

SHOPSPEX (2D & 3D)

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BRIEF

Shopsplex is a simulated shopping tool that replicates a real-world competitive retail environment based on a plan-o-gram that is category and retail channel specific.

Respondents use their mouse to “pick up” products from the shelf; add them to their “cart” or put them back on the shelf; and finally, “check out.” There are many types of shopping limitation can be applied which will be explained in detail in the variable section.

USER INTERFACE (SURVEY)

The timed-find tool has three variants:

Version	Device support	Features
2D Shopsplex	Desktop, tablet	The shelf is presented in a flat format and all users see is the shelf image
3D Shopsplex	Desktop, tablet (experiment)	The shelf is presented in a 3D environment with customizable store background, signage and etc.,

2D Shopsplex

This version is similar to 2D Popup Timed-find, the shelf image will be resized to fit into user's window. User can use zoom in/out button to scale the shelf image. User can pick up the products they are interested, add to cart or put it back.

Variable needs in tool template

Since this tool is quite similar to 2D Popup Timed-find, they are sharing the same template but with different variables configuration. Check below table for details

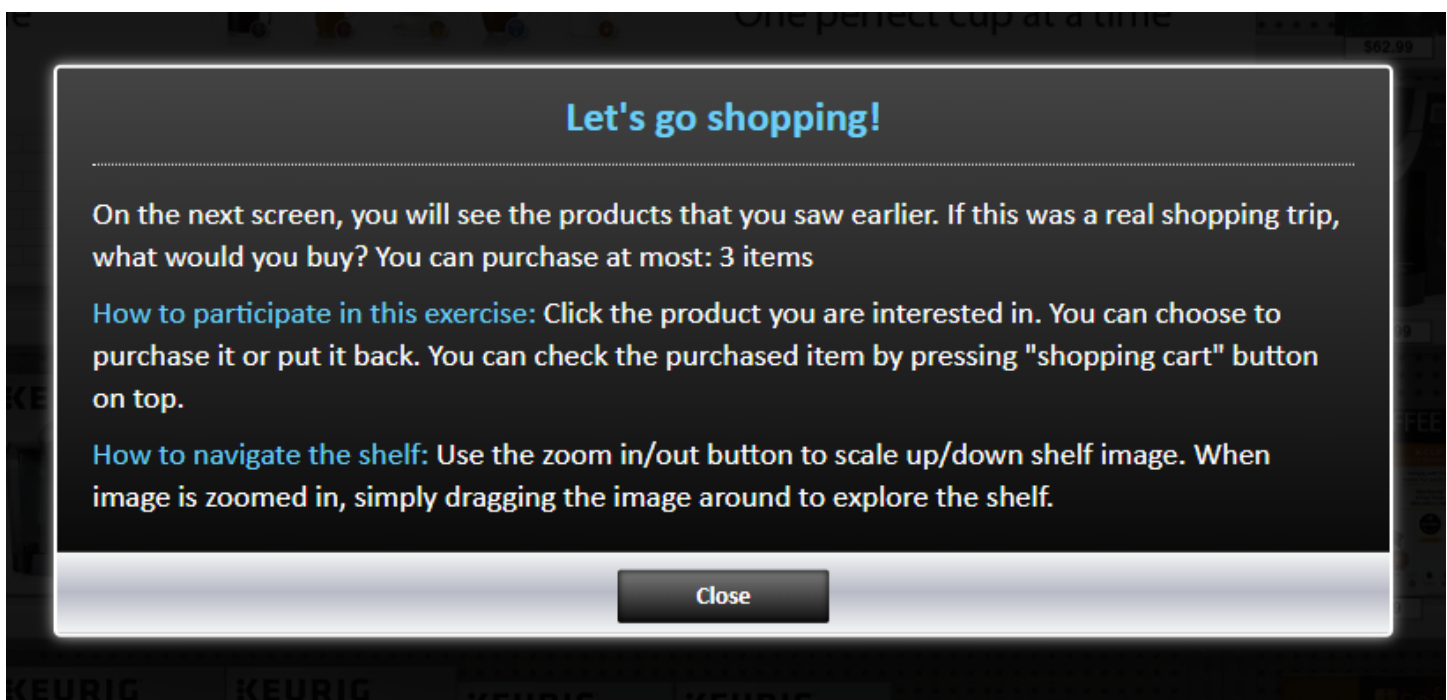
Variable Name	Used By	Who set-it-up	Usage
spexID	Both	Dynata	User Identity
isDecipher	Both	Dynata	Survey platform
isShopsplex	Both	Dynata	true – shopsplex false – Timed-find

zoomAtFirstClick	Both	Dynata	<p>true (default) – when user first click on shelf, the image will be auto-zoomed instead of showing product popup</p> <p>false – when user first click on shelf, the tool will show product popup directly</p> <p>HS need to inform Dynata if don't want to use default value.</p>
shelfID	ShopspeX	HS	<p>To load shopspeX products information</p> <p>HS need to inform Dynata about the value</p>
keyProducts	ShopspeX	Dynata	<p>Define which is the key products for the shelf. if this value is setup, the tool will save extra information which can be used by reporting tool and TAB team to speed up reporting process.</p> <p>Its value is the product's arealD. More than one key product is allowed. Just separate them with comma like 101001,103005.</p> <p>If no key product is needed, use "999999" to bypass the tool checking.</p> <p>HS need to inform Dynata about the value</p>
limitType	ShopspeX	Dynata	<ul style="list-style-type: none"> • 0(default) – there is no limitation requirement • 1 – maximum spending limitation, user can spend at most xxx money • 2 – maximum quantity limitation, user can buy at most xxx products • 3 – minimum quantity limitation, user have to buy at least xxx products • 4 – minimum and maximum quantity limitation, user has to buy at least xxx products but no more than yyy products. The value is presented in the format like max&min (4&2) • 5 - special limitation on value defined in extraInfo (shelf csv) <p>HS need to inform Dynata about the limitation type needed and Dynata will set it up with proper value</p>
limitNumber	ShopspeX	Dynata	<p>Dynata will set it up based on the study's requirement</p>
limitSymbol	ShopspeX	Dynata	<p>When special limitation is used (limitType = 5), the symbol here is used to describe the quantity of the product. For instance, (Gal), (L)</p>

			HS need to inform Dynata about that value
timeLimit	Timed-find	Dynata	
groupID	Timed-find	HS	
targetProduct	Timed-find	HS	
langFile	Both	HS	The language file for the tool, it will be a json link.

