

# **AI Pack Screening Model**

## **Applying Data, Expertise & Artificial Intelligence to Screen Packaging Concepts**

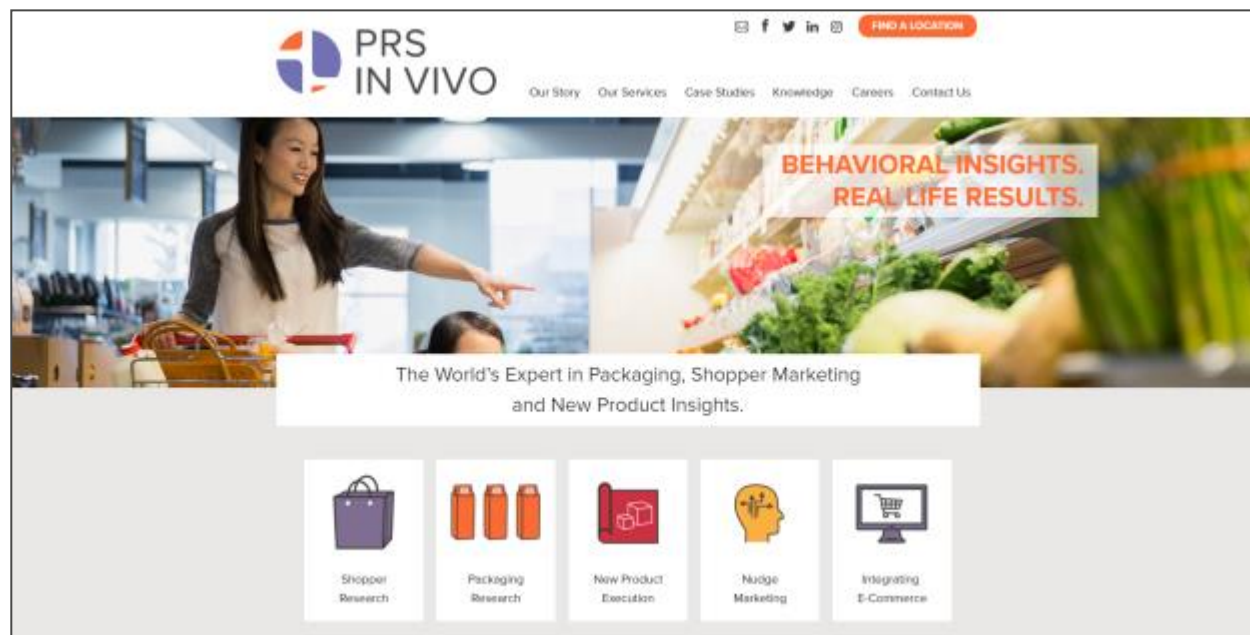
**General Online Research 2019**  
**March 8<sup>th</sup> 2019**



Behavioral Insights. Real Life Results.



# At PRS IN VIVO, We Conduct Over 1,000 Packaging Studies Annually





## We See the World of Insights Changing...



**NEW THINKING  
(BEHAVIORAL SCIENCE)**



**NEW DATA  
& ANALYTICS**



**INCREASED TIME  
& BUDGET PRESSURE**



Sector	Core use cases:			
Asset Management	Investment strategy	Portfolio construction	Risk management	Client service
Healthcare	Diagnostics	Drug discovery	Monitoring	
Insurance	Risk assessment	Claims processing	Fraud detection	Customer service
Law & compliance	Case law	Discovery and due diligence	Litigation strategy	Compliance
Manufacturing	Predictive maintenance	Asset performance	Utility optimisation	
Retail	Customer segmentation	Content personalisation	Price optimisation	Churn prediction
Transport	Autonomous vehicles	Infrastructure optimisation	Fleet management	Control applications
Utilities	Supply management	Demand optimisation	Security	Customer experience

Source: MMC Ventures

We tried building a use case  
for our business...



