for scale will emerge the strongest



**To take advantage of opportunities, OTT providers must plan for scale with the right brand and positioning, the right monetization approach, and the right development strategy**



**Brand and personalization:** In the current world with unending reams of content and varied preferences of audiences, the brand positioning of the OTT channel must be well thought out. The market strategy for each kind of OTT player will need innovative technology uses and revenue models, as well as hyper-personalization to keep viewers engaged. OTT providers can achieve this through a human-centric, design thinking approach that will enhance CX/UX. Machine Learning and Artificial Intelligence enable algorithms, data and predictive analytics to provide crucial consumer insights – behavior, viewing patterns, genre preferences – allowing personalization down to the individual. Netflix, Amazon Prime, Hulu are therefore able to offer unique experiences through product or content recommendations that are most relevant to that individual. The right amount of ‘Push’ without bombarding is key – otherwise, the user might get annoyed and delete the app.



**The right development strategy:** In building a platform, OTT providers can choose to offer ready-to-use streaming or bespoke solutions – both have advantages and need to be evaluated based on how they want to position themselves. Off-the-shelf solutions are more affordable upfront, quicker to deploy, and best-suited for OTT providers who want to offer video as a nice-to-have service with just the basic features. Custom-developed solutions, even though they take longer to deploy and have a higher initial investment, offer full control and technology ownership to the OTT platform provider.



**Agility of scalable architecture:** Consumer expectations are volatile; companies need to be agile and not rely on a monolithic framework to build their streaming services. Some companies are strengthening the spine of their platform, making it modular, scalable, and easy to integrate with a micro services approach. They might choose to work with a technology partner such as [Robosoft](#) to bring together services like ad servers, recommendation engines, billing services, payment gateways etc., to offer a holistic solution.



**The right monetization strategy:** The current monetization models of OTT are nascent, and as young as the medium and technology itself. With new applications such as gaming, television commerce, learning, event streaming, and personal video conferencing, successful experiments in [revenue models](#) will spell the next level in maturity for the OTT industry.

## The OTT provider will need to design for growth.

They need a roadmap powered by technology and a human-centric approach that will not only allow them to survive their immediate challenges but also thrive in the long run.

# Designing for growth



## Best practices from a design perspective to craft OTT platforms

Now While OTT providers puzzle about how to acquire a larger consumer base with brand positioning, content, and revenue models, they also need to make the right technology choices and have deeply thoughtful usability.

To be ready to expand with 5G and a scalable architecture, they will need agility to make their platform modular and micro-services-based and also plan CMS modules, manage users, subscription monetization, DRM, devices, DevOps and more.

### UX is the key to retention and user growth – designing new and engaging experiences will create viewer loyalty



Start with the **principles of design thinking** to create user-centric experiences – which begin from empathizing with and understanding the users.



**User and competition research** are critical aspects to understand the business and customer requirements; the findings direct a high, medium, or low fidelity prototype of the proposed solution.



**Prototyping is the stage** where a representative model is built to validate its viability and experience. It can help in testing features and getting quick feedback from users to fine tune, keeping the final outcome in mind.

A partner with expert design thinking approach, technical know-how and industry experience can help develop and deploy the OTT app much faster and save costs.



# 10

**Recommendations for  
Streaming UX to Building  
Highly Engaging (and  
Profitable)  
Emotional Experiences**



# 1 Easy onboarding



At the very first instance, ensuring onboarding and navigation are quick and easy create a lasting impression on the user. OTT providers should only ask for essential personal details, permissions and consent, and in return, provide features and UI elements that are quintessential. Context-specific signups are important as the smallest details matter in design and impact UX. For example, viewers signing in to watch a live stream of a sports match are in a rush to start watching, so multiple personalization questions will be a negative experience. Tech-savvy users might not want to be hand-held through the onboarding process and would be happy if given the option to skip rudimentary steps.



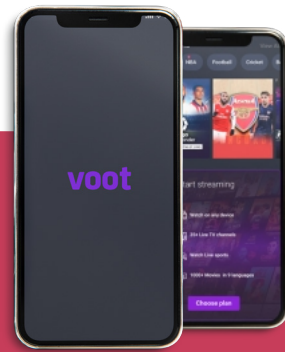
In fact, music video streaming app **Vevo** found that adding a skip option to their onboarding flow increased logins by nearly 10%.