Instruction window

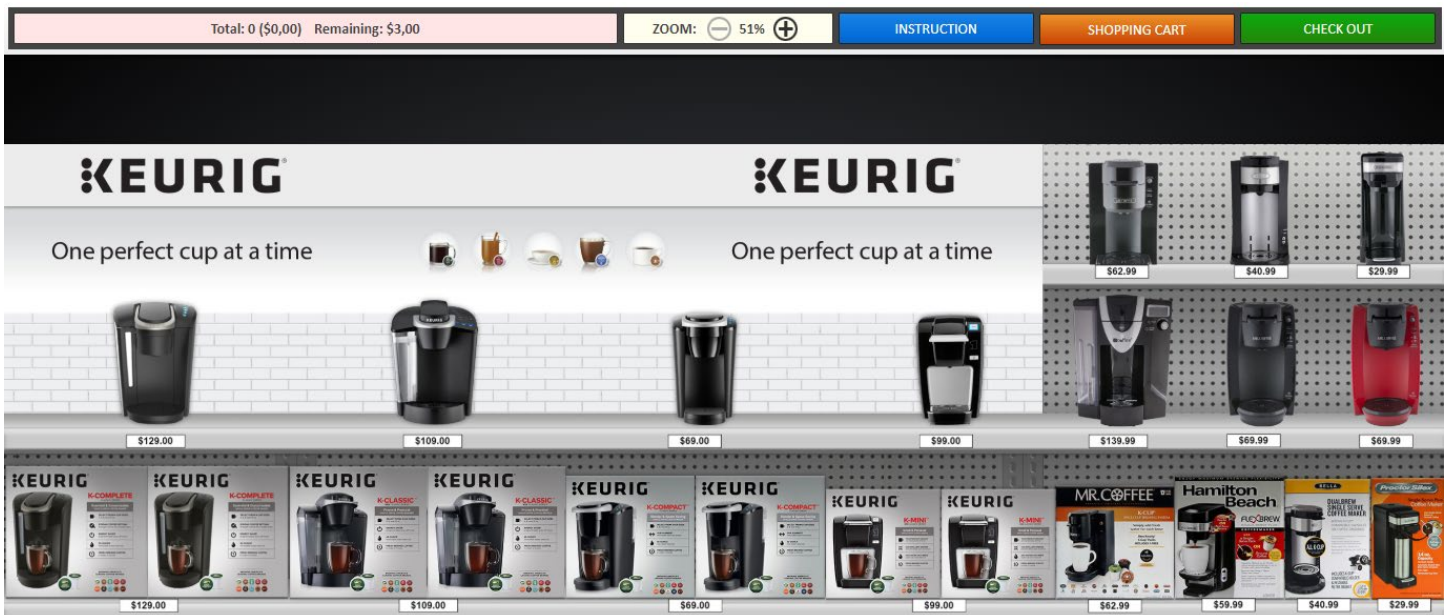
In the instruction window, respondent will be informed about the requirement of this shopping exercise, is there any limitation need to be aware.



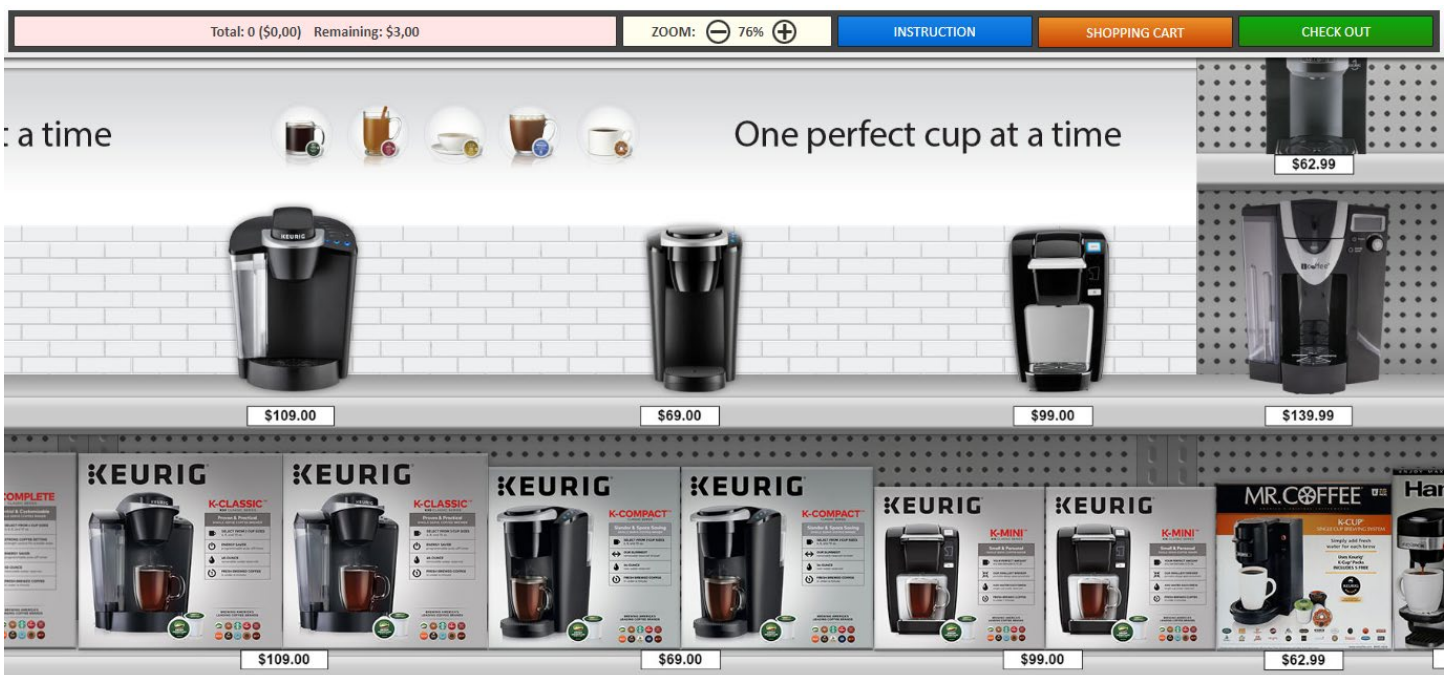
Main Interface

The main interface has two parts:

- Top console contains: shopping summary, zooming control, instruction button, shopping cart button and check out button
- Main test image – in zoomed status, user can pan the image to browser the shelf.



Zoom-out Mode



Zoom-in Mode

Shopping Summary Section

The section will provide general information of user's purchase activity. Based on different limit type, this section will change accordingly:

`limitType = 0` (no limitation applied)

Total: 0 (\$0,00)

`limitType = 1 & limitNumber = 100` (max spending limitation, can't spend more than \$100)

Total: 0 (\$0,00) Remaining: \$100,00

`limitType = 2 & limitNumber = 3` (max quantity limitation, can't buy more than 3 items)

Total: 0 (\$0,00) Remaining: 3

`limitType = 3 & limitNumber = 1` (min quantity limitation, need buy at least 1 item)

Total: 0 (\$0,00) Remaining: 3

`limitType = 4 & limitNumber = 4&2` (min quantity limitation, need buy at least 2 item and no more than 4 items)

Total: 0 (\$0,00) Remaining: 4 **Minimum Purchase: 2**

`limitType = 5 & limitNumber = 5` (maximum special volume limit, buy no more than 5 gal products)

Total: 0(Gal) (\$0,00) Remaining: 5(Gal)

Product Popup

The product popup will show the close-up image of the selected product. Product information can be configured to “show” or “hide” in Packspex admin tool. If the exercise is chosen to hide the full product information, then basic information like price and weight information will still be shown (if available)

If the product image is larger than the available display area, a zooming control will be shown at the bottom of the product, user can use it to enlarge the image more if needed.



Popup with zooming control and full product information

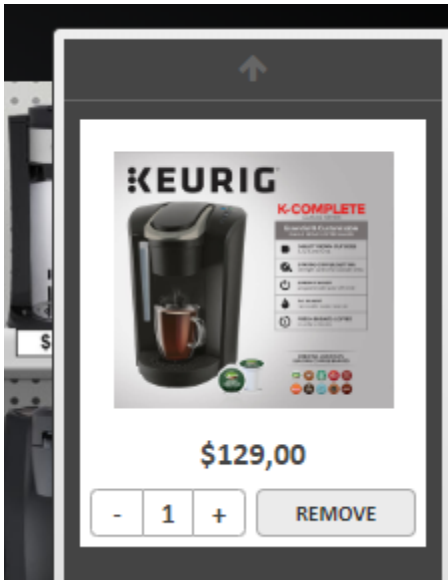


Popup without zooming control and no full product information



Popup for purchased product

Shopping Cart



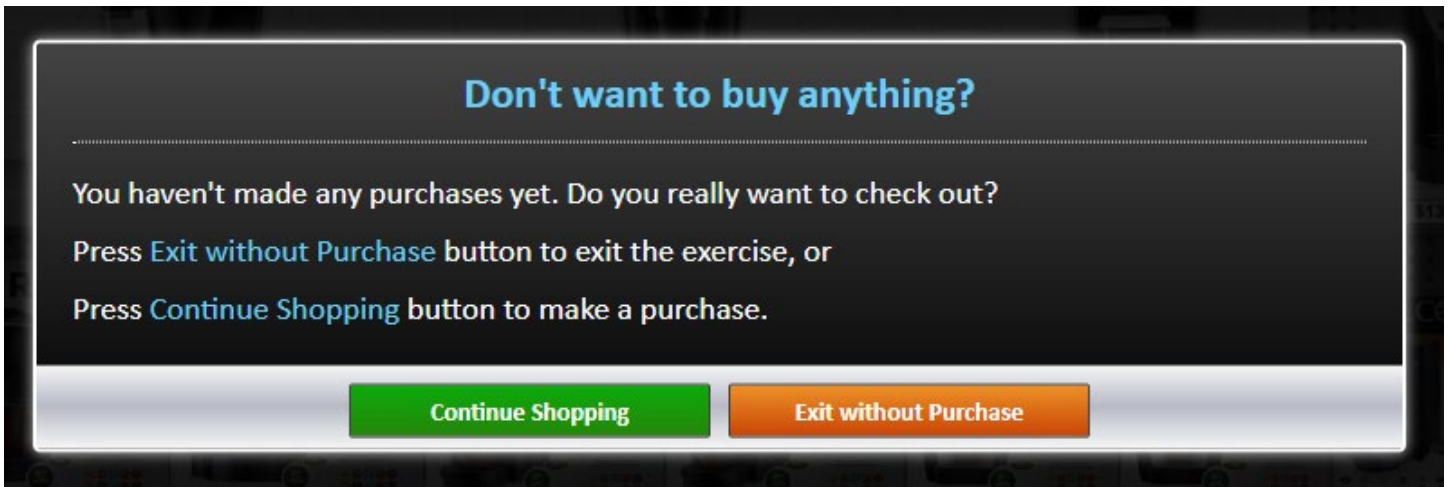
The shopping cart will stay open when users press the “shopping cart” button or “open then close” after users make a purchase.

For each purchased item, a thumbnail image of this product will be added to the shopping cart. User would be able to adjust quantity and remove product if they want.