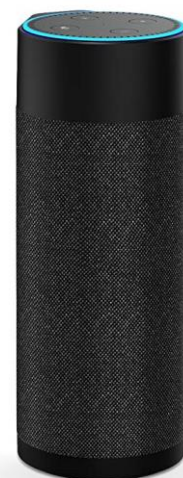


# Areas we are looking into when using AI

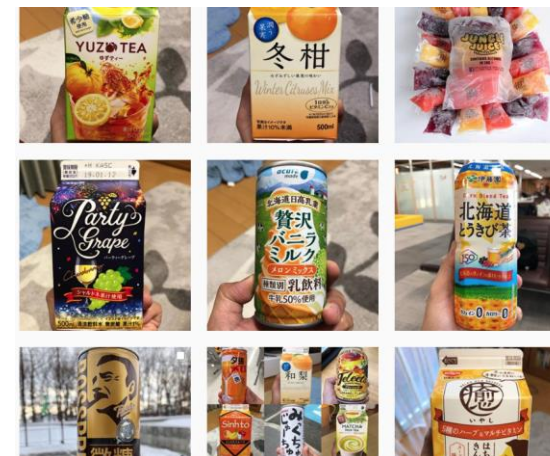


Packaging

Valentin Wittmann  
★★★★★ **Ganz schicke Hülle**  
19. August 2018  
Falter Schweiz - Verifizierter Kauf  
Ich brauche das iPad Mini hauptsächlich als Monitor für meinen Phantom 4 Kamera-Copter, dazu mi Problem, obwohl ich es schon dutzende Male herausgenommen und wieder eingesetzt habe.  
Die Schutzfunktion ist einwandfrei, aber das schwarze Kunstleder sieht nicht besonders wertig aus - nehmen. Mir ist das wie gesagt egal von daher bin ich mit der Hülle zu dem fairen Preis zufrieden.  
Die Sleep-Funktion mit dem Magneten scheint bei mir eigentlich immer zu funktionieren, man hört abschaltet.  
Allerdings hatte ich schon manchmal das Gefühl, dass das iPad beim Transport in der Hülle sich wie Rucksack steckt. Es ist schon ein paar Mal passiert, dass plötzlich am nächsten Tag der Akku nur noch unbemerkt beim Transport angekommen ist. Zum Transport zu einem Einsatz mit dem Quadcopter zu vermeiden.  
    
griesTraum  
★★★★★ **Gutes Cover, guter Preis!**  
22. März 2018  
Falter Schweiz - Verifizierter Kauf  
Eigentlich eine Standardhülle fürs iPad Mini 4, man kann damit nichts falsch machen. Das Case ist in Zuklappen wie gewünscht ein Sperren des iPads aus oder kann als Standhülle gefaltet werden. Alles Der Abzug eines Sterns kommt daher, dass die Verarbeitung des Cases etwas Mängel hat. So war es abfallen. Weiters ist es sehr schwierig, das iPad in die Hülle zu geben, da es wirklich sehr hart und ist Fall, daher weiss ich, dass es anders geht.  
Alles in allem aber ein guter Preis für ein gutes Produkt!



Text and Voice

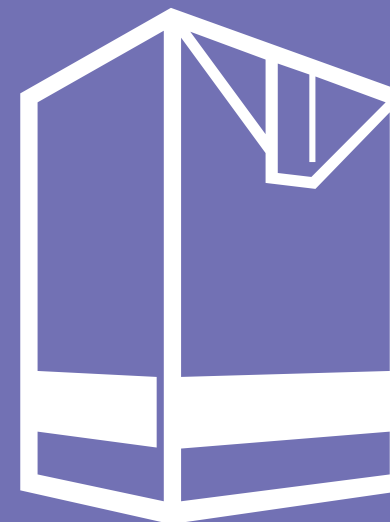
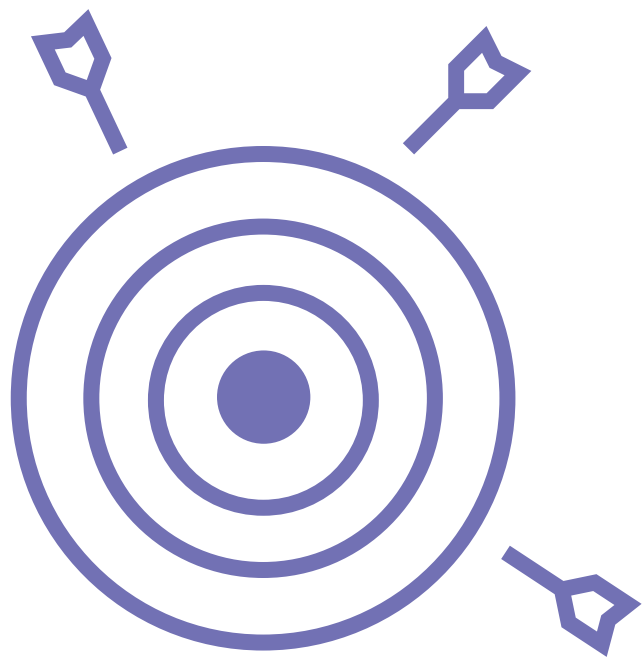


