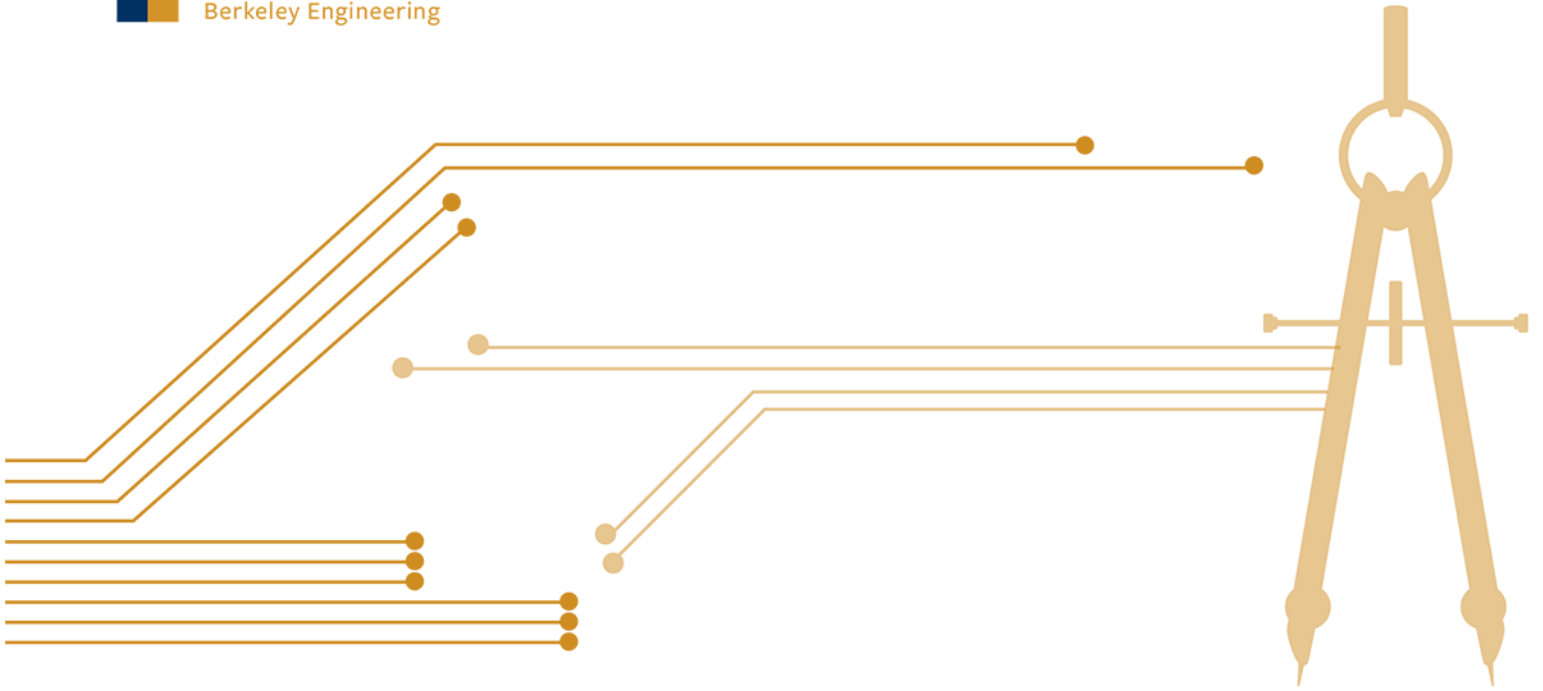




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Executive Summary

InteriorZoom is an application which seeks to make small interior design projects fun and painless by combining the latest capabilities of smart devices, AI-based recommendations and an extensive database of ready to order furniture. While large projects can absorb the costs of hiring an interior designer, small projects such as furnishing a room or a small flat usually can not, but the owners would really appreciate the design guidance. It is also very hard to visualize a given design and experiment with different styles and color schemes in a way which gives a true rendering of the space in question. There are many problems, from fragmentation (each furniture vendor has its own app with access to only its inventory, no tool does both floor plan measurement as well as furnishing) to usability to an overwhelming amount of choice.

InteriorZoom aims to change this status quo and be the LegalZoom of interior design, taking the best practices of aesthetics and design with the latest advances in technology to deliver ready to order furnishing recommendations tailored to the needs of a specific user. The market for online furniture sales is estimated to be \$65 Billion in 2018, growing around 10% each year. Capturing some of this presents a very lucrative opportunity from a financial standpoint.

