STÜF:

Concept Document by (James Moore):

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STÜF: Overview of Game Design Document

1 USP

STÜF's USP is the integration of the ROVR hardware. ROVR is a VR treadmill that allows users to control the movement in a game by sliding their feet back and forth. STÜF is a game about moving quickly through a showroom and collecting as many objects as possible, I am designing the gameplay to be very much an arcade game in nature as I feel this fits perfectly with the silly fun that the combination of the ROVR and the mechanics of throwing things around in VR offer.
The ROVR also allows move immersion giving a very unique experience for players.

2 Platform

2.1 Console/PC

The platform that STÜF would work best on, would be PC as it has the best hardware for VR and allows integration with the ROVR hardware. ROVR is a VR treadmill that allows for full immersion into a VR game by utilising sound. The kit I have used for the creation of my project is the cheapest ROVR currently available with better versions at a slightly higher price point.

While I am un aware if the ROVR can be supported on other platforms, such as PSVR, I feel that as the hardware progresses there may be enough reason to port the game to the various platforms later down the line.
Due to the nature of the ROVR, I have been researching application of combining my project and the ROVR's capabilities to create an experience best suited for arcades. While the arcades of the past have been largely phased out and are primarily in holiday towns, I have researching into Arcade Clubs which are places that currently offer many old arcade experiences as well as offering the use of VR. These clubs are on the lookout for VR based games that I feel my project along with the USP of the ROVR tech would be a great fit for.

2.2 Target audience

The target audience of STÜF would be early 20s onwards as the equipment to run STÜF is fairly expensive so the audience would need to have the initial funds available. They will for the most part be PC gamers as the hardware mainly works with PC however if I did release to PSVR it could slightly change the audience to a younger one as the barrier to entry would be less.

3 Narrative/Game world

STÜF's world is made up of a showroom, not unlike those of a well-known Swedish brand, where the player must grab items off the show floor and throw them into an area to gain the most points overall. You could almost compare it with Supermarket Sweep as the player must run around as fast as possible to get the highest score within the time limit.

As I have gone for a more arcade game mentality with the project there isn't much needed in the way of narrative other than the basic challenge for the player. Because of that the player only experiences a short area in which to learn the ROVR mechanics which also serves as a way to give the player their objective of collecting as much as possible. Therefore the narrative is as simple as "You are a customer coming to the STÜF showroom on Black Friday and you must buy as many objects as

possible before other people come into the store, giving you three minutes!” this is simple and all that is really needed due to the arcade nature of the game.

4 Core Loop

Objective: Get the best score within the time limit
Challenge: Collecting as many objects as possible
Reward: Score/leader board

The core loop of STÜF is very simple due to how it has been designed as an arcade experience. Because of this, there are currently no plans to create any sort of reward system for the game other than the classic world and/or friend leader boards. As development continues, it is possible that an element could be added to unlock later level by reaching scores past a certain number.