Click the thumbnail image will re-open the product popup with proper purchased quantity filled in. Refer to above “[Popup for purchased product](#)” image.

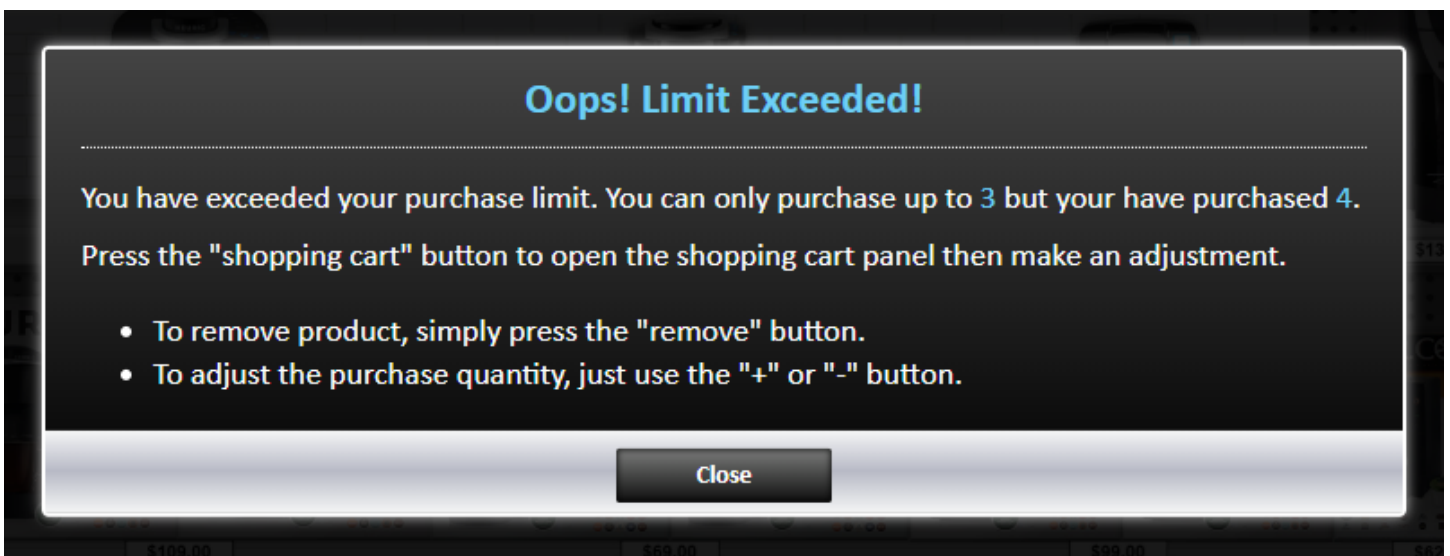
Message window 1 – no purchase

If users don't purchase anything and try to leave, they need to confirm "They want to leave without purchase"



Message window 2 – limitation not meet

If the limitation is setup but users want to leave without meeting the requirement, a popup warning will show up to remind users what they need to do. An example of warning window will look like below



3D Shoppex

The main difference between 3D shoppex and 2D shoppex is the testing shelves will be presented in a 3D environment. Hence, instead of testing only one shelf in 2D shoppex, you can test multiple shelves at the same time in 3D shoppex. Also, there are capabilities to customize the store environment in a certain way. Besides the environment difference, since the potential complexity of the environment, 3D tool will have a mini map in top console which makes its top console has more controls than 2D Shoppex.

Variable needs in tool template

All 3D tools (Shoppex, Timed-find, Eyespex) will share the same template with different configurations. Below are all the variables available in the template and here we will focus on these shared and Shoppex-only variables.

Variable Name	Used By	Who set-it-up	Usage
spexID	all	Dynata	User Identity
isDecipher	all	Dynata	Survey platform
appType	all	Dynata	1 – Eyespex 2 – Shoppex 3 – Timed-find
startDirection	all	Dynata	1 – coming from left end of the shelf -1 – coming from right end of the shelf
scanPath	all	HS decide value Dynata set in template	By default, this value will be empty. When there are multiple shelves in test and it is required to provide certain swinging animation, HS will provide values which is similar to “5,3” , Please refer to “Scan Path Configuration” Section for detailed explanation.
showWalkIntro	all	Dynata	Do we need to show door-opening animation? true – show animation false – hide animation
showNavIntro	all	Dynata	Do we need to show navigation animation? It is suggested user only see this navigation once. In most time, user will do Shoppex first then Timed-find. Hence this value should be true in shoppex and false in Timed-find.

			<p>true – show animation</p> <p>false – hide animation</p>
storeConfig	all	HS	<p>This json file is used to set up store, link image with its tool ids and customize store environments.</p> <p>HS need to provide Dynata this link</p>
keyProducts	all	HS	<p>Defined which is the key products for the shelf. If this variable is configured, the tool will be able to save extra information for reporting tool and TAB team to speed up the process.</p> <p>Its value is the product's arealD in the shelf information file. And you can use more than one key products, just separate them with comma like 101001,103005.</p> <p>If no key product is needed, use "999999" to bypass the tool checking.</p> <p>HS need to inform Dynata about the value</p>
previousPurchases	ShopspeX	Dynata	<p>This is used in the situation when there is two rounds of shopping exercise and we need to populate shopping cart based on first shopping exercise. The input format will look like below:</p> <p>arealD[x]quantity, arealD[x]quantity, arealD[x]quantity</p>
removePurchases	ShopspeX	Dynata	<p>This is always used with previousPurchases. It will remove the items from previous purchase based on the arealD passed here.</p>
limitType	ShopspeX	Dynata	<ul style="list-style-type: none"> 0(default) – there is no limitation requirement 1 – maximum spending limitation, user can spend at most xxx money 2 – maximum quantity limitation, user can buy at most xxx products 3 – minimum quantity limitation, user have to buy at least xxx products 4 – minimum and maximum quantity limitation, user has to buy at least xxx products but no more than yyy products. The value is presented in the format like max&min (4&2) 5 – special limitation on value defined in extraInfo (shelf csv) 6 – maximum quantity limitation by arealD, user can buy at most xxx products of a specific criteria; NOTE: make sure arealD and max purchase quantity number is passed to storeConfig json under "maxLimitPerAreas"-> "arealds":[], and "maxCount".