# 2 Simplified search and seamless User Experience (UX) of content

With the abundance of content on OTT platforms, the challenge for OTT players is to ensure an easy, memorable experience. The faster and more easily users can get to the content they like, the more likely they are to stay on. Best practices in design that speed up and ease the browsing, discovery and viewing experience include:

- ✓ Improved voice search can help simplify the interaction between the viewer and the device
- ✓ Clear segregation of content types, such as different treatment based on content category such as live content and VoD content (**VOD – Shows, Movies, or clips**)
- ✓ Defining clear navigation and sections for premium, short-form content
- ✓ Clear categorization – for **example, movies, TV shows, genres, audience segments**)



## voot

Viacom18's video-on-demand app, Voot was built by Robosoft to enable uninterrupted browsing with a floating video player.

Its vast video content library of 70,000+ hours comes with content viewing customization -users can choose to view shows as per preferred channel, genre, or language.

### Highlights

- Uninterrupted, continuous browsing users can browse what to watch next with the floating video player
- Content customization - Viewers can choose shows as per their preferred channel, genre or language

### Technologies used

- Android: Java, Kotlin; IDE Android Studio
- iOS: Swift; IDE Xcode
- APIS: Kaltura and third-party wrapper services



Home



Explore



Shorts



Mindblown



Premium

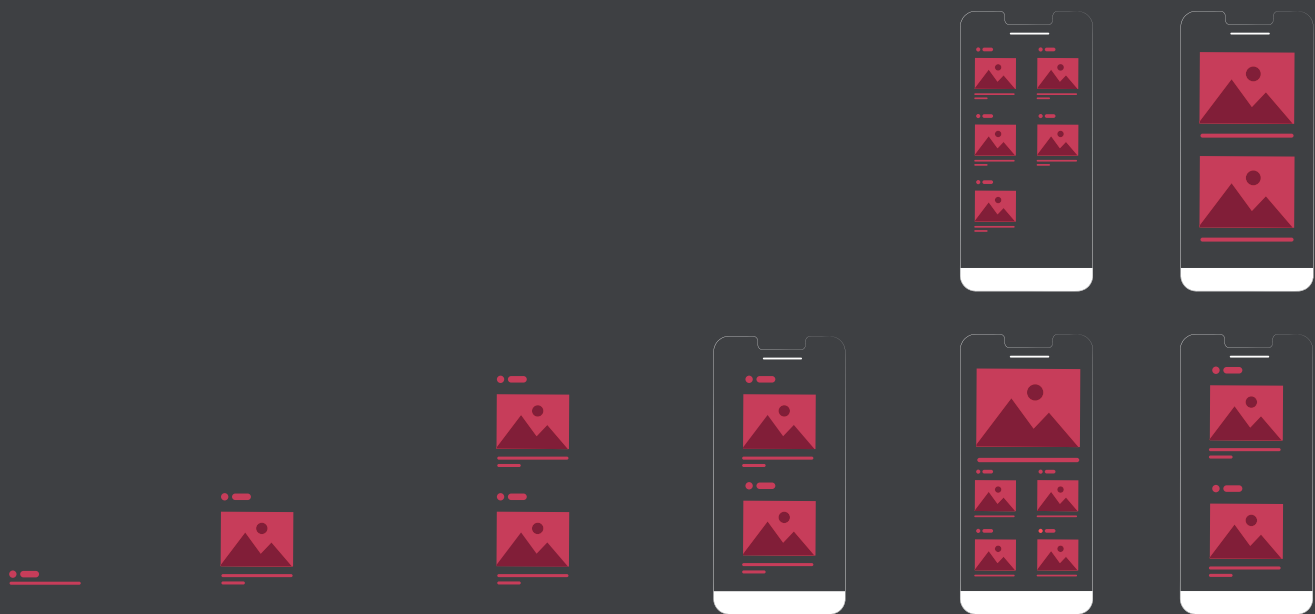


# 3 Building a thoughtful Design System

While colors and typography are important, a well-defined design system helps create user-centric digital products that address specific needs more comprehensively. For instance, using the methodology of Atomic Design gives a clear understanding of how interfaces are built and accelerates the development of modular designs. Here, the entire interface can be broken down into smaller components or building blocks that can be easily referenced throughout the stages of design.