5 Screen Mockup

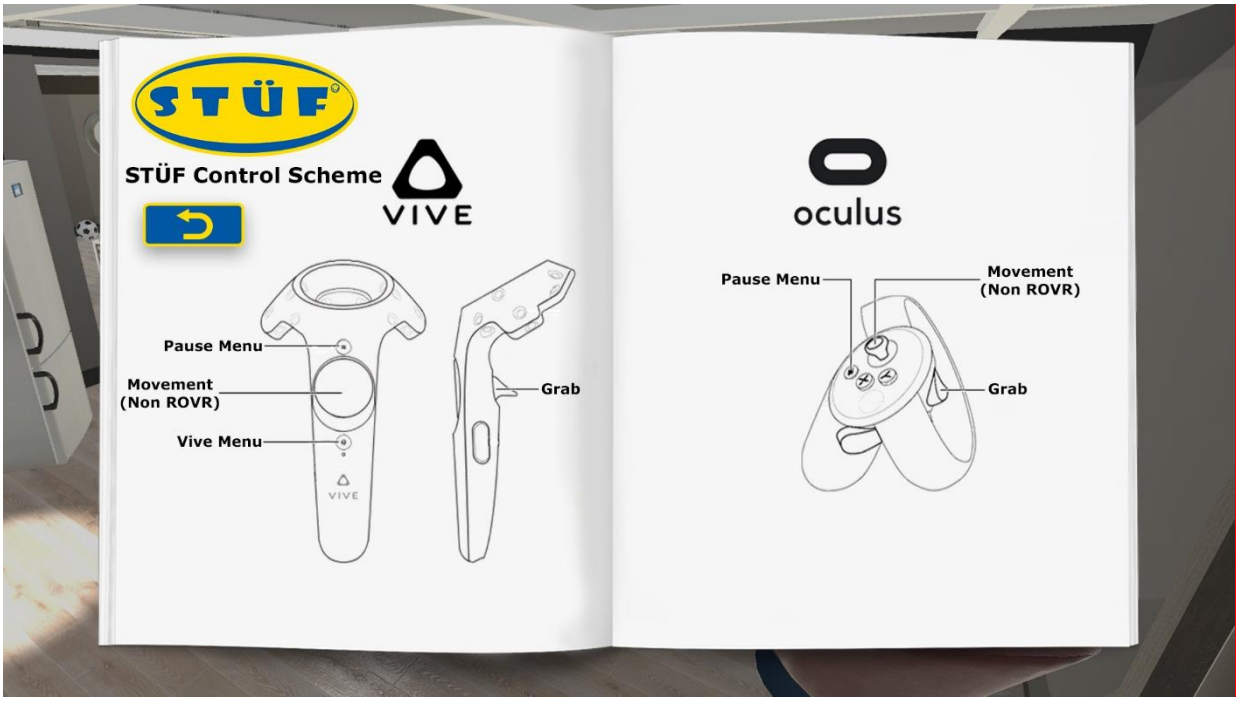
Throughout the level there are digital clocks that the player can use to see how long is left on their time limit. This is due to being in VR, there is no easy way to give any form of heads up display that you would expect in most games such as a racing game where they would have a lap timer. For this screen mockup, below you will find an image of the main menu. As there is not much else that can suffice for a screen mockup of a VR game using this is as much of one as you can get without just being in the game.
The buttons in blue can be selected by clicking much in the same way as interacting with the menus in the Oculus and Vive using the point line that emits from the controller.

6 Game Mechanics and Controls

The mechanics of STÜF involve using the ROVR to move the player though the level as well as using systems from Steam VR to pick up objects from around the showroom floor and throw them to a store assistant who stores them for your final total.
Each object that the player collects adds to a final score that will be shown at the end of the time limit. The mechanics only involve simple steps like run and collect objects by throwing them to a worker

who pops out of doors. There is also one Golden Meatball which is worth a lot of money. This meatball is hidden throughout the level and is different every playthrough.

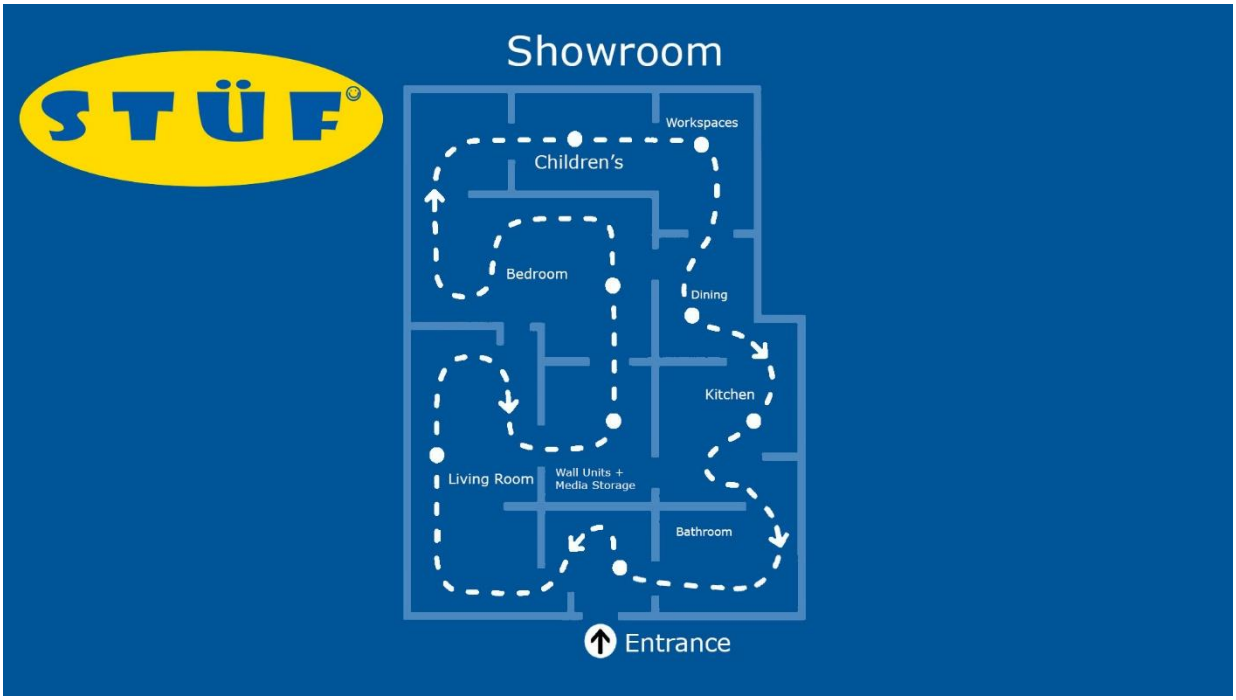
The controls for STÜF involve using the ROVR as the movement system. The ROVR translates input from a microphone in the base to input commands allowing the player to shuffle in order to move in the game. I have combines the ROVR controls with the Steam VR pick up and throw controls using the VR controllers. It doesn't matter what VR controllers you are using as the inputs are the same for all, this means if you own an Oculus or Vive they will both work the exact same way by using the triggers to pick up objects. Below you can find an image to show what the control scheme page looks like and the controls that are in use in the game. I have not added a section for the ROVR and there is only one way to use the ROVR in this game.