Pictures



## It starts with the Need for a Fast, Reliable Pack Screening Process...

**50% of Pack Re-Designs Fail  
to Meet Objectives & Drive Improvement**



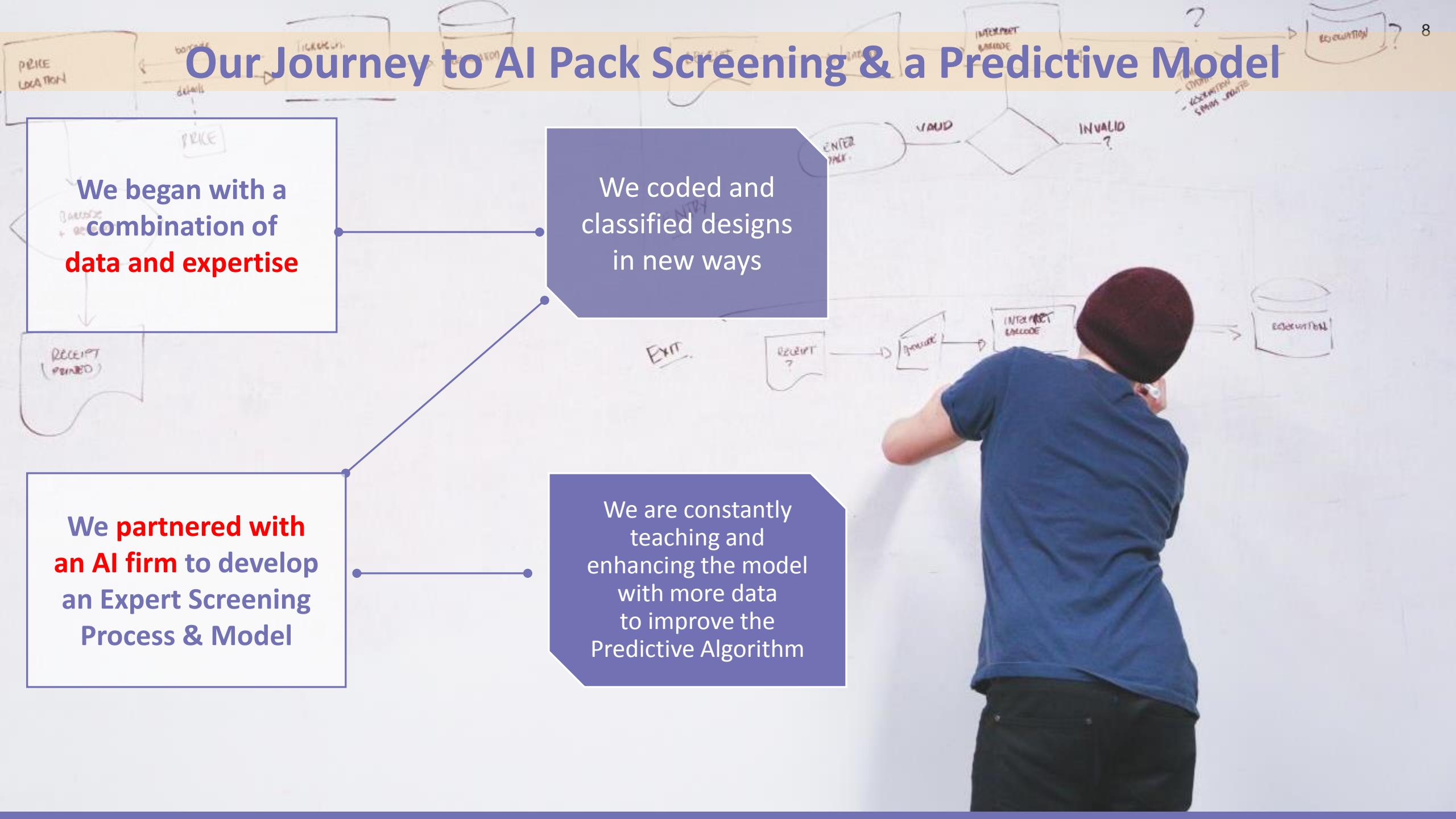
New Product Failure Rates  
Remain at 80% or Higher  
*(Often Due to Poor Packaging)*