There are three secular trends supporting the viability of the InteriorZoom product:

1. **Mainstream support for AR/VR:** the new generations of smartphones support the iOS ARKit and Android ARcore standards which enable accurate measurements of the physical spaces around the device and present uniform APIs to display augmented reality scenes.
2. **3D furniture assets:** vendors have the 3D models of their inventory available for use in their own apps as well as digital marketing campaigns
3. **Ecommerce penetration:** buying anything online (even big ticket items) has become routine and commonplace. Lead and commission tracking systems are readily available for sites which generate sales.

We are seeking a seed funding round of \$2 Million for the next 18 months to cover the cost of the development of the InteriorZoom service, apps and supporting infrastructure as well as to strike the first partnerships with furniture vendors.

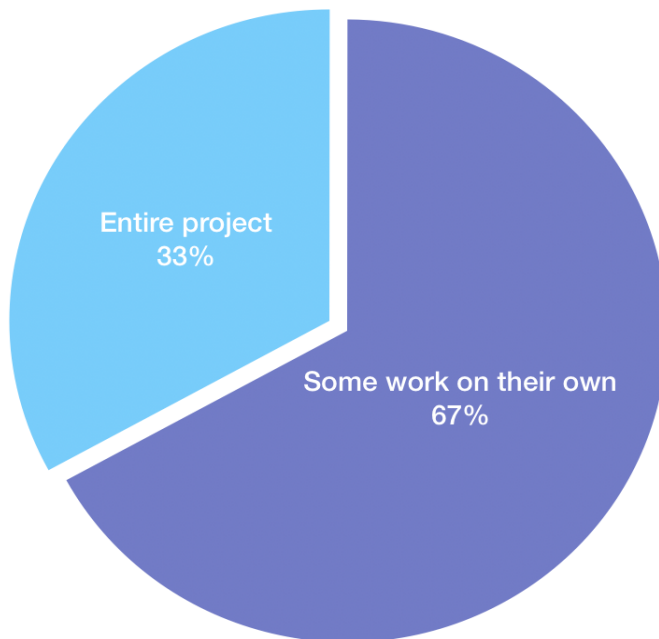
The Need

In the US (2017), 75 Million people had planned to re-model. Every age group was planning projects to stay in their homes longer. 33% planned to do the Entire project themselves while 67% planned to do some work on their own.

The market for online furniture sales is estimated to be \$65 Billion in 2018, growing around 10% each year.

With so many people remodeling and buying furniture online, if IZ can work with a small percentage (5-10% or 3.5 – 7.5 Million) of these homeowners, we can expect to make a lot of money (5% of all furniture they order) when each of these homeowners order furniture thru our IZ application.

59% of homeowners (75.3 million) planned to remodel in 2017



Online Furniture Sales Are Booming

Estimated e-commerce sales of furniture, homewares and home decor in 2018*



@StatistaCharts

* incl. furniture, kitchen and bathroom accessories, kitchens, glass ceramics & porcelain, antiques, decoration, lamps, lights and bulbs

Source: Statista Digital Market Outlook

statista

Approach

InteriorZoom provides a seamless end-to-end experience for consumers to design, visualize, purchase and schedule delivery for interior renovation projects. The end-user downloads the InteriorZoom application onto a smartphone and begins by using the device to provide a 3D scan of the room/space to be renovated. Additional data about the use case and user profile is collected through a series of simple questions from the app interface. This data is encoded and transmitted to the recommendation algorithm on the InteriorZoom servers to generate a full interior

design solution (furnishing selection and placement). The user is able to visualize the and manipulate the generated room design on a desktop web portal as well as visually see the pieces in the space directly using augmented reality on the smartphone app.

The core enablers of this experience is a combination of sensing technologies commonly found on mobile devices/operating systems and InteriorZoom's cloud-based Design Recommendation Engine And Model (DREAM) engine (see Figure 1).