7 Level Design walkthrough

The Showroom is currently the first level that has been created. This encompasses the whole look and feel that STÜF is built upon. Here, you can see the layout of the Showroom level. It was based upon a real showroom design to give it a grounded feel. The player enters the showroom at the bottom, being able to follow the white lines on the floor to move around. There are also shortcuts for the player to move from each side quicker as they are on a time limit.

A traditional level walkthrough would not particularly work due to the nature of the game. The player is free to move around the showroom however they please to complete their task as fast as possible. The objects are placed around the whole showroom floor, with the golden meatball placed somewhere at random. As you can see in the mood board section, reference was used to create the overall feel of this level and the game as a whole. There are opportunities to make more levels with different aesthetics and layouts in future.



8 UI functionality

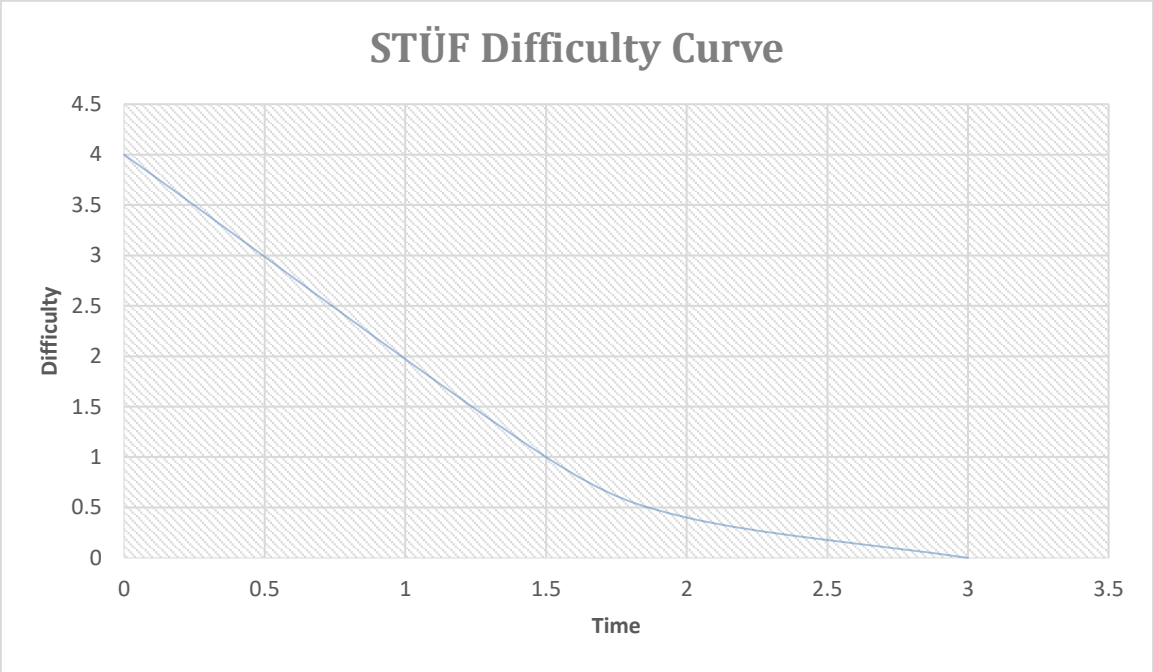
Simply, STÜF has no conventional UI. Being in VR, it is difficult to create a UI that forms well to the gameplay. Instead, there is simply a ledge where the player interacts with a floating menu in VR which is stylised as a catalogue. You can see an image of what the main menu of the game would look like, imagine this screen however hovering in VR in front of the player.