			HS need to inform Dynata about the limitation type needed and Dynata will set it up with proper value
limitNumber	Shopsplex	Dynata	Dynata will set it up based on the study's requirement
timeLimit	Timed-find	Dynata	0 (default) – no time limitation Number > 0 – time limitation in seconds
findProduct	Timed-find	HS	The name/description of target product HS need to inform Dynata about the value

Scan Path Configuration

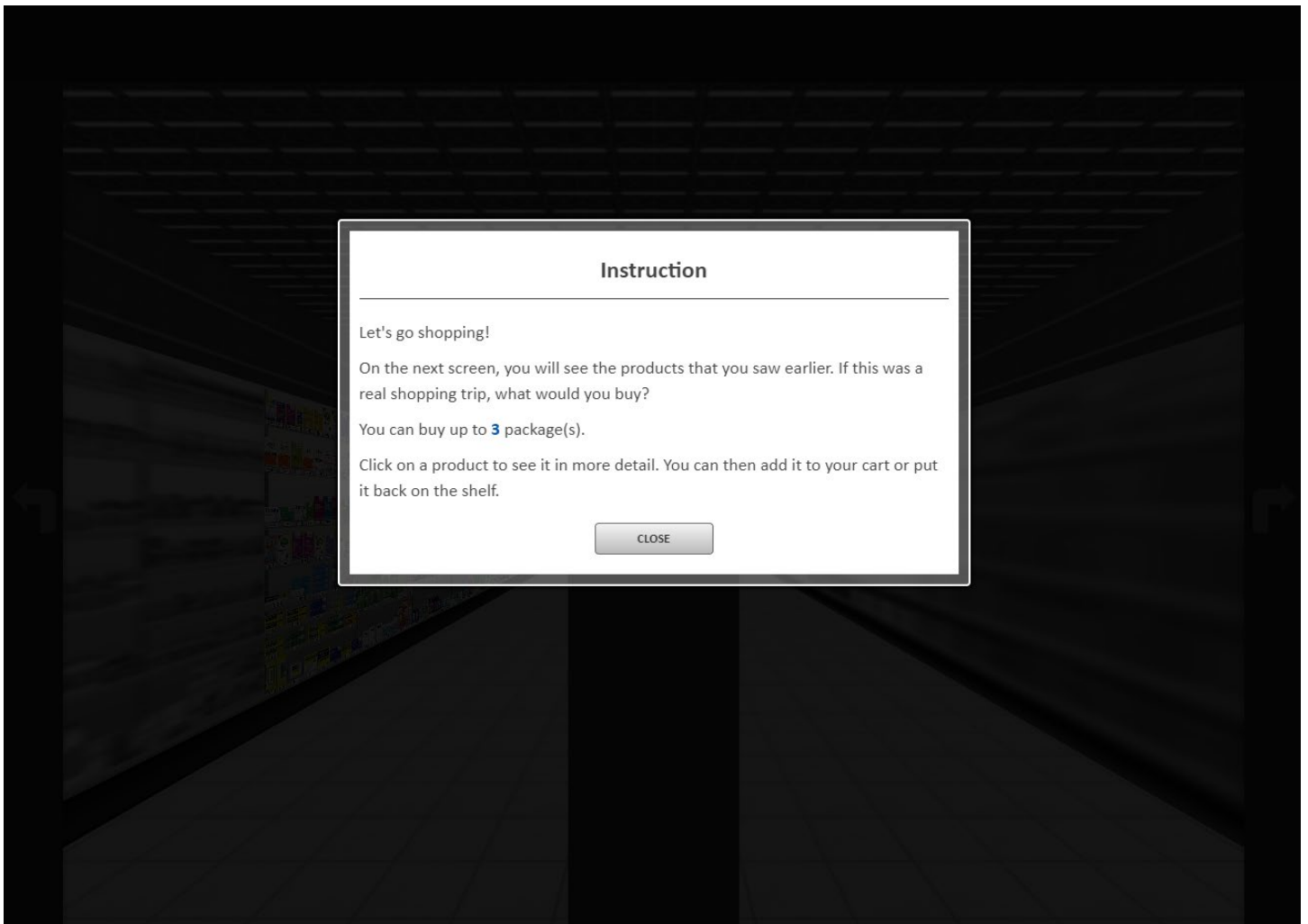


From left to right, based on the aisle layout, the tool use 1 – 9 to represent each position. For example, **1 means** the center position of the first aisle and **2 means** the center position for the first shelf block.

The scan path takes comma delimited value and set up camera's movement. For example, if we want respondent to see the position on 5, then go to position on 1 and then back to position 3. The scan path will be "5,1,3".