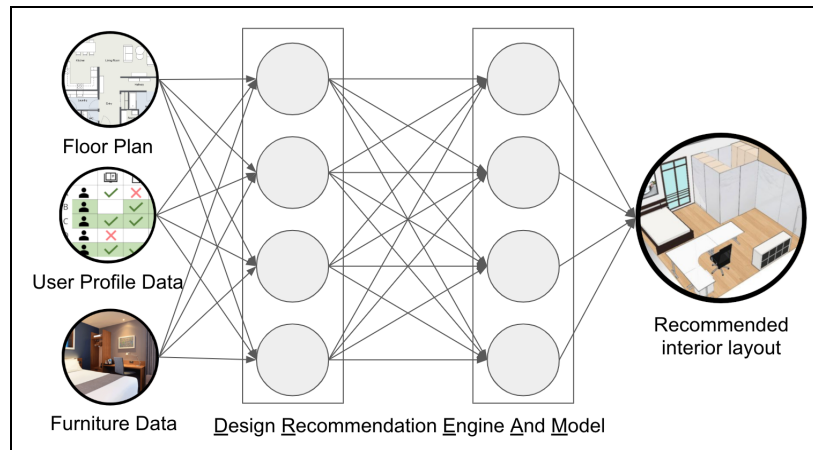


Figure 1: InteriorZoom DREAM engine

Leveraging existing Augmented Reality (AR) frameworks deployed on iOS and Android (ARKit and ARCore), InteriorZoom allows the customer to use their smart device to scan and measure their desired room using an intuitive visual interface (see Figure 2). The spatial data of the area, placement of windows, doors, entryways and openings can be easily captured directly on the smartphone in the InteriorZoom app.

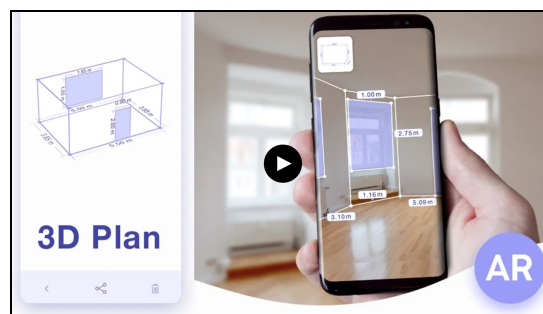


Figure 2: Intuitive room measuring and mapping interface based on AR

The scanned room data is used to provide a 3D model of the room to the DREAM engine. In combination the spatial data, the user is asked a series of simple “A or B”

questions to help identify room use and style preferences that will be used to provide the necessary input data to the InteriorZoom DREAM engine. Additionally, motion tracking cues generated by the smartphone sensor suite can be utilized to generate a higher fidelity model of the motion patterns and functions for the intended room/space (see Figure 3).

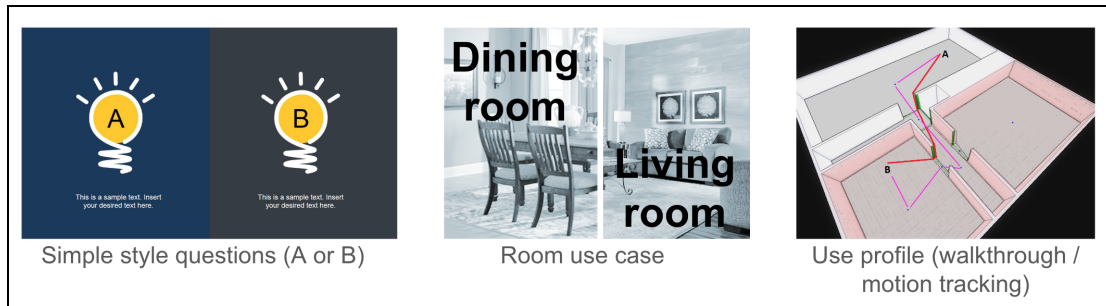


Figure 3: Examples of basic questions and use profile capture through motion tracking

The DREAM engine uses a catalog of available furnishings in conjunction with the above user data to generate a Virtual Furnishing Map (VFM), a 3D representation (position and orientation) of the selected pieces in the scanned space. This representation is used to construct the scene of the furnishings in the scanned space, to be directly visualized in the smartphone display (see Figure 4). Furthermore, the virtual representation is also available for viewing, manipulation and modification of the design on the InteriorZoom web portal.



Figure 4: Visualizing the Virtual Furnishing Map results in AR

Virtual assets and their respective metadata used in the VFM generation are obtained from partners' catalogs and design inventory. Utilizing existing CAD data (supporting standardized 3D formats such as .stl, .iges and .step) and vendor metadata, the InteriorZoom algorithm is able to correctly size, catalog and group items for its recommendation. Additionally, 3D models of recommended items are transferred to the smartphone device to be rendered in AR.

In order to generate VFMs with a high correlation to the tastes and preferences of the users, it is critical for the DREAM engine to generate highly reliable recommendations. It is anticipated that initial deployment of the InteriorZoom platform will rely heavily on metadata provided by the furnishing suppliers and content-based methods for the recommender system. Modifications and changes to the generated VFM by the end-user is used as training data, fed back into the recommender to improve recommendation accuracy. As the user base increases, the recommender system biases the solution towards collaborative filtering methods generated based on patterns and habits of prior users, shown in Figure 5.