The other elements of the UI such as the end screen where the player score, and leader board are found is done in the game itself. However, the need may arise that it may be better for the overall experience to offer a leader board tab on the main menu where the player can take a look anytime. This would be a good option as it would allow a section for the player to see what their personal best way and how to improve on it.

9 Game challenges, Difficulty curve & progress

In STÜF, the main challenge to the player is mastering the controls. Because of the use of the ROVR movement will be challenging at first and require some time getting used to it. At the start of the game we have a small into section that allows the player to get used to the movement of the feet on the ROVR to move.
Each object that the player can collect in the game has its own tag with its own monetary value that is used at the end of the game to give the player their score. This means that some objects may be worth more than others, and it is the players that must figure out which is worth more to try to reach a high score.

The difficulty curve would likely follow the image below, the main challenge is the controls of the ROVR which once overcome would make the game easier. As the game is geared towards an arcade environment, there is not a traditional difficulty curve or game progress as the experience is made to last less than five minutes per game.
While there is not much opportunity to progress, the idea is that later down the line other levels are created to offer some new environmental challenge for players to try.



10 Wizdish ROVR

After talking about the challenge and difficulty of STÜF, it is essential to talk about the Wizdish ROVR and how STÜF utilises it. While the ROVR has been discussed earlier in this document, it is important to give it its own section to talk about the technology and how it is used in STÜF.
The ROVR works by using a microphone in input and converting it to a joystick forward command, this is great because it allows most other sections of the game, such as steam VR, to work with it without adding a whole new VR component. The ROVR gives a level of immersion in games that is hard to come by, to really be immersed into a VR game you have to be able to move around the environment with yourself. This means that the player should be able to move in a physical space and in turn move in the virtual one.

To accommodate the fact that the player will have to adjust to the ROVR, STÜF has an opening section where the player walks into the showroom. This opening section allows the player time to learn how the ROVR's walking works, this should only take a few seconds and it is the equivalent of walking on a new surface for the first time. The ROVR is amazing for STÜF as the gameplay of sprinting around a shop gathering as many items as possible lends itself well to the fun of really sprinting using the ROVR.
Another great aspect about the ROVR would be that it confines the player to a certain area. After speaking to some workers in the modern Arcade Clubs they said that for their VR zones they go for games that are played on the spot as ones with movement create injuries and are less impressive to people watching. They prefer games such as Beat Saber, like Beat Saber STÜF uses the arcade aspect of the high score meaning in an arcade environment the players have incentive to beat each other's scores.

Below you can find an image of the ROVR, this can give you a better idea of how it is used. The microphone is below the bottom panel, and the shoes use ball bearings that allow a slicker surface when using the ROVR. This technology is a big step forward in how VR is played, as it advances it is likely that other developers may start using this for their projects.

