



ACCELERATE  
SUCCESS

Digital  
**Transformation**  
to Digital  
RE-INVENTION  
in the fragrance industry

A close-up, side-profile photograph of a woman with long, wavy brown hair. She is holding a piece of pink, textured fabric to her nose and inhaling deeply, her eyes are closed in a state of sensory enjoyment. She is wearing a white lace-trimmed top. The background is a bright, out-of-focus window with a view of a cityscape.

## What's happening in the fragrance world?

# Industry Overview

## Market Size

The global fragrance and perfume market size was estimated at USD 61.79 billion in 2023, with a projected growth to USD 84.02 billion by 2028 at a CAGR of 6.34%.

## Product Line

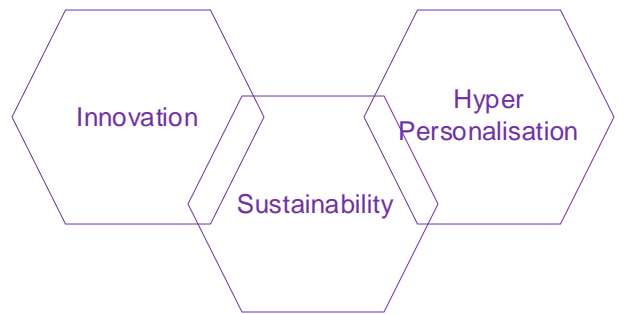
Spans across personal care, cosmetics, household products, and various industries.

Essential component in beauty and personal care products, contributing to personal hygiene, confidence, and individuality.





## Value Chain Drivers



← From Raw Materials Sourcing to Global Distribution →

## Market Dynamics

Celebrity endorsements, product advertising, and social media trends entice consumers to choose from different variants of fragrances.



## Challenges

- Brand counterfeiting
- Stricter regulatory standards for product safety, labeling compliance, and environmental considerations





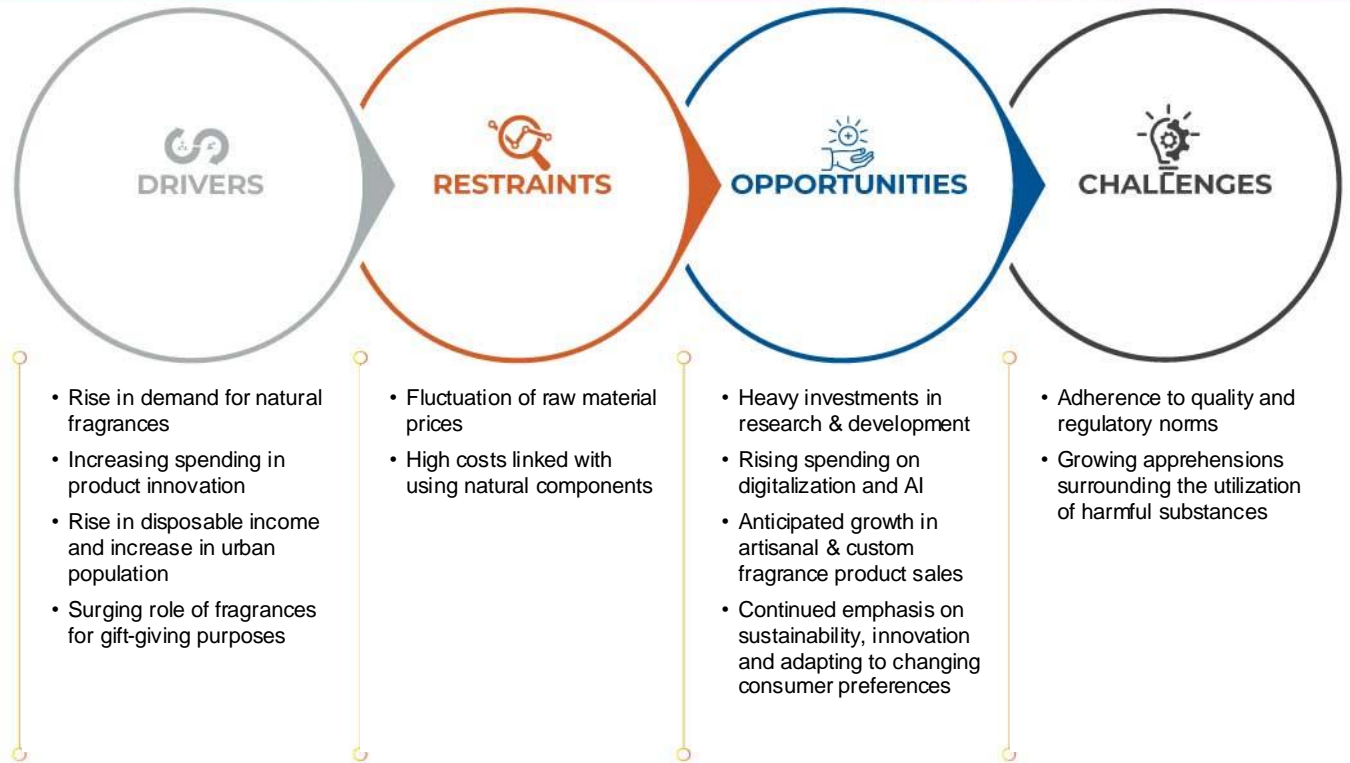
## Outlook

- Expected increase in demand due to expanding distribution network, e-commerce penetration, and rising demand for high-quality products.
- Technology driven innovation positively impact growth
- Generational attributes driving differentiation



## KEY INSIGHT

The rising adoption of fine fragrances for gifting purposes is expected to boost total market demand.