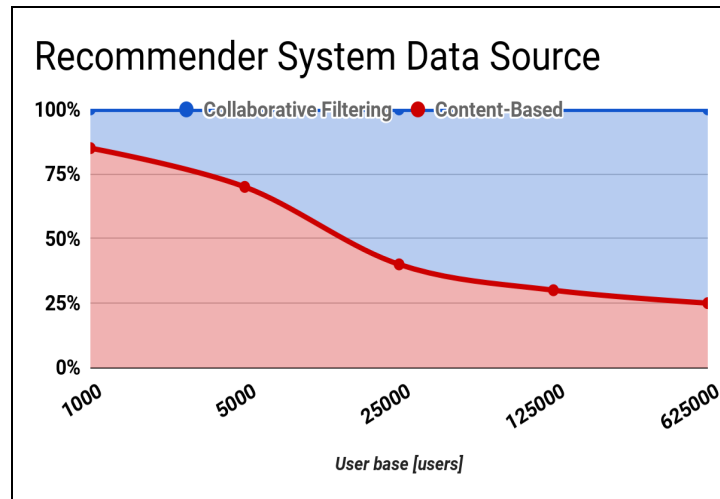
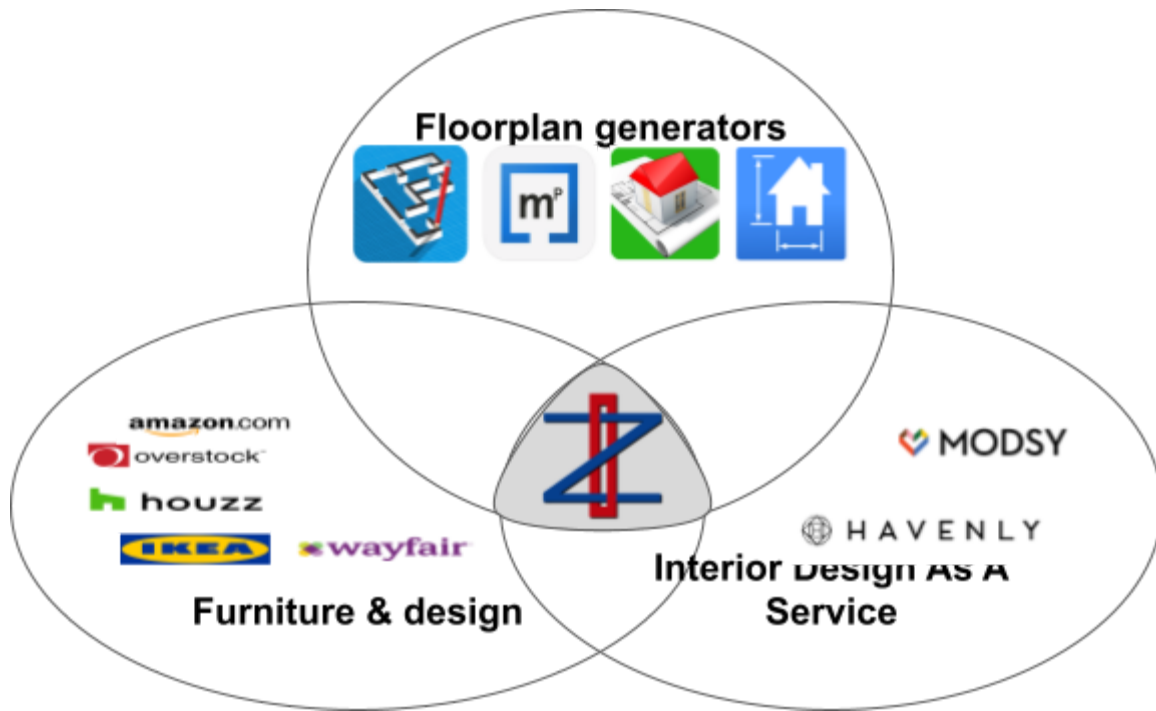


Figure 5: Increasing reliance on collaborative filtering to the DREAM engine as user base of the platform increases

Competitive Analysis

In today's market, there are many vendors like Houzz, Ikea, Wayfair, Overstock and Amazon who provide the furniture catalog and design options from their inventory. Also on the other side, there are few companies like Modsy, Heavenly who help customers connecting to interior designers for availing their service at a premium cost. Though there are many mobile apps that are already available in AppStore and PlayStore to help users to measure their home interior dimensions using their mobile devices, InteriorZoom is uniquely positioned to offer the complete service to the end users starting with measuring their home dimensions, to choose the furniture designs to their likings and ability to view them virtually in their home before completing the purchases. So InteriorZoom stands out in the competition as the one-stop shop to users for designing furnitures for their homes in a much more personal and compelling way.