## Atomic Design: building design systems

Here is a quick overview of the components of Atomic Design easily referenced throughout the stages of design.



### Atoms

Represent the basic building blocks of a design system. An example of this is a button or a text style

### Molecules

A group of atoms work together as a unit. Molecules are tangible UI elements

### Organisms

Atoms and molecules work together to form a component

### Templates

Placing components into a layout lead to a content structure

### Pages

Pages are the highest level of fidelity

# 4

## Personalized and localized content recommendations



Today's users expect a personalized experience from all their digital interactions, which can be achieved by building a robust AI-powered recommendation engine. [More than 80 percent of the TV shows](#) people watch on Netflix are discovered through the platform's recommendation system. Machine learning and algorithms help go beyond viewers' preconceived notions and find shows that might not have been their first choice, but they would like. Netflix feeds into its algorithms data that is explicit (say, giving a thumbs-up for a show) as well as implicit data, which is behavioral (say, a viewer binged-watched on a show in two consecutive nights). The majority of useful data is implicit.

Global Cycling Network GCN, the world's largest online cycling channel caters to 2 million plus subscribers. Robosoft created an interactive VoD platform that leveraged the principles of design thinking to deliver relevant content to its niche audience. Cyclists and cycling enthusiasts can watch live events, social events and premium content through Chromecast on all platforms.



### Highlights

- Various content formats including live, social and premium
- The VoD platform is also inclusive of OTT features
- Viewers can use chromecast on all platforms

### Technologies used

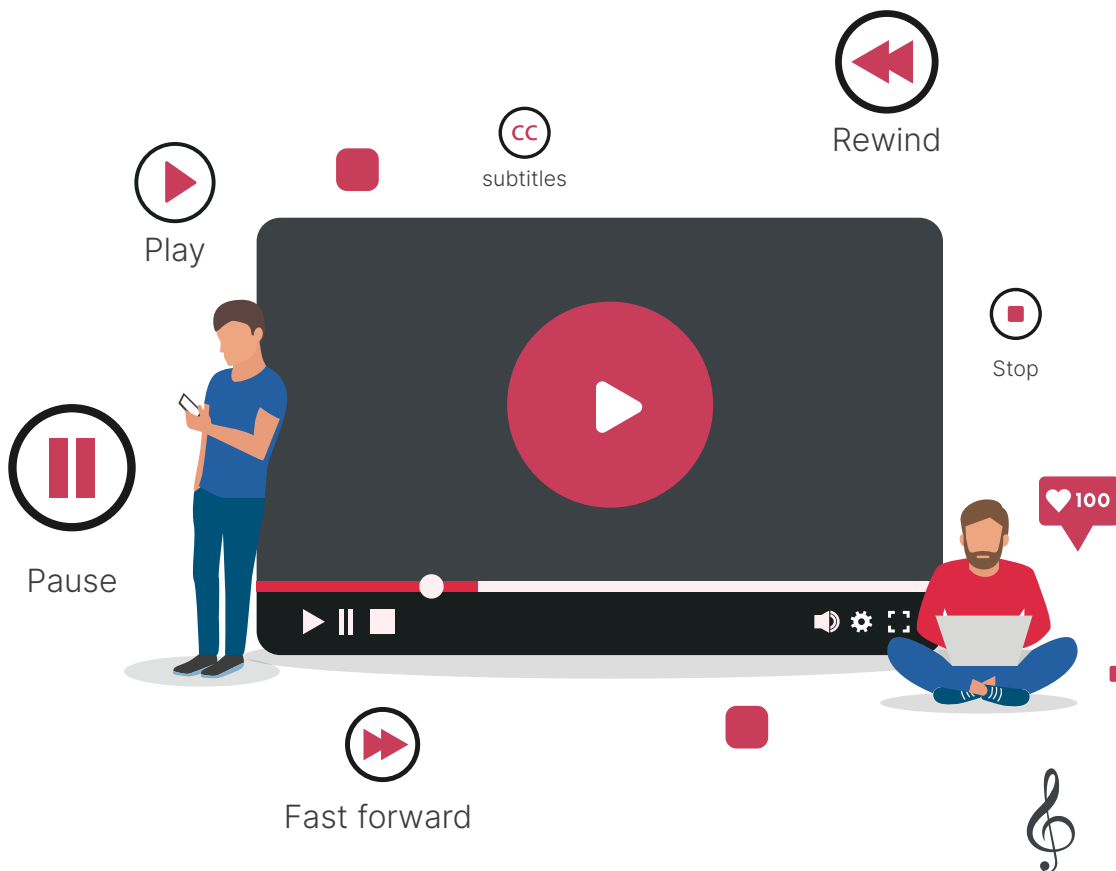
- Android platform - Kotlin
- iOS platform - Swift
- Web platform - ReactJS
- Testing-Appium based automation framework
- Video delivery via integrated Luna player, with metadata ingestion, content ingestion, live workflow and scheduling workflow via VDP and content management via Sonic CMS