# Market Watch

## Focus on Sustainability

Industry aligning with sustainable initiatives emphasizing eco-friendly packaging and ethically sourced ingredients.

## Global Presence

- Asia-Pacific, particularly China, emerging as the fastest-growing market with increasing demand for luxury perfumes.
- Expanding distribution networks and penetration of e-commerce retail driving global reach.

## Innovation & Technology

- Ongoing research & development for novel fragrance formulations.
- Integration of technology, such as neuroscience-driven scent recommendations with science backed notes that target stress becoming a new purchase entry point. This will unveil personalized and functional performance with scent.

## Next-Gen Sustainability

The sustainable fragrance space will grow as advancements in biotech emerge and drive innovation in ingredients.

## Fragrance in the Metaverse

Fragrance goes phygital, from scent profiles that imagine how the internet smells to creating online worlds that link to individual fragrances, merging the digital and physical realms.

## Gen AI, Robotic Process Automations, Internet of Things (IoT) etc.



# Hyper Personalisation for the Experiential Generation

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**“Fragrances have the power to evoke memories, emotions and enhance our moods”**





- Gen Z can see right through inauthentic products. Having them actively involved in the creation of fragrance is essential.
- Being transparent about ingredients and creating fragrances that provide value while remaining authentic is very important to them.
- They prefer to have a ‘fragrance wardrobe’ as opposed to a single signature scent.
- Their desire to curate a cohesive fragrance assortment has fueled the rise of #PerfumeTok.



# Briefs inspired by the latest millennial trends

“Iredale Eau de Parfum” Inspired by the wreckage of the Peter Iredale on the shores of the Pacific Northwest, the essence of smoldering driftwood intermingles with notes of surf and sea



*Scent temporarily transports you somewhere new or allows you to seek comfort in nostalgia.*



# Gen Z and the rise of gender-neutral fragrances

“Unisex fragrances are popular with consumers who care about expressing their individual personality through their fragrance, They don’t want to be assigned a standard fragrance based on their gender, but would rather find a scent with unique personal appeal.”

– Eleanor Dwyer, US beauty and fashion research associate at market research company Euromonitor International.



a new fragrance for a man or a woman

in 2021 there was a 176 per cent increase in online discussion of gender-neutral fragrances.

That number keeps growing, and as a consequence the fragrance industry is starting to offer a catalogue of smells that focuses more on scents' personality than gender roles.

## Unisex fragrances

## New Generations and Labels

“People no longer want to be labelled, whether it’s gender, age or ethnicity, and instead want to be recognised for their individual wants and taste,”



## Quinnox Expertise and Experience in Similar Domain

# Vertical Domain Expertise



Industry Segment	Customers															
Fragrance & Ingredients	Firmenich		Coca-Cola Enterprises		Golden State Foods		Coca-Cola Refreshment		Reinhart Beverage Services		KRAFT Foods		Dean Foods			
Chemicals	3M				EcoLabs				Amway							
Manufacturing	Qualcomm				Motorola Mobility		Nokia		Motorola Solutions		Zebra		3M			
Others (MOND) Partner Collaboration	Nestle								Henkel							
Scheduling & Demand Management																
Procure to Pay																
Supply Chain Collaboration																
Supplier Relationship Management																
Order Management																
Order to Cash																
Digital Media Management																

Figure 1

Quinnox is organised by Verticals, and has developed technical and domain expertise in various business functions that **directly impact CPL Aromas operations.**

Figure 1 discusses industry segments and Value Chains (B2B etc.) where Quinnox brings expertise (colour coded to match clients, segments and core processes) through the Solution Architect Group (SAG), Delivery and operational members who will be deployed to the Factory.

**Key members** assigned to the engagements have worked on projects that include Order to Cash, Procure to Pay, Supply Chain and other core processes.

Figure 2

Figure 2 highlights additional examples from an Enterprise Architecture standpoint.

Quinnox has experience in Fragrances, Food and Ingredients, Manufacturing and core operational processes **and this expertise**

Supply Chain Management			Marketing & Product Mgmt.			Sales & Customer Care	
Supply Chain Planning & Collaboration	Demand Planning	Production Engineering & Support	Product Data & Life Cycle Management	Market Analysis	Research & Technology Development	Mgmt. of Customer Business Relationships	Customer Service Delivery
Transport Management	Production & Configuration		Product Design & Collaboration	Production & Configuration	Product Alliance Dev & Mgmt.	Customer Order Fulfillment Mgmt.	Returns & Disposal Mgmt
Inbound & Outbound Logistics	Materials Handling & Warehousing		Brand Product & Service Promotion		Demand Conditioning & Collaboration	Customer Request Handling & Assignment	
Purchasing Execution & Material Request Planning			Channel Development & Management			Customer Acquisition & Sales Mgmt.	
Strategy, Management & Planning							
Strategic Management		Business Strategy Management	Enterprise Transformation Management		Financial Planning	Financial Planning	
Resource & Business Operations Planning			Stakeholder & Government Relationship Mgmt.			Business Performance Mgmt.	
Enterprise Support & Resource Management							
Human Capital Mgmt.	Property Mgmt.	Supplies & Supplier Mgmt.	Asset Mgmt.	Financial Services	Legal Services	Administration & Personnel Support	Education & Training Services
						Biz Ops Program Dev & Execution	

# Digital Re-invention and Technology Integration

# RECOMBINING NATURAL AND ARTIFICIAL INTELLIGENCE



## **The Rise of AI and Data-Driven Perfumery**

Industry's commitment to digital transformation, innovation, and meeting evolving consumer demands.