**We began with a combination of data and expertise**

We coded and classified designs in new ways

**We partnered with  
an AI firm to develop  
an Expert Screening  
Process & Model**

We are constantly  
teaching and  
enhancing the model  
with more data  
to improve the  
Predictive Algorithm





# The First Step was “Mining” Our Database of Over 25,000 Studies...

Which KPIs/Metrics are Validated to In-Market Sales Performance?

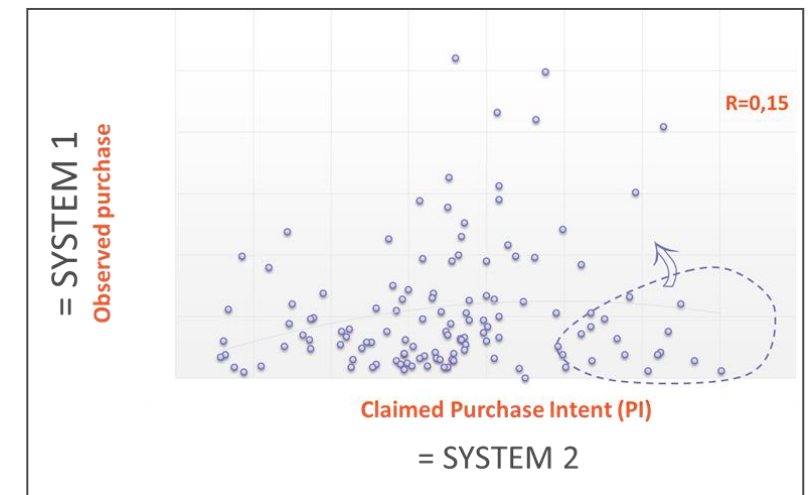
- Visibility, Shop-Ability, Purchase from Shelf, etc.

What are the Relationships Within & Across Key Metrics?

- Which KPIs are Linear? Which are Related?

What is the Impact of Different Situations?

- Re-Stage & NPD, Large & Small Brands, etc.







# We Then Added a New Dimension to Our Analysis.

Pack Predictive Model 11

## TEXTUAL UNITS

**Textual Units**

- Umbrella Brand (ex Danone)
- Sub Brand (ex Taillefine)
- Product Brand (ex Cremosso)
- Type of product (ex plain yogurt)
- Product composition (ex Bifidus)
- Variety or perfume (ex lemon)
- Weight or contenance (ex 4x 125 g)
- Promises product bloc (ex more sweet)
- Non permanent promotion bloc(a gift)
- Permanent promotion bloc (ex + 10%)
- Other textual units

For each textual units define:

Presence	Number	Pack change on Current pack	Intensity of change
Yes	Only for promises product	No change	No change
No		Typography	Low change
		Size +	Medium change
		Size -	Strong change
		Color	
		Location	
		Name	
		Shape	
		addition	
		Remove	
		Other	

Pack Predictive Model 12

## VISUAL UNITS

**Visual Units**

- Product Visual
- Visual of the ingredients of the product
- Icon associated with the brand
- Character
- Transparency of the product
- Abstract drawings
- Figurative drawings

For each visual units define:

Presence	Number	Pack change on Current pack	Intensity of change
Yes	Only for Abstract drawings and figurative drawings	No change	No change
No		Size +	Low change
		Size -	Medium change
		Color	Strong change
		Location	
		Name	
		Shape	
		addition	
		Remove	
		Other	



Pack Predictive Model 13

## COLOR UNITS

**Color Units**

- Number of colors
- Dominant colors
- Secondary colors

For Dominant and secondary colors define:

Presence	Number	Pack change on Current pack	Intensity of change	Specificity of the color on Product Category / variety	Pack change on Current pack
Yes		No change	No change	Specific	No change
No		Color	Low change	Category	Specific
		Nuances	Medium change	Variety	Category
		Addition 1 color	Strong change		Variety
		Addition several colors			
		Other			

Pack Predictive Model 17

## PACKAGING FEATURES

**Nature of the material**

Nature	Intensity of change	Specificity of the color on Product Category	Pack change on Current pack
Carton	No change	Specific	No change
Plastic	Low change	Category	Specific
Composite	Medium change		Category
Metal	Strong change		
Glass			
Other			

**Shape of packaging**

Shape	Intensity of change	Specificity of the color on Product Category	Pack change on Current pack
Circular	No change	Specific	No change
Square	Low change	Category	Specific
rectangular	Medium change		Category
Oval	Strong change		
Triangular			
Domes			
Other			



## Methodology : A 2 steps process

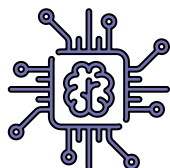
### 1 AI MODEL - BUILT ON PAST TESTS DATABASE

Precise documentation in the model of :

- the category specificities
- the geography and other elements
- **For each tested, route: the changes vs current pack (logo, colors, product rep, font, etc....)**

The model produces a **probability of performance**, based on past tests registered in the database

→ **RANKING OF ALL THE TESTED ROUTES**



### 2 COMPLEMENTARY EXPERT EVALUATION

- PRS INVIVO Senior experts team evaluation, to dig deeper **into the why of the ranking**
- Based on our proprietary expert scale built on 3 KPI (visibility / first impression / communication).
- *These evaluations are themselves weighed by coefficients derived from the algorithm.*

OVERALL SCORE	58	49	46	61
VISIBILITY	Green	Green	Orange	Green
FIRST IMPRESSION	Orange	Orange	Orange	Orange
COMMUNICATION	Orange	Orange	Orange	Orange
FIT WITH BRAND VISION	Orange	Orange	Orange	Green

Legend: Limited opportunity (Orange square) → Good opportunity (Green square)