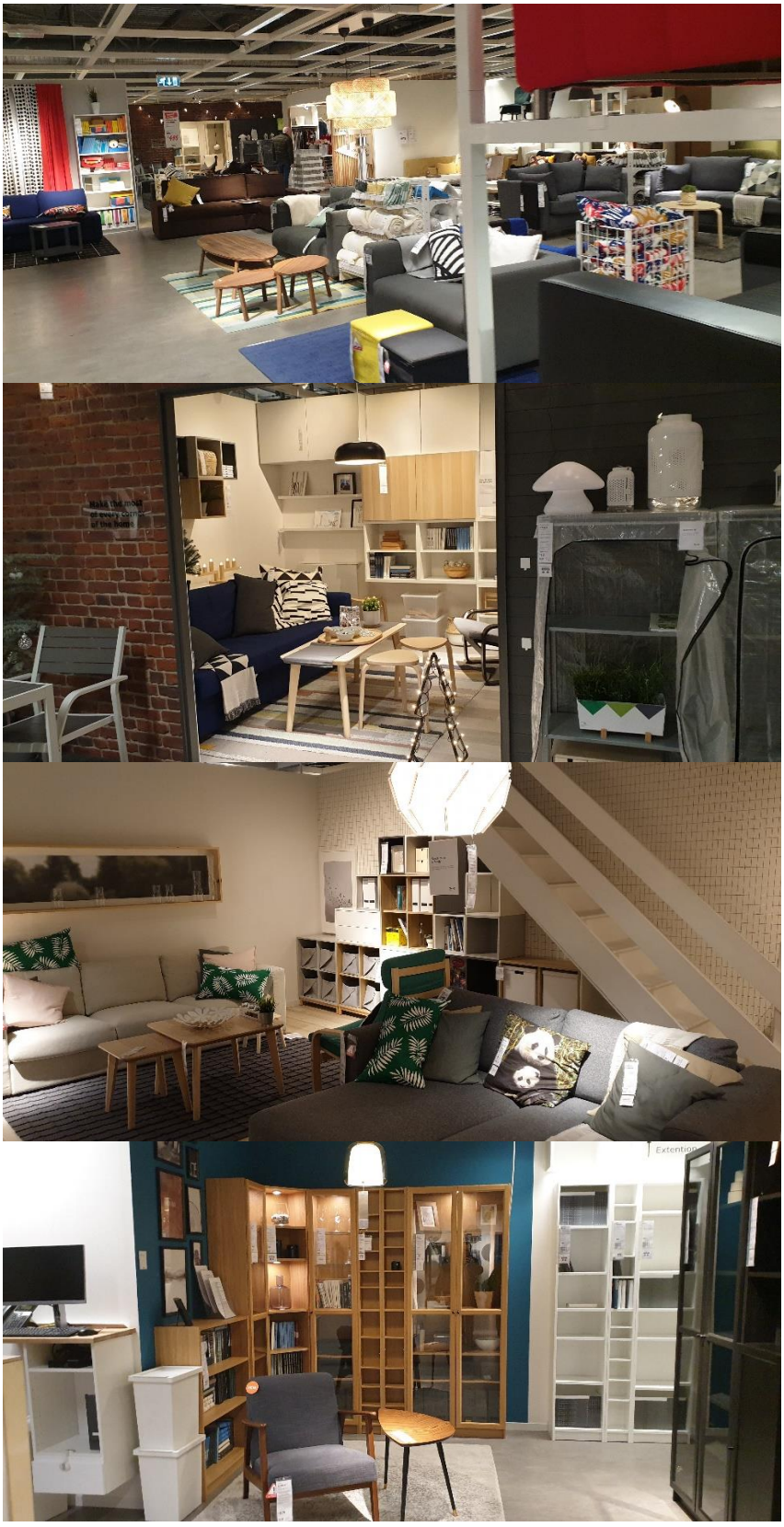
11 Mood Board

For the creation of STÜF, reference was used in almost every aspect of the design. From the design and feel of the level, to the creation of the menu assets and overall feel. Below you will find all the reference images used in the creation of STÜF as well as some inspiration for STÜF as a whole.

