

Allocating Products to Channels in the Item Discovery Funnel

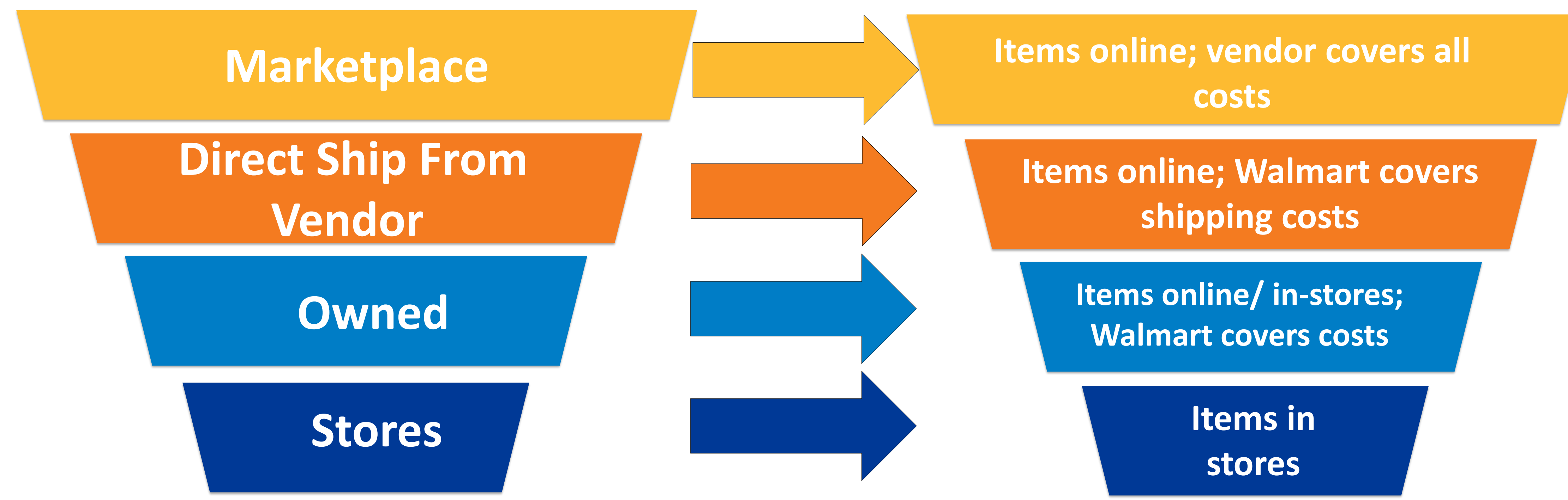
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Background

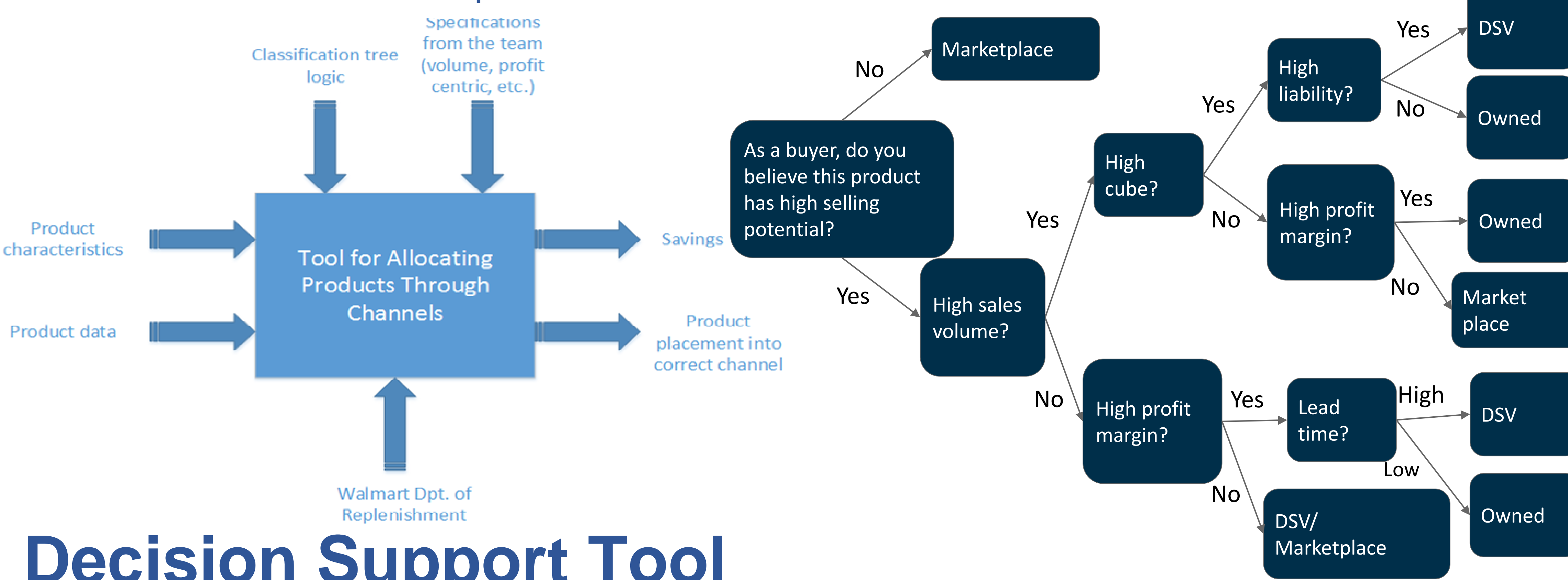
- Walmart has four channels, with varying levels of financial ownership, through which they can provide products to customers.
- Better use of these channels will enable Walmart to achieve omnichannel retailing, or the integration of different methods of shopping available to consumers (online, in store, mobile phone)