# 5 A simplified viewing experience using intuitive UI



OTT platforms must simplify the process of discovering content as well as the watching experience. To simplify every aspect of the process, intuitive UI uses these key features:

- ✓ Flexibility to switch on-and-off the subtitles option
- ✓ Information about the quality of video and data consumption
- ✓ Option to resume from where the user left off
- ✓ Quick and easy buttons for start, stop, rewind, fast forward





# 6 Building a cross-platform, multi-device, seamless experience

Today viewers consume content on multiple devices making seamless delivery of content on multiple devices a mandate for OTT players.

On-the-go viewing experience can be enhanced by giving users the power of watching content at their convenience without the limitation of internet speed. Giving users the option to download the video for watching later allows them to engage with the app and the content they like whenever they want.

Robosoft built the Discovery+ platform with the primary objective of designing and delivering a unified, effortless, and consistent experience across devices, regardless of where the user starts, continues, and ends the journey.

Discovery+ maps every micro touchpoint via a robust, intelligent, and empathetic ecosystem.

The casting feature helps easily connect web, tablet, and mobile to a TV while allowing users to recreate the joys of a big-screen experience with family and friends and derive greater value from the platform.



## Highlights

- Unified cross-platform multiexperience created by mapping every touchpoint to build empathetic design
- More than 4000 hours of infotainment and lifestyle content across 40 genres classified into four-learning and educational content, kid-friendly, short-form and content in various languages

## Technologies used

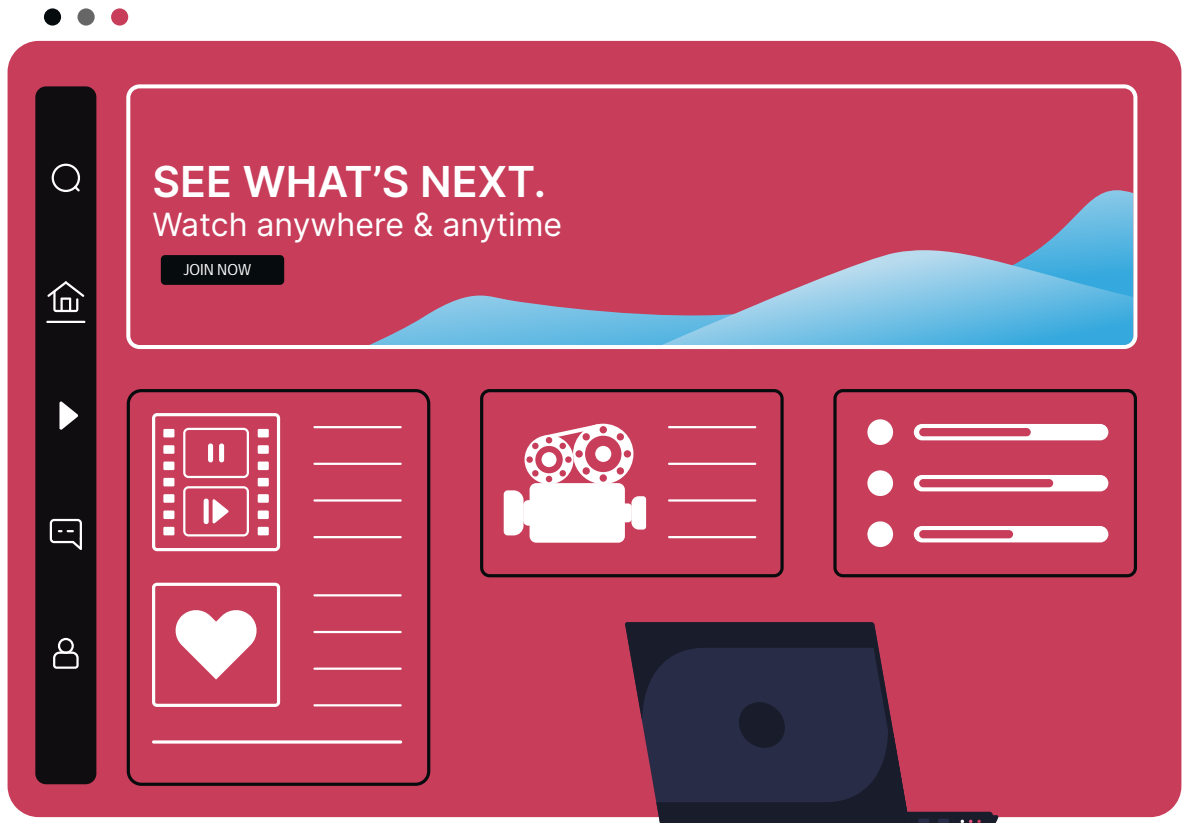
- Mobile: Kotlin for Android and Swiftv5.1 for iOS
- Web: ReactJS, Progressive Web app
- Discovery's custom OTT frameworks
- JSON: API based Sonic APIS