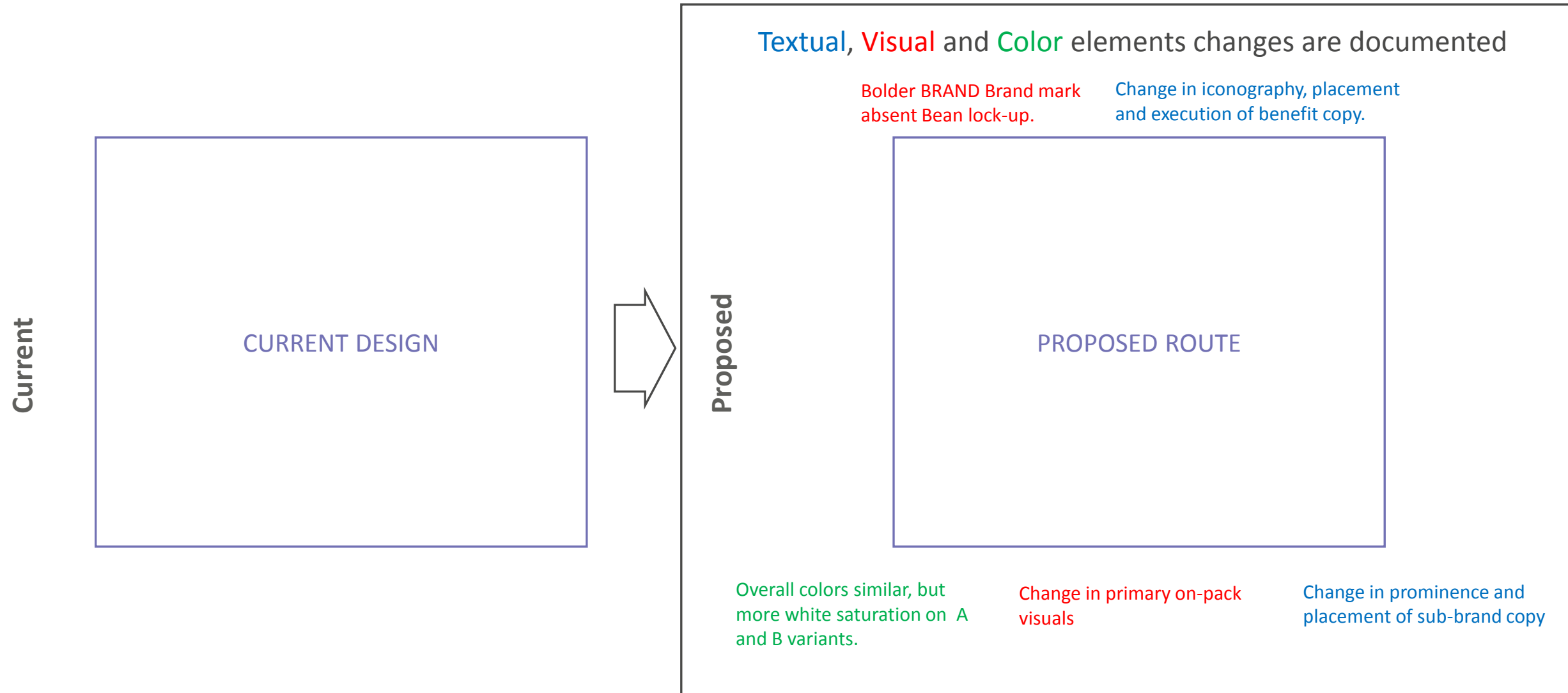
Clear ranking, evaluation and optimization of the proposed routes.





## Documentation of the Pack Changes

A detailed analysis of the pack changes is a key input for the model.

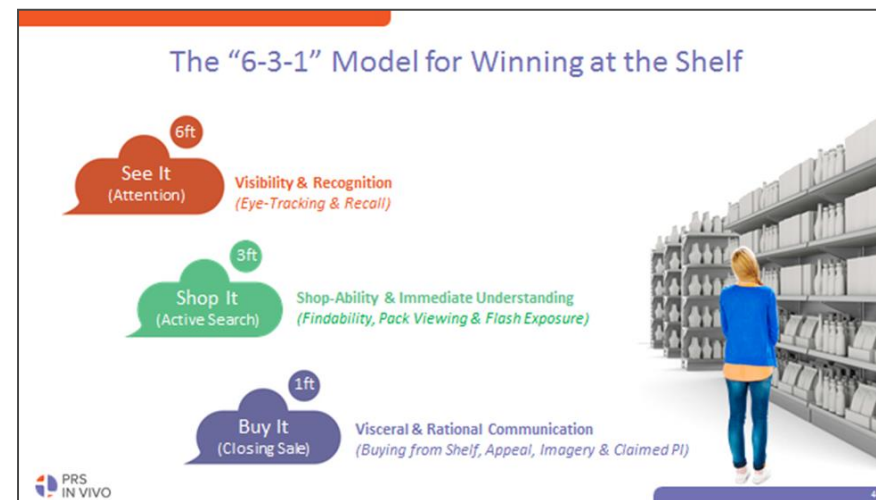




# What is the Output?

A Clear Profile of Each Route...

...on Key KPIs for In-Market Success.



- ✓ Shelf Presence
- ✓ Immediate Impression/Communication
- ✓ Fit to Design Objectives/Brand Vision



## Where we are today...



### NEW THINKING (BEHAVIORAL SCIENCE)



We have built the model based on behavioral data from thousands of studies in our historical database



### NEW DATA & ANALYTICS



Partnering with AI Experts to combine their knowledge with ours



### INCREASED TIME & BUDGET PRESSURE



Ability to deliver results in the time of one week for a fraction of common budgets



# THANK YOU VERY MUCH



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