IKEA

Find your way in the Showroom
Workspaces
Children's IKEA
Bedroom
Dining
Kitchen
Living room
Wall units & Media storage
Småland
Entrance
Find your way in the Marketplace
Lighting
Cookshop & Tableware
Home organization
Textiles
Rugs
Home decoration
Swedish Foodmarket
Bathroom
Restaurant & Café
Wall decoration & Mirrors
Find your way in the Self-serve furniture area
Bistro
Check-outs
Exit
Customer Service
Living room
arm chairs
coffee/side tables
sofas
sofa beds
Wall units & Media storage
bookcases
CD & DVD storage
glass-door cabinets
TV units
entertainment units
Bedroom
bed frames
bedside tables
chests of drawers
closet storage systems
mattresses
Children's IKEA
children's beds & cribs
children's furniture
child safety items
storage
toys
Workspaces
desk/computer tables
desk/visitor chairs
storage units
Dining
bar stools
buffets
dining chairs
dining tables
serving carts
Kitchen
appliances
kitchen cabinets
counter tops
knobs/handles
kitchen accessories
Information
Restrooms
Changing stations
Phone
Shopping carts
Småland
Cookshop & Tableware
cutlery
food storage
glasses/barware
knives/gadgets
pots & pans
tableware
Lighting
bookcase/cabinet lights
floor/table lamps
lightbulbs
work lamps
wall/ceiling lamps
Home organization
boxes/crates
clocks
clothing storage
desk accessories
wall shelves
Bathroom
bathroom cabinets
towels
towel rails/soap dishes
shower curtains/rods
Textiles
blankets/bedspreads
cushions
curtains/blinds
pillows/comforters
sheets/duvet covers
Rugs
rugs
doormats
laminate flooring
Wall decoration & Mirrors
frames
mirrors
posters
pre-framed artwork
Home decoration
candles/candle holders
vases/decorative bowls
plants
plant pots
wicker baskets/furniture
Restrooms
Changing stations
Flat carts
Shopping carts
Restaurant & Café
IKEA Seattle
601 S.W. 41st Street, Renton, WA 98057
Phone: (425) 656-2980
Toll Free: (800) 570-IKEA (4532)
www.IKEA-USA.com/Seattle
IKEA

IKEA®



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£10

£650
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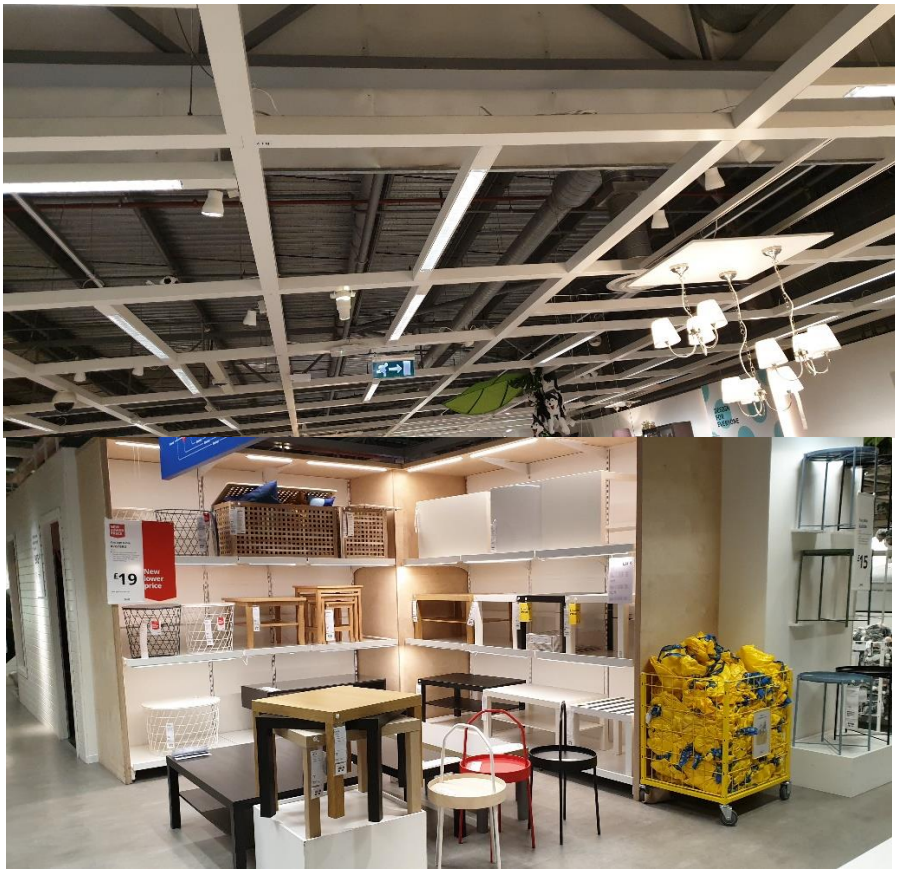
DESIGN FOR EVERYONE
£129

DESIGN
FOR
EVERYONE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New lower price

Our modular KNOXHULT units make planning your kitchen simple. Scan to explore the range.