# 7

## Enable widespread discovery and access to diverse content

OTT providers are trying to improve differentiation in a crowded market. One way is by infusing global content with local flavors or offering local content with a global appeal and design plays a crucial role in building the features that allow access and viewing of diverse content. For example, multiple language or subtitles will expand content options for users in the US who want to watch South Korean shows. Similarly, an Indian user who loves the crime genre will get content recommendations for series on crime from multiple geographies and languages. Others like Revry, the first global LGBTQ+ streaming TV network, aim to cater to underserved segments.



# 8 Personalized upsell and retention packages



Today's subscribers want services that are personalized at every stage of the experience from sign-up to discovery, viewing, and renewals. Thus, personalization should permeate beyond content and include the entire user journey on the app. Today a user keeps toggling between multiple devices while accessing the platform. Developers will need to consider data from these sources to notify the user about the upsell and the renewal offers while also giving them the power to choose. Allowing users to choose multiple devices, streaming quality options, renewal options tailored to their choices etc. can help elevate user experience and ensure retention.





# 9

## Design for new, live and interactive applications of OTT



OTT viewers are ready for new ways to interact, such as live streaming, shopping, and interactive content and social media integrations. The pandemic saw live events move online, including classes, employee town halls, customer seminars, conferences, fitness sessions, music concerts, and major sports events like the Olympics. When it comes to interactive live streaming, the user's expectations are very different from what they want out of leisurely drama or family sitcom shows. [Designing interactive elements for a live streaming](#) event needs insight into what users really want – which is context-specific.

Robosoft built a holistic and well-integrated app for Magnolia that showcased content from home renovation gurus Chip and Joanna Gaines that was launched on Discovery+streaming service.



**MAGNOLIA  
NETWORK**

### Highlights

- Watch: an OTT section with shows and episodes
- Shop: e-commerce
- Visit: focussed on Magnolia's physical stores
- Create: users could share learning courses, recipes, articles

### Technologies used

- Mobile platforms: iOS (iPhone and iPad), Android mobile and tablet, and Fire Tab,
- iOS and tvOS: XCode IDE with iOS SDK, Cocoapods, git version control
- Android, Fire TV and Fire Tablet: Android studio, Kotlin
- Web: CScode (javascript and typescript)
- Roku: Roku Device; VS Code; Atom; Eclipse (any normal editor)
- OBS Studio along with USB capture card (demo purpose)
- App analytics: Adobe, Apptentive, Mux, Firebase, Kochava, New Relic



# 10 Design for growth

Design will play a pivotal role in unlocking benefits of seamless access, simpler navigation and enhanced discoverability of personalized content as OTT providers aspire to elevate the experience of users, gain their loyalty and achieve sustainable growth. For example, the super app idea is gaining traction as the OTT industry matures with players like Apple TV leading the way and designing for scale will help improve user engagement across the app as well as its cost effectiveness.