**Generative AI (Gen AI) as a tool for R&D** will radically disrupt how you investigate and invest in new classes of fragrances and broaden your research to find more novel candidates for your regulated trials and evolving customer segments.

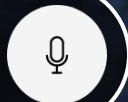
Generative AI models improve the process of identifying novel, patentable molecules and formulations with desirable properties.

Training GenAI models on large datasets of chemical structures and their associated properties allow the models to learn patterns and generate new molecules with similar characteristics

Discriminative & Generative AI helps 'Patent extension' of established fragrances nearing the public domain

Reduced cost to innovate and increased trial pipelines

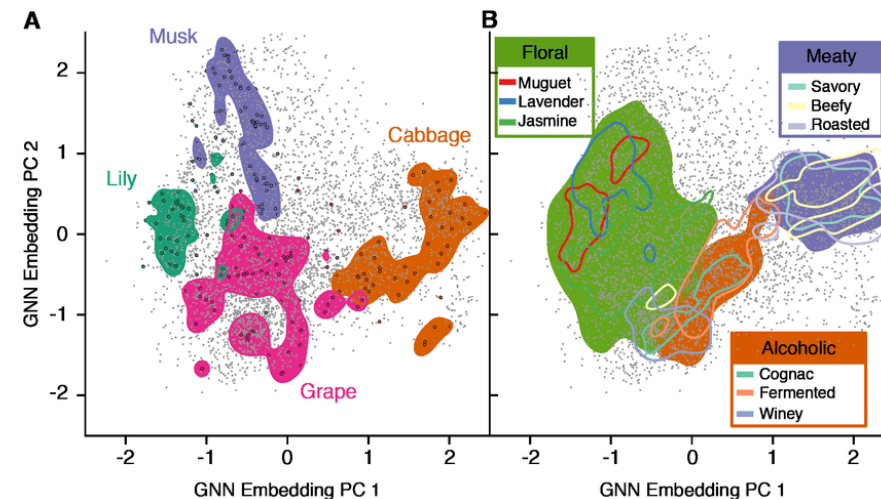
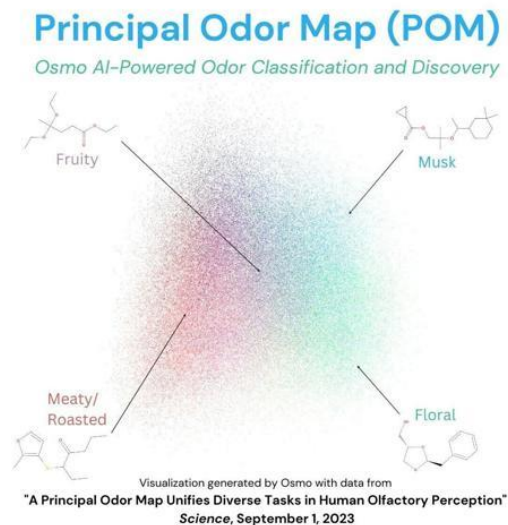
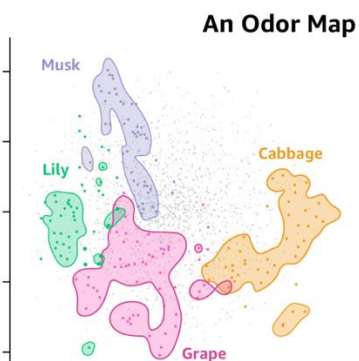
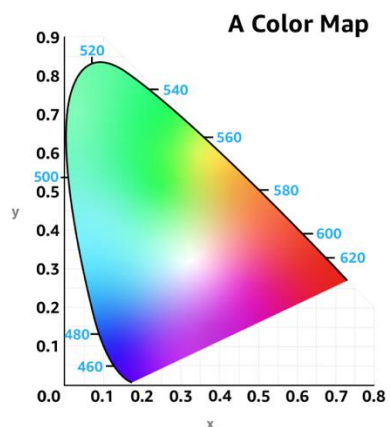
What do you want to create today?



# Digital Re-invention – Competition Check

osmo by Google

## Digital Mapping of Scents based on molecular structures




Using graph neural networks (GNN), Osmo CEO Alex Wiltschko and his team created a principal odor map (POM), the first generalized odor map of its kind that can outperform people at scent prediction. Their machine-learning model, which was trained on a dataset of 5,000 molecules, predicted the scent of hundreds of molecules that had never been smelled before, based solely on molecular structure.

Osmo has created a powerful platform that accelerates the search through the billions of molecules in chemical space to predict the scent of any molecule that exists or is manufactured.

**Goal 01** Lead the discovery of new scent ingredients that are safe, sustainable, and environmentally friendly.

**Goal 02** Create digital representations of smell that will change how we capture, transmit and remember scents.



Smell emotions



**MYRISSI**

Myrissi, part of Givaudan's 2025 strategy, captures and predicts consumers' emotional perception of fragrance. Based on a decade of academic research in brain imagery and AI, it aligns colors, emotions, and scents for an enhanced fragrance experience.