Benefits

Interior Design is a complex process, starting from space measurements, dimensions, fitting, conceptualization, visualization, item selection to the installation and furnishing. IZ solves all of these steps packaged in a single seamless solution, providing hassle free experience to homeowner and on the way providing opportunities to home designers, furniture sellers and builders. IZ creates a outstanding platform is win-win-win solution for consumer and sellers.

Home Owner:

- ★ Help with small home space design projects
- ★ Easy to design, select the features and order from one single DREAM platform

Service Provider:

- ★ Increase Sales and unique order pipeline with products on ready to buy platform
- ★ Increase customer satisfaction and worryfree inventory
- ★ Easy forecasting with in-depth analysis of what customer is actively looking for and product feedback

Business Model

There are two distinct market segment that IZ tries to address. First being, the consumer (Home Owner) and second being, Service Providers (Interior designers, freelancers, Furniture stores, designers and installation providers etc.). Both of these segments benefit immensely as IZ connects them perfectly and with a good balance of cost/benefit model.

Below section summarizes the business model for each of these segments:

Home Owner:

- ★ Free DIY and AR based product recommendations
- ★ Tiered paid consultations and design ideas from highly respected designers, recommended AI based design matches and ideas based on optimal space utilization

Service Provider:

- ★ 5 to 10% of sales commission
- ★ Product placement ads with automatic matches
- ★ Showcase fully ready themed designs to buy suite of things for entire room/space

Go-to-Market Strategy

InteriorZoom targets to enter the market in 2021 with implementation of the three main marketing channels. The goal is to establish our brand name and build steadily increasing revenue within one year.

Promotion through Online Marketing Channels:

Online Marketing will focus on two channels – **online search engines** and **social medias**. Advertising through major search engines on Google Ad, Yahoo, AOL, Bing will enable us to reach the large base of potential customers in the target market segment. Our 2nd online marketing channel will be social medias on Facebook and Twitter. Promoting video will be casted to these social medias as the primary carrier. The self-propagating nature of the social medias will broadcast our brand name across their network.

Partner with Large Furniture Retailers:

Partnership with large furniture retailers like Ikea, Wayfair, etc., and build a win-win and show-case business model. It will give the privilege for them to bring their products into our virtual showroom and in the meantime allow us to access their existing customer base. This will establish the root for our avenue and enable steady growth. Then we will use this successful business model to approach other furniture retailers and manufactures to grow our business and revenues. For the first year, we will partner ship with two retailers and give them exclusive access to InterZoom featured application.

Build Organic Traffic through Case Studies:

We will build multiple case studies covering majorities (living room, studio, bedroom, bathroom, etc.) of the interior design segment we are targeting, which will be published in our own website as well as other medias like Youtube. These cases will give the potential customers a real feeling of our service and applications before they start their own projects.



Financial Model

We seek a seed funding of \$2M. With this money, over the next 18 months, we will 1) hire a team of 4 Software developers, 1 Data science engineer and 1 Business development / Sales, 2) team will work with Home Designers to create our product on mobile and desktop applications which will incorporate furniture data from our suppliers and then 3) do Online marketing.

Right now we are assuming our clients will average \$500 per sale and we will make 5% of that sale or \$25. By 2022 we forecast to have revenue of \$10 Million which corresponds to ~400,000 clients (or 0.5% of homeowners that are remodeling) ordering furniture thru out IZ application. By 2023, we forecast to have revenue of \$100 Million which corresponds to ~4 Million clients (or 5% of homeowners that are remodeling) ordering furniture thru out IZ application

Based on our Financial model, we plan to show a profit in 3 years in 2022.

\$K	2019	2020	2021	2022	2023
Revenue	\$10	\$100	\$1,000	\$10,000	\$100,000
Cost of Revenue	\$20	\$50	\$300	\$2800	\$25,000
Gross Income	-\$10	\$50	\$700	\$7200	\$75,000
Gross Margin	-50%	50%	70%	72%	75%
Operating Expenses	\$640	\$1,400	\$3,000	\$5,000	\$15,000
Net Income	-\$650	-\$1,350	-\$2,300	\$2,200	\$60,000
Net Margin				22%	60%

Base assumptions:

Average sale: \$500

Average commission: 5%

Advertising and product placement revenue starts in 2021