1 **SUNNERSTA** Trolley $39.90
Powder coated steel and polypropylene plastic. L56×W33, H97cm. 503.037.21

2 **KNOXHULT** Kitchen $472.60
Complete kitchen which includes worktop, shelves, drawers, sink bowl, wash-basin mixer tap and LILLVIKEN water-trap. Lighting and appliances are sold separately. Melamine foil. W204×D61, H220cm. 692.024.25

3 **IKEA 365+** Food container with lid, rectangular $10.90 Heat resistant glass. L21×W15, H7cm. 1L. 892.690.66

4 **KAFFEREP** Vanilla sauce $3.90
500ml. 604.376.16

5 **PROPPMÅTT** Chopping board $9.90
Oiled solid beech. L45×W28cm. 603.003.50

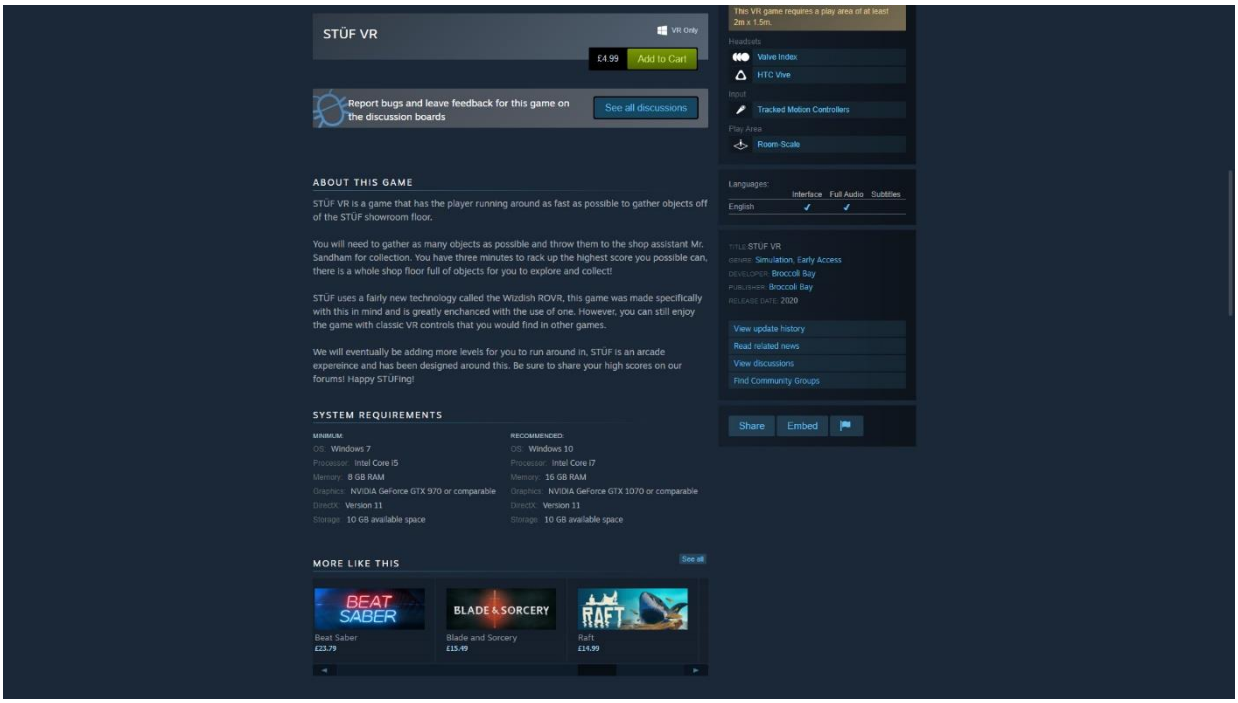
6 **IKEA 365+** Vegetable knife $25.90
Stainless molybdenum/vanadium-steel. Length of knife blade: 16 cm. 902.879.36