Well&Be

By pushing the boundaries of wellbeing understanding through renowned mood technologies and the principle of sensorial congruence, **Well&Be** helps define outstanding emotional product experiences for consumers, powered by fragrance, together with other product features, such as packaging colour.

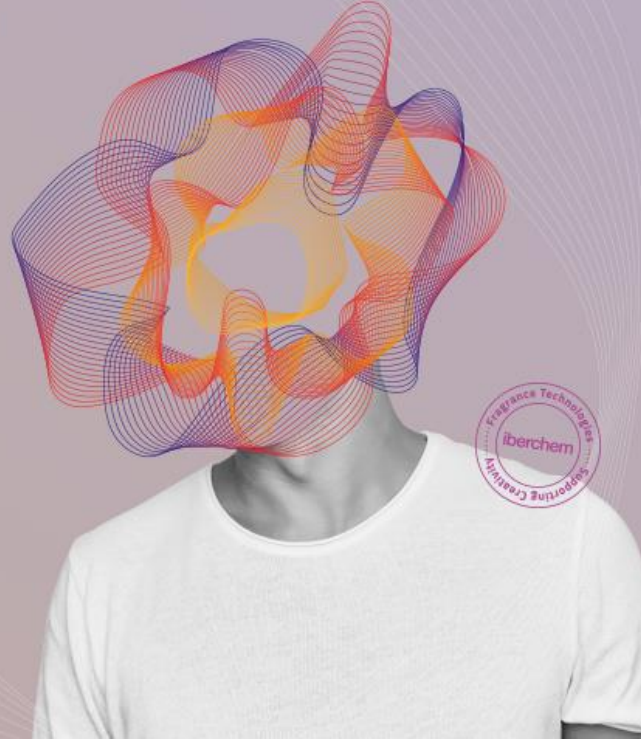
# WAVEMOTION

by iberchem

001

## THE NEUROSCIENCE OF SCENT

[iberchem.com/wavemotion-neuroscience-scent/](http://iberchem.com/wavemotion-neuroscience-scent/)



iberchem  
FRAGRANCES OF NATURE

# Vita

Decoding  
the Naturality  
of Fragrances

## Neuroscientific Investigation Program

Designed to scientifically evaluate the impact of fragrance on human psychology and physiology, Wavemotion will unveil insights into how scent can influence positive neural responses to transform the emotional landscape of consumers and elevate consumer wellbeing.

Utilising multi-dimensional, sophisticated neuroscientific techniques and physiological practices, Wavemotion will explore the processing of odour signals within interconnected structures of the brain, which are essential in determining emotional states before we even recognise the scent.

## Digital Fragrance Creation Tool

- Vita assists perfumers in developing natural fragrances according to ISO16128 standards, enhancing naturality data transparency.
- Accelerates the process, allowing for a more nature-conscious ingredient selection.

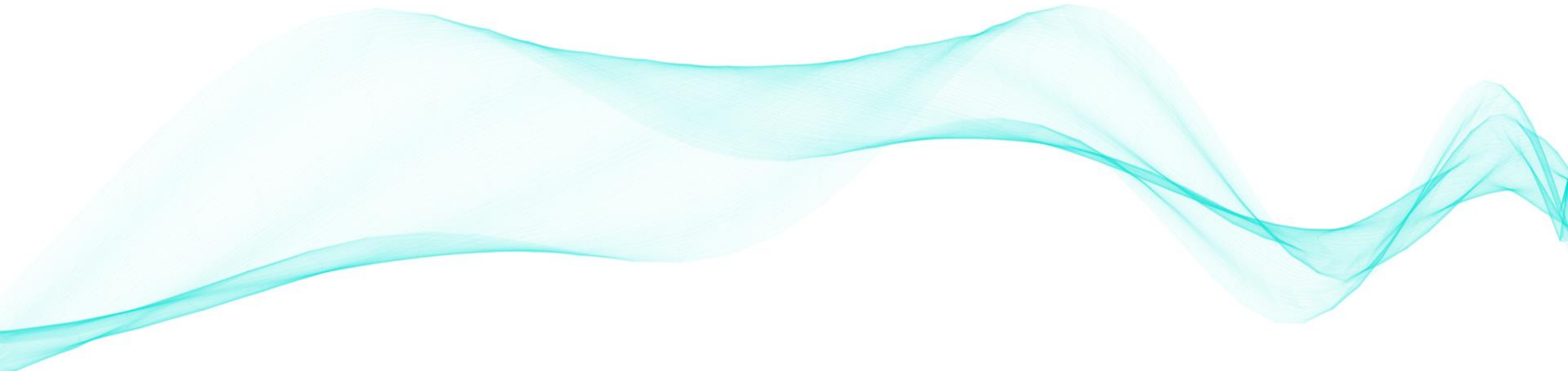


Firmenich

ADS

Accurate Dosing Systems

The high-tech robot is designed to automate the process of accurately measuring out hundreds of flavouring solutions, which go on to determine the taste profile of food and beverages. By offering the specialized dosing technology, allowing scent and flavour formulas to be compounded on the machine in minutes instead of hours, it outperforms competitors still using gravimetric or volumetric dosing.