Item Discovery Funnel



Stakeholder Analysis & Project Process

- Last semester, we worked in collaboration with students from the Walton College of Business to develop an initial classification tree



Decision Support Tool

- Our tool goes through the logic behind our classification tree to allocate items
- The user interface can be seen below. There are two distinct sections for our tool – the required inputs from buyers and the outputs from the tool

UPC	Category	Subcategory	Item Name	Retail Price	Purchase Price	Shipping Cost	Length	Width	Height	Weight	Cube	Forecasted Sales?	Correlated Item?	Multipack Available?	Final Recommendation	Sales Data?	Retail Price <\$5?	Profit Margin	Velocity	Cube	AUR	Risk	Shipping > Profit?	Marketplace Availability?	# Items in Inventory?	In stores?
94142000000	Chemicals	Floor Cleaners	Chem dry c038 1 e pet odor extinguisher	\$15.99	\$10.49	\$0.00	10.50	14.00	10.00	30.00	0.85	N/A	N/A	N/A	DSV	Yes	No	High	Low	Low Cube	High	Yes		No	No	
93439900000	Chemicals	Trash Bags	tutt mitt dog waste/poop pick up bag, 100-cou	\$12.21	\$10.12	\$0.00	1.00	1.00	1.00	0.06	0.10	N/A	N/A	N/A	Marketplace	Yes	No	High	Low	Low Cube	High	No		No	No	
73314200000	Chemicals	Floor Cleaners	Simple solution pet urine destroyer, 32 oz,	\$5.98	\$3.22	\$0.00	3.13	3.13	9.56	2.17	0.05	N/A	N/A	N/A	Owned/DSV	Yes	No	High	High	Low Cube	High				Yes	

Current Process

- Currently, buyers individually decide where items should be placed within the item discovery funnel.
- Walmart needs a uniform approach to placing items in channels to guarantee the lowest cost for Walmart and lowest price for customers.

Calculations for Tool

Metric	Project Definition	Calculation	High/Low Declaration
Velocity	Volume of the item being sold annually	Individual data compared relative to similar items	Low: $AUR < 75\%$ retail price
AUR	Average Unit Retail of item	$\frac{Total\ Sales}{Total\ Units}$	Low: $AUR < 75\%$ retail price
Cube	Physical Size of Item	User input of item dimensions; from data	Weight > 30 lb Cube $\geq 3.25\ ft^3$
Risk	User defined product risk versus similar items	Buyer inputs high or low risk of item	User Defined for High or Low
Profit Margin	The amount of revenue versus costs	$PM1 = Retail - Cost$ $PM2 = PM1 - Shipping$	High: +PM1; +PM2 Low: +PM1; -PM2 Negative: -PM1; -PM2

Results

- All models in inventory were run back through the model to analyze whether there is a better channel.
- These are results from notional data produced by Walmart for testing purposes.

Risk?	Final Recommendation	Category / Original Placement							
		Chemicals				Entertainment			
		Dsv	Mp Inv	Owned	Store Inv	Dsv	Mp Inv	Owned	Store Inv
High	DSV	90	98	51	60	23	59	4	7
	Marketplace	289	30	96	32	140	42	20	8
	Owned/DSV	126	17	64	228	120	844	25	30
	Owned/Shared					1	2	3	
Low	Marketplace	22	6	4	2	27	9	9	6
	Owned				91				9
	Owned/DSV	122	17	64	227	119	844	24	30
	Owned/Shared					1	2	3	
	Owned/Store	361	122	143		135	92	15	