Instruction window

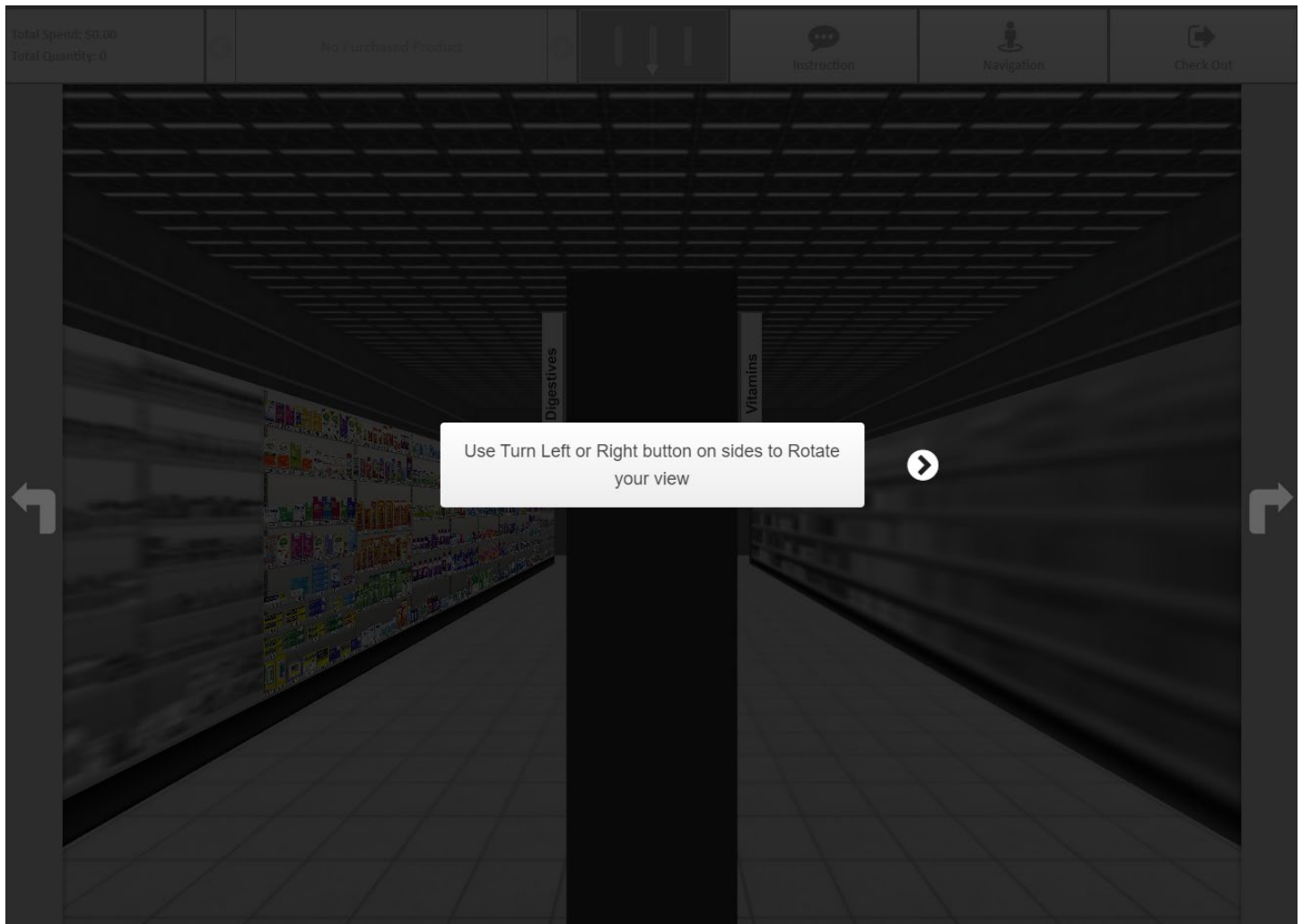
In the instruction window, respondent will be informed about the requirement of this shopping exercise, is there any limitation need to be aware.



Navigation demo window

The navigation demo window shows a series of short animations with the navigation tips of the tool. Each tip will be shown for certain duration then auto move to next one. However, users can also use forward button to speed up.

If it is the first-time users see the demo, there is only forward button shown in the window. But if users have seen the tutorial once, both back/forward buttons will be activated in the window to allow users to browser through and stop at wherever they want.



Main Interface

The 3D environment is complicated than the 2D version, it has three main parts:

- **Top Console**
 - [Shopping summary](#)
 - [Mini Shopping Cart](#) – all user purchased products' thumbnails will be shown here
 - [Mini Map](#) – show the store layout and flashing dot means where user currently locates.
 - [Instruction Button](#) – view exercise instruction again
 - [Navigation Button](#) – view navigation demo again
 - [Check Button](#)
- **Turn left/right button**
- **Main display area**



Shopping Summary

The section works same as the 2D tool. It will provide general information of user's purchase activity. Based on different limit type, this section will change accordingly:

`limitType = 0` (no limitation applied)

Total Spend: \$0,00
Total Quantity: 0

`limitType = 1 & limitNumber = 100` (max spending limitation, can't spend more than \$100)

Total Spend: \$0,00
Total Quantity: 0
Remaining: \$100,00

`limitType = 2 & limitNumber = 3` (max quantity limitation, can't buy more than 3 items)

Total Spend: \$0,00
Total Quantity: 0
Remaining: 3

`limitType = 3 & limitNumber = 1` (min quantity limitation, need buy at least 1 item)

Total Spend: \$0,00
Total Quantity: 0
Minimum Purchase: 1

`limitType = 4 & limitNumber = 4&2` (min quantity limitation, need buy at least 2 item and no more than 4 items)

Total Spend: \$0,00
Remaining: 4
Minimum Purchase: 2

`limitType = 5 & limitNumber = 5` (maximum special volume limit, buy no more than 5 gal products)

Total Spend: \$0,00
Total Quantity: 0(Gal)
Remaining: 5(Gal)

Mini Map

The mini map will show the 2D store layout map and a flashing icon will indicate where the user currently standing position. The icon also represents the eye-angle, so user can easily which user they are facing to.

1 aisle layout



2 aisles layout



3 aisles layout



Customized layout 1



Customized layout 2



Shopping Cart

Unlike the fully functional shopping cart in 2D Shoppex, the 3D shopping cart only shows thumbnails version of each product users purchased. Click on the thumbnail will open that product's popup window which shows product information as well as the quantity users purchased. If there are more products than the cart area can display, the left/right buttons will be enabled accordingly to allow user browser the cart as they want.



Product Popup

The product popup will show the close-up image of the selected product. Product information can be configured to “show” or “hide” in Packspex admin tool. If the exercise is chosen to hide the full product information, then basic information like price and weight information will still be shown (if available)

If the product image is larger than the available display area, a zooming control will be shown at the bottom of the product, user can use it to enlarge the image more if needed.