## **AI-based ‘white noise for your nose’ that cancels surrounding malodours**

- Moodify AI-based algorithms easily generate malodour formulas that are said to outperform the best malodour control benchmarks created by any other supplier when introduced to the human nose, eliminating the perception of bad smells.
- The advanced algorithm selects the best combination of odour neutralisers, creating a customised formula that perfectly matches the target customer’s malodour requirements.
- The final formula has the concentration of components needed to obtain the expected effect, and the material amounts can be updated during the optimisation of the composition. Regulatory limitations and price considerations are also considered to ensure that customers get the most cost-effective and efficient solution.



## From aromas to algorithms: Smell Token digitizes fragrance experience

Smell Token

**The Scent NFT project is aimed at transforming the way humans perceive and interact with scents** by digitizing scents and **making them accessible through a digital platform**. Has use cases in transparent supply chains, anti-counterfeiting measures and efficient agreements.

- In this digital marketplace for scents, users can purchase and experience scents through a unique system. The core of the process lies in the “diffuser”. The “diffuser” is a physical device that functions like a printer where a specific aroma is created from a combination of different aromas released from a scent NFT
- Scents are represented as non-fungible tokens (NFTs), allowing users to own and experience scents digitally. By scanning the NFT with a smartphone, users can trigger the diffuser to emit the chosen scent, creating a unique aroma
- The “Smell Market” can allow for control over scent copyrights in the fragrance industry. The adoption of blockchain technology and NFTs further ensures authenticity, ownership, and even resale rights.
- The potential for collaborations with celebrities, brands, and influencers to create signature scents opens up new avenues for engagement and creativity.



**Web 3.0 & Metaverse technologies** in fragrance manufacturing ushers in a new era of transparency, traceability, and sustainability. Decentralized protocols and blockchain integration enhance supply chain visibility, ensuring authenticity and ethical sourcing, while empowering consumers with a personalized, interconnected fragrance experience.

- [Byredo](#), which is breaking new ground by teasing the first-ever perfume for Web3. Partnered with Nike owned digital fashion startup Rtfkt, it involves 26 ingredients that represent different emotions (harmony, naivety and virtue) which are digital collectibles valued same as the precious raw materials in the real world. They will come in limited quantities and be wearable on avatars. Collectors will also be able to create customised scents by mixing together two of the digital ingredients. 2,000 physical bottles of perfume will then be produced, individually numbered and identified with a type of chip, known as an NFC tag, that will connect it to you
- In 2022 alone, L’Oréal filed 17 trademarks for virtual cosmetics
- [Fenty Beauty](#) recently filed a series of trademarks for “downloadable virtual goods” for Web3
- In March, [Decentraland](#) hosted the first ever [Metaverse Fashion Week](#), where octopus waiters served drinks, one of the world’s biggest beauty brands made its debut and avatars strutted down the runway wearing realistic iterations of clothes by high-end labels like Dolce & Gabbana



## Our PoV and User Centric Approach

# Differentiation by Design



Our goal is to improve the way client see's its customers by **re-imagining the customer journey**



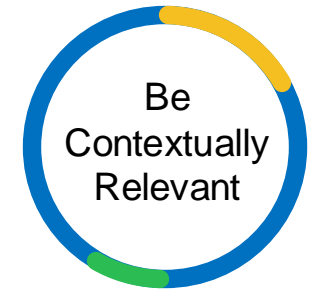
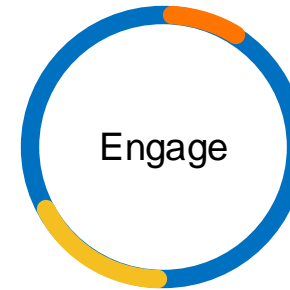
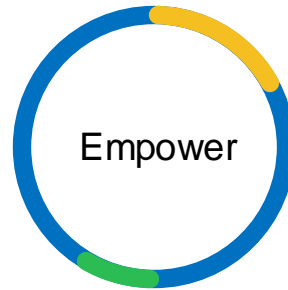
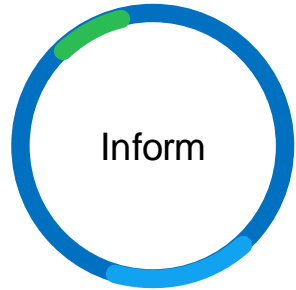
We aim to achieve this via the following interventions:

- Customer understanding and **their Journey Mapping**
- **Portal optimization** across devices
- **Human Factors (Usability) & Accessibility**