Leveraging technological developments and innovation can also help OTT providers reimagine user engagement strategies. For example, Web 3.0 could be used for tokenization to reward user loyalty and interactions and will deliver true value if design features are thoughtfully planned and incorporated at the outset.







# **Robosoft**

**a proven track record in crafting  
OTT platforms**



# Our Capabilities

















			
Defining product vision & roadmap	Seamless, human centred design for multi-device & multi-platform experiences	End-to-end engineering & robust microservices based platform	Analytics & monetization strategies

## Trusted partners at every stage of OTT product development

	<b>Build</b> Build an audio or video streaming platform from scratch		<b>Re-imagine</b> Re-design and re-craft an existing OTT service		<b>Maximize value</b> Craft a super-app across genres and offerings to strengthen brand experience
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## Experience and expertise across the entire spectrum in OTT

Front end user applications					
Platforms				Fire Edition Smart Tv, Fire TV Stick, Fire TV Cube, Fire TV 	
UI Tech Stack	 	iOS 	android 	fire OS android  BrighScript SceneGraph	
Platform Specific Video Players	Video.js	AVPlayer	ExoPlayer	Amazon customized ExoPlayer Video Node	
Hosting/Publishing Platform	 Makes API Call [GraphQL]	 Makes API Call [GraphQL]	 Makes API Call [GraphQL]	 Makes API Call [GraphQL]	 Makes API Call [GraphQL]
Global Identity Services      Monetizer      CMS      Recommendation Engine      Analytics					

# About Robosoft



Robosoft is a full-service digital transformation company with a vision to **Simplify Lives**. A subsidiary of TechnoPro Holdings, Japan, we offer end-to-end solutions in **Product Advisory, Design, Engineering** and **Analytics**. We craft intuitive digital experiences that drive brand preference for enterprises. Our industry experience is diverse including Banking & Financial Services, E-commerce & Retail, Media & Entertainment, Healthcare & Pharma. We have played an active role in the ever-changing world of digital products — from app development to emerging technologies.

We started operations in 1996 with Apple Inc., as our first customer. **With 25 years of experience in software development** we have played an active role in the ever changing world of digital products - from app development to emerging technologies such as voice, Artificial Intelligence and Machine Learning.

With offices in **New York, San Francisco, Los Angeles, Tokyo, Mumbai, Bangalore, Pune, Udupi** we partner with several prestigious brands across the globe including **Discovery, ESPN, HP, McDonald's India, Paytm, NDTV, Viacom18, Disney, BSI** and more. We have crafted over 2000 digital experiences and our apps have garnered over a billion downloads. Our clients are spread across diverse domains - Banking & Financial Services, E-commerce & Retail, Media & Entertainment, Healthcare & Pharma to name a few.

Voted 'Mobile App Development Company of the Year' at the Amazon Mobility Awards, our other prestigious awards include Top Wearable App Developers, Best UX Design Agency 2020, 'Products, Upgrades, and Innovation of the Year' at CEO World Awards, Best of App Store, Apple Design Award, BAFTA, Stevie Gold Winner at American Business Awards to name a few.



### **Proven Track Record In Software Development**

Two decades of software experience with several in-market success stories. Over 1800 successful projects, a team of 800+ digital advisors, design thinkers & engineers, mature

### **Deep & Wide Experience In Crafting OTT Solutions**

Expertise in creating multiexperiences for global brands like Discovery, Nat Geo, ESPN, Viacom, NDTV, Warner Bros. and Network18, among many

## **Why Robosoft**

### **Product Strategy To Analytics: End To End Service**

We offer full-lifecycle digital product development. Our expertise in CI/CD, DevOps, Automated Testing, Customer Experience and design services adds value to the customer acquisition and retention goals of enterprises.

### **Deep & Wide Experience In Crafting OTT Solutions**

Hybrid model of nearshore & offshore Offices in San Francisco, New York, Tokyo, and strong offshore centers in India - Mumbai, Bangalore, Udipi.



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