Popup with zooming control and full product information



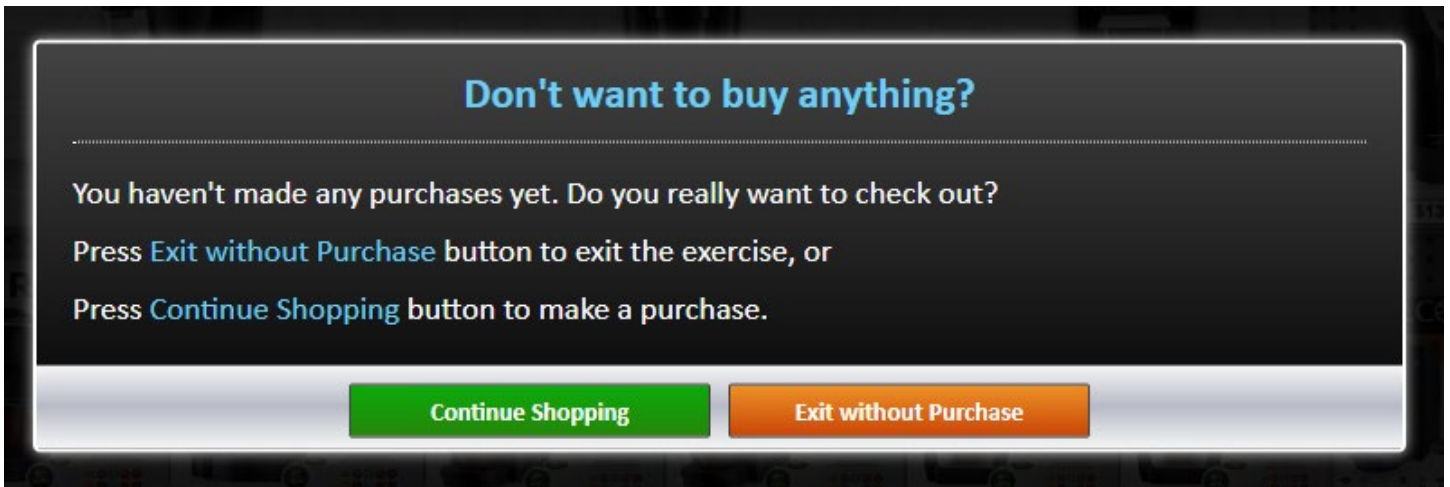
Popup without zooming control and no full product information



Popup for purchased product

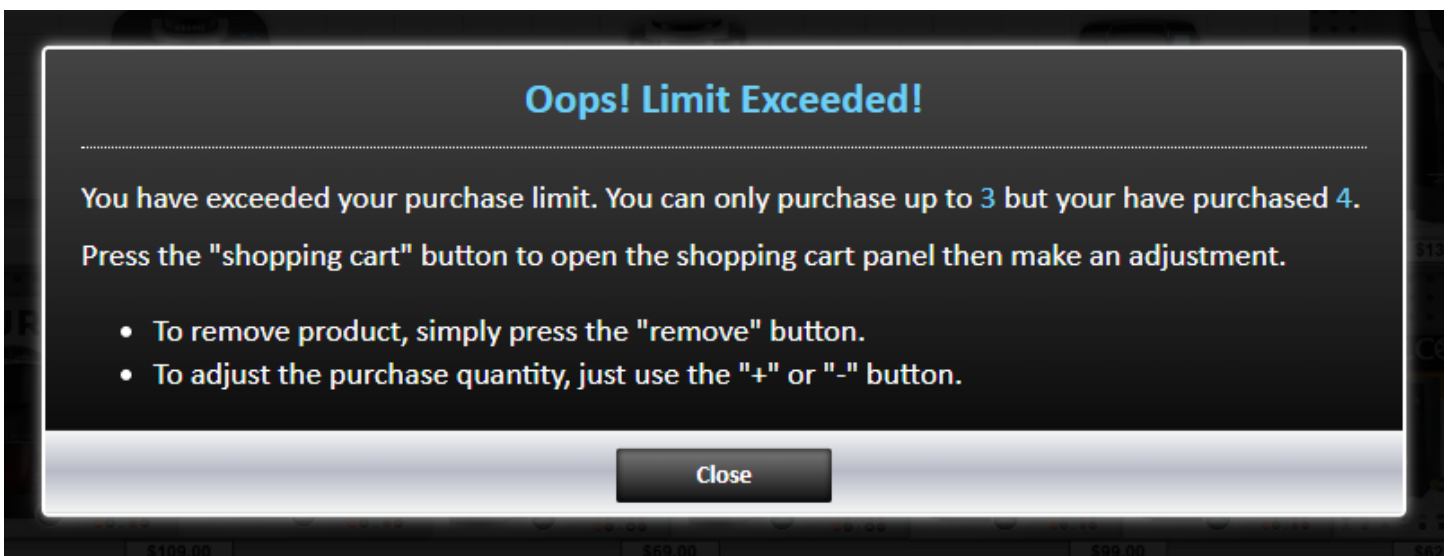
Message window 1 – no purchase

If users don't purchase anything and try to leave, they need to confirm "They want to leave without purchase"