# Our User Experience Point of View (PoV)



To deliver the WOW Experience, our Web / Mobile Apps must

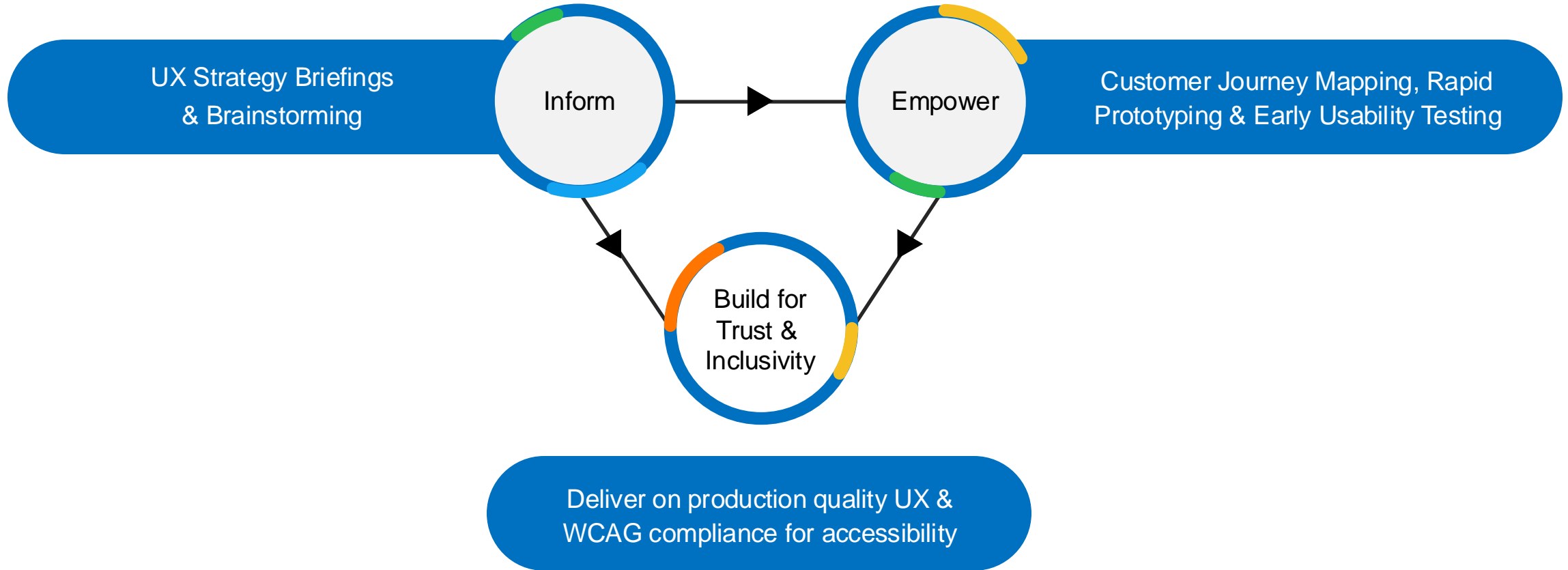


Customers, End Users & Stakeholders

Focus on Customer Interactions at every stage of the Customer Journey

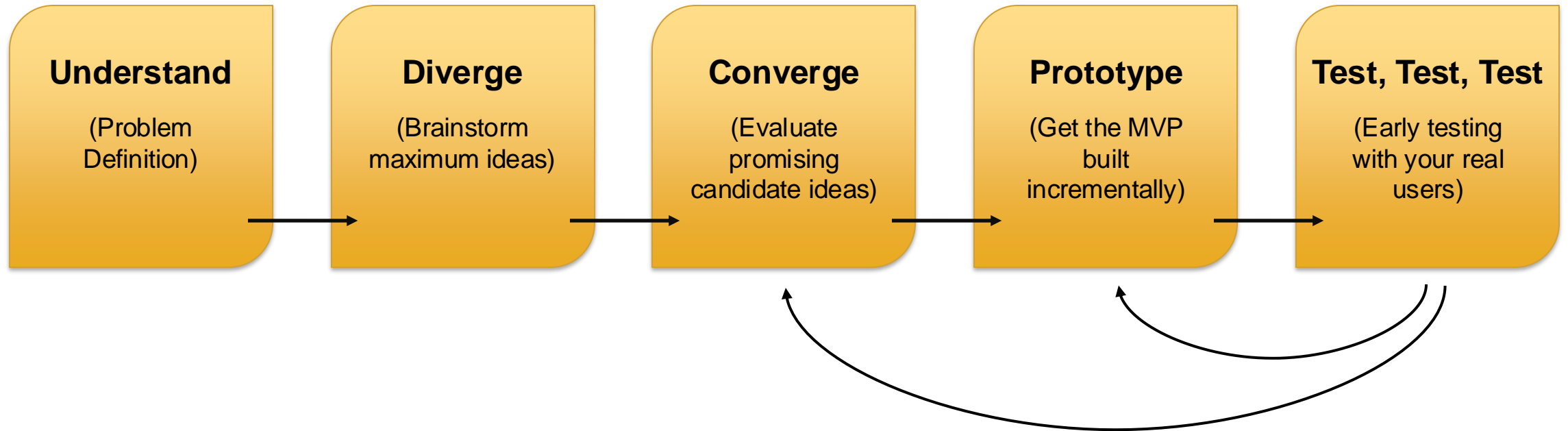
(discover, evaluate, buy, access, use, get support, leave, re-engage...)

# Our UX Engagement Process



# Design Sprints leading to MVP

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# Crafting Compelling Experiences across Touchpoints



Understand Business Need

Gather Business Requirements

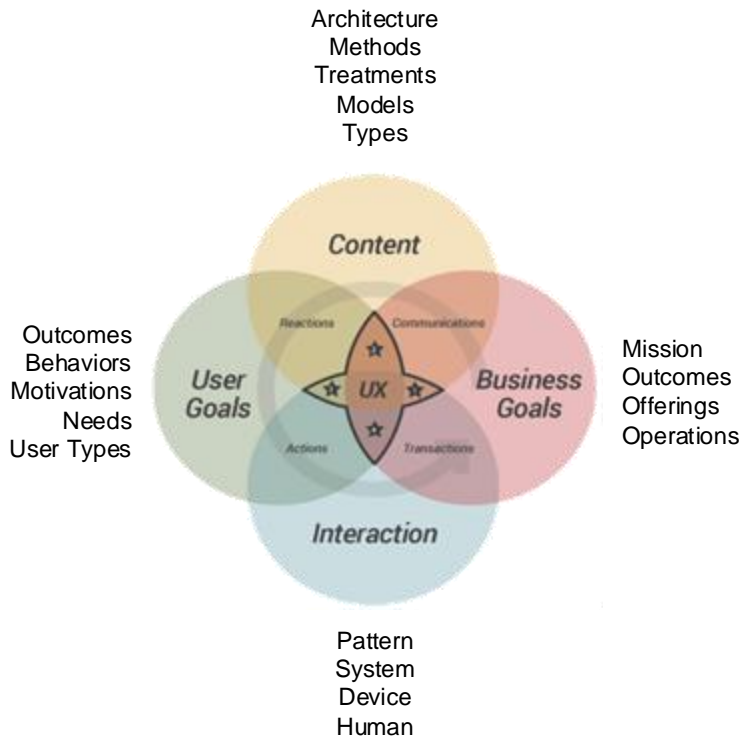
Customer Journey Mapping & Persona Creation

Low / High fidelity Wire framing

Designing the mobile User Experience

## CUBI Model

This model below helps bring out creativity, communication, simplification through multiple scenarios, collaboration and uncovering gaps. Below are the layers of this model.



## Personas - Journey Maps - Wire framing - Usability Testing



- Wireframes
- Paper Mockups
- UI Specifications
- Expert Reviews
- Use Case Scenarios
- Informal Usability Testing
- Functional Prototypes
- Formal Usability Testing
- Field Studies
- User Persona's
- Style Guides



## Customer centric & Usability tested Mobile UX Design



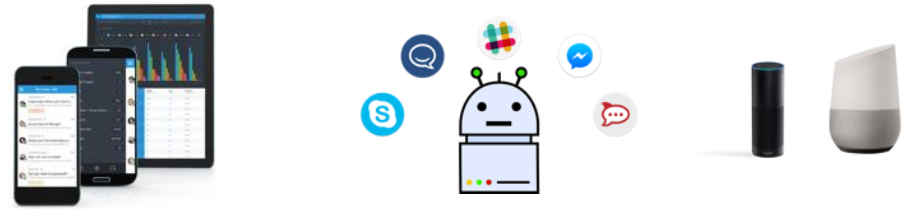
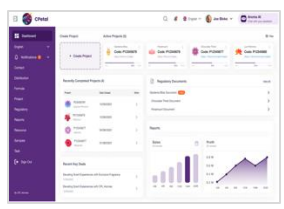
# Delivering the Brand Promise throughout the Customer's Journey

## User Persona's



STAGES	RESEARCH	BOOK APPOINTMENT	ARRIVE AND CHECK IN	WAIT DURING SERVICES	CHECK OUT	FOLLOW UP
<b>DOING</b>						
	<ul style="list-style-type: none"> <li>Will I be able to find the right car?</li> <li>Will I be able to find the right car?</li> <li>Will I be able to find the right car?</li> </ul>	<ul style="list-style-type: none"> <li>Are they flexible? Can I just show up?</li> <li>What's the best way to book an appointment?</li> <li>Can I cancel or reschedule? How?</li> </ul>	<ul style="list-style-type: none"> <li>Is it easy to find and get there?</li> <li>Where do I go? (Where do I talk to?)</li> <li>How long will the wait be?</li> <li>How much will the cost?</li> </ul>	<ul style="list-style-type: none"> <li>What can I do while I wait?</li> <li>Should I follow wait lists or come back later?</li> <li>Will I be done on time? I will wait!</li> <li>Can I search what they are doing to my car?</li> <li>How is my service friendly?</li> </ul>	<ul style="list-style-type: none"> <li>Will a mechanic tell me exactly what they did?</li> <li>Will I understand what they are talking to?</li> <li>What is the cost breakdown?</li> <li>Are there other tips for maintaining my car?</li> </ul>	<ul style="list-style-type: none"> <li>Where is my car? Is it in the workshop?</li> <li>When will I need to bring my car in again?</li> <li>What makes me happy, and what can I do on my own?</li> </ul>
<b>CUSTOMER EXPERIENCE</b>	<ul style="list-style-type: none"> <li>Needs lots of information on knowing who to turn to.</li> <li>Quick links.</li> <li>Customized info.</li> </ul>	<ul style="list-style-type: none"> <li>Appointments can be booked by phone or online but it's better either way.</li> <li>Online form asks for a lot of information.</li> <li>Phone booking is more convenient and friendly.</li> <li>Online booking will inspire personal email phone.</li> <li>Handily attend on the phone, but have to go through automated voice first.</li> </ul>	<ul style="list-style-type: none"> <li>Check in is fast and friendly but it doesn't feel like the car is getting fixed.</li> <li>No acknowledgment of how time matters.</li> <li>Phone ringing constantly and loudly.</li> <li>Customer not informed that check up is included with oil change, until he's asked.</li> </ul>	<ul style="list-style-type: none"> <li>Waiting area is more comfy than most but nothing similar and green feels good old but.</li> <li>Artifacts are not relevant to my service.</li> <li>No indication of my estimated completion.</li> <li>No entertainment.</li> <li>No acknowledgment from staff.</li> </ul>	<ul style="list-style-type: none"> <li>Checked in fast so problem that it doesn't register a huge claim to return.</li> <li>Knowledge and passion only came after everything.</li> <li>No clear breakdown of what was done, how it was done, or the price.</li> <li>No reason to stay connected between visits.</li> </ul>	<ul style="list-style-type: none"> <li>It is an awful experience that there's no space in my connected between visits.</li> <li>Teased better service than a dealer.</li> <li>Created receipt in a flash and.</li> <li>Nothing to show or connect with my newly green car!</li> </ul>
<b>OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>Do better the website.</li> <li>Clearer messaging.</li> <li>Simplest fastest navigation.</li> </ul>	<ul style="list-style-type: none"> <li>Streamline the appointment form and process.</li> <li>Customer profile on repeat appointments are easier for us.</li> <li>Use phone for getting additional details -&gt; is it worth it?</li> <li>What is going on with the car?</li> </ul>	<ul style="list-style-type: none"> <li>Display signage for parking.</li> <li>Labels if customer is new or returning (for repair).</li> <li>Acknowledge green thinking in communication.</li> <li>Provide a menu of services with prices.</li> <li>Acknowledge both final assembly. Maps would be helpful.</li> </ul>	<ul style="list-style-type: none"> <li>Provide custom options.</li> <li>Display the display of the website.</li> <li>Show staff interaction. It's good to have from staff who are passionate about identity.</li> <li>Provide a line up - alternative between public and private spaces.</li> </ul>	<ul style="list-style-type: none"> <li>Take highlights and show them to their profiles for those details about other user done.</li> <li>Empower customer to rate the site to increase their ratings.</li> <li>Show price comparisons for different parts (oil vs average each shop).</li> </ul>	<ul style="list-style-type: none"> <li>In the car service documentation, include diagnosis and use friendly terms.</li> <li>Follow up and build a relationship. Use customer feedback the environment with Green Garage, tips for the car, services, and instructions for special events.</li> <li>Customer profile for long term relationship, and record keeping, and order appointments.</li> </ul>

## Outcomes to achieve



Illustrated representation of customer expectations, experiences and feelings across multiple stages and channels while using a product or consuming a service

# Making your Digital Experiences Inclusive & Accessible



## Web Content Accessibility Guidelines 2.1

### Perceivable

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language

Provide alternatives for time-based media

Create content that can be presented in different ways (for example simpler layout) without losing information or structure

Make it easier for users to see and hear content including separating foreground from background

### Operable

Make all functionality available from a keyboard

Provide users enough time to read and use content

Do not design content in a way that is known to cause seizures

Provide ways to help users navigate, find content and determine where they are

### Understandable

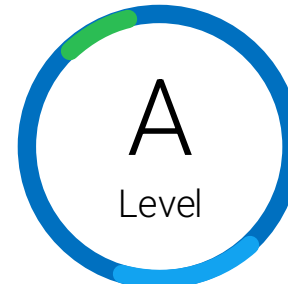
Make text content readable and understandable

Make web pages appear and operate in predictable ways

Help users avoid and correct mistakes

### Robust

Maximise compatibility with current and future user agents, including assistive technologies





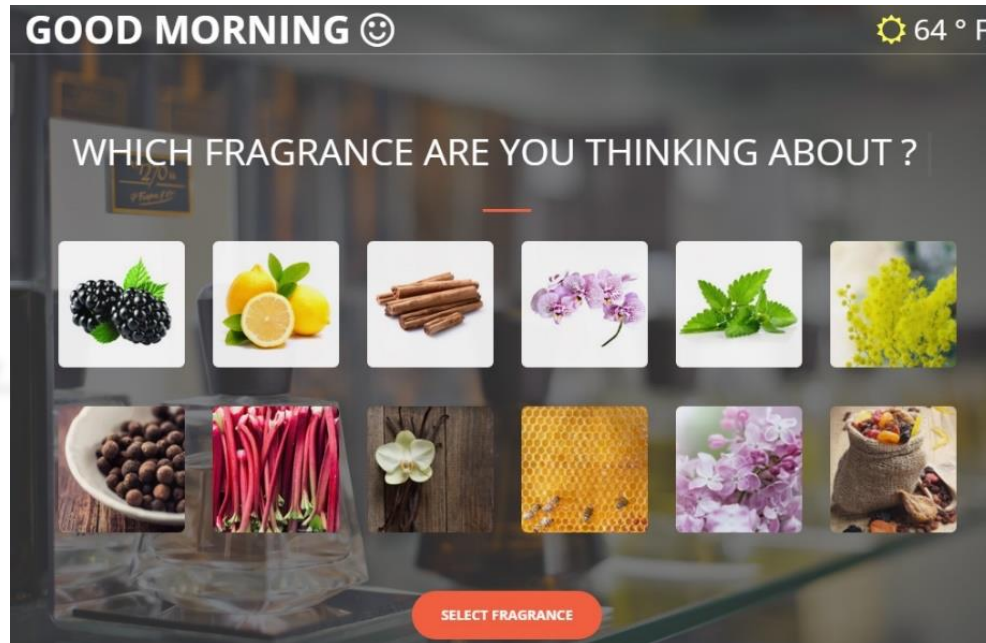


## Some Use Cases