15 Year Guarantee

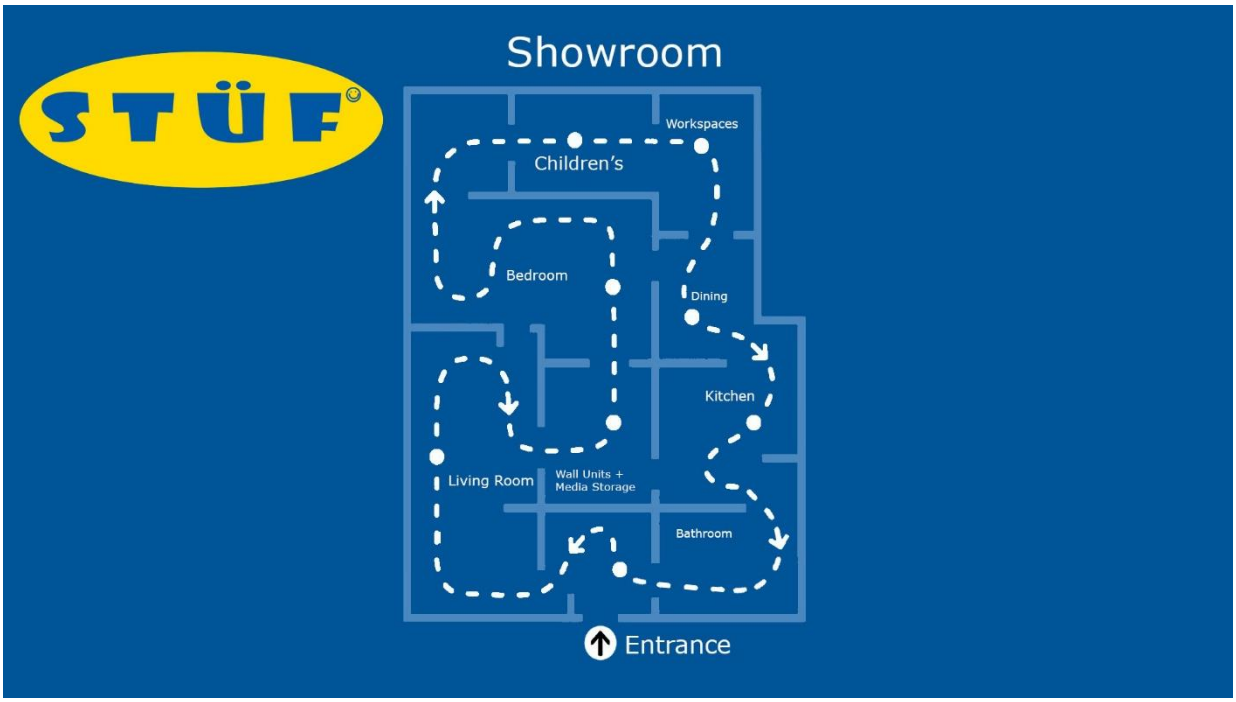
IKEA 365+ Vegetable knife has a 15-year guarantee. See page 191.

12 Promotional materials

The following are some promotional materials that were created for STÜF. The first is a mockup of what the steam store page would look like for the game.



STÜF
① CÜMFY CHÜR
Living Room
$99.99
② STÜÜL
Kitchen
$29.99
Play
1 CÜMFY CHÜR Living Room $99.99
Soft and beautiful chair, made with the fakest wool possible.
2 STÜÜL Kitchen $29.99
Fake metal and fake leather seat that moves up and down.
3 REALLY CÜMFY SÜFA Living Room $249.99
Not even polyester sofa, honestly I'm not sure what we made it out of.
③ REALLY CÜMFY SÜFA
Living Room
$249.99
⑤ BÜD
Bedroom
$420.99
④ WÜDEN CHÜR
Garden
$59.99
Level Select
⑥ FÜÜD SHÜLF
Dining Room
$179.99
4 WÜDEN CHÜR Garden $59.99
Made this with some twigs lol.
5 BÜD Bedroom $420.99
Made with imagination. Only imagination.
6 FÜÜD SHÜLF Dining Room $179.99
Made with wood I think. Seems real enough, car boot sale approved.
7 FÜSH HAÜS Any Room? $322.99
Includes real fish, we won them all at a fun fair in Milton Keynes.
Controls
STÜF offers over 350,000 products worldwide!
⑦ FÜSH HAÜS
Any Room?
$322.99


STÜF
Showroom
Workspaces
Children's
Bedroom
Dining
Kitchen
Living Room
Wall Units + Media Storage
Bathroom
Entrance