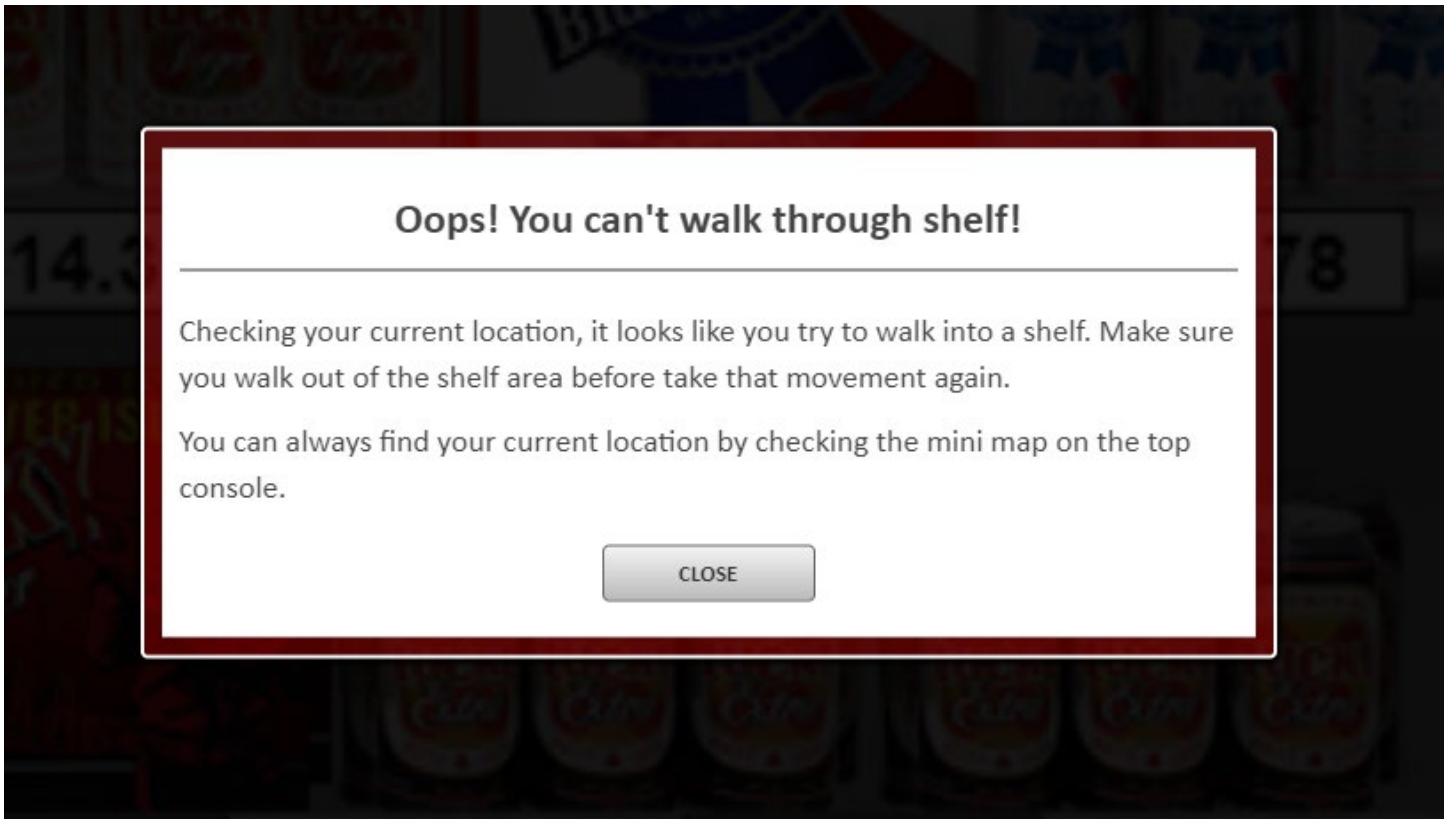
Message window 2 – limitation not meet

If the limitation is setup but users want to leave without meeting the requirement, a popup warning will show up to remind users what they need to do. An example of warning window will look like below



Message window 3 – Navigation Warning

Besides the same the message windows 2D tools provides, 3D tool has a unique navigation warning. Sometimes, when user will hit the wall during browsing, the tool will show the warning and inform user why they seem to be stuck.



USER DATA

For each shopsex exercise, the tool will save two parts of data, one for HS and another one for Dynata

HS Data

Variable Name	Usage
spexID	Respondent ID
shelfID	Which shelf this click belongs to
actionCode	<ul style="list-style-type: none">• 1 – purchased product• 2 – viewed product• 3 – when users try to exit without purchasing / viewing any product, this value will be used in a placeholder record to prove the exercise has been correctly presented to user
arealID	ArealID of the product If actionCode = 3, arealID = 999999.
isKeyProduct	If key product is configured, this value will indicate whether the product is key product or not (value: 1/0)
Quantity	How many quantities user purchase for this product. If this is a viewed only product then its value will be 0
isFlip	If the product has more than one views, this indicates whether users view other images beside the first one. <ul style="list-style-type: none">• 1 – user DOES view other images• 0 – user DOESN'T view other images
isDelete	Is this product purchased then removed by user? If the product is deleted, the quantity will be reset to 0 <ul style="list-style-type: none">• 1 – users purchase then delete the product later• 0 – this product has never been deleted from the shopping cart
timeOnProduct	How long user spend time on looking the popup If actionCode = 3, timeOnProduct= 0.
timeInTool	How long takes user to pick up the product since exercise starts

	If <code>actionCode = 3</code> , <code>timeinTool= 0</code> .
imageArray	If the product has more than one views, this indicates how users view those images. The index starts with 0 (first image)
clickOrder	The order of click. In which order, the product has been picked up. If <code>actionCode = 3</code> , <code>clickOrder = 0</code>
xPos	X position on image where respondent click If <code>actionCode = 3</code> , <code>xPos = -999</code>
yPos	Y position on image where respondent click If <code>actionCode = 3</code> , <code>yPos = -999</code>

Dynata Data

- `PSN_SSX_S` – whether the key products are selected (1 – selected, 0 – not selected)
- `PSN_SSX_P` – whether the key products are purchased (1 – purchased, 0 – not purchased)
- `PSN_SSX_V` – whether the key products are viewed only (1 – viewed, 0 – not viewed)
- `PSN_SSX_Q` – the total quantity of purchased key products
- `PSN_SSX_PR` – the total spending of purchased key products
- `ipurchased` – arealIDs of purchased products
- `iselected` – arealIDs of viewed products
- `ideleted` – arealIDs of deleted products
- `totalSpend` – total spending in the shopping exercise
- `totalQuantity` – total purchased quantity in the shopping exercise
- `firstPurchaseDuration` – the duration when respondent makes first purchase (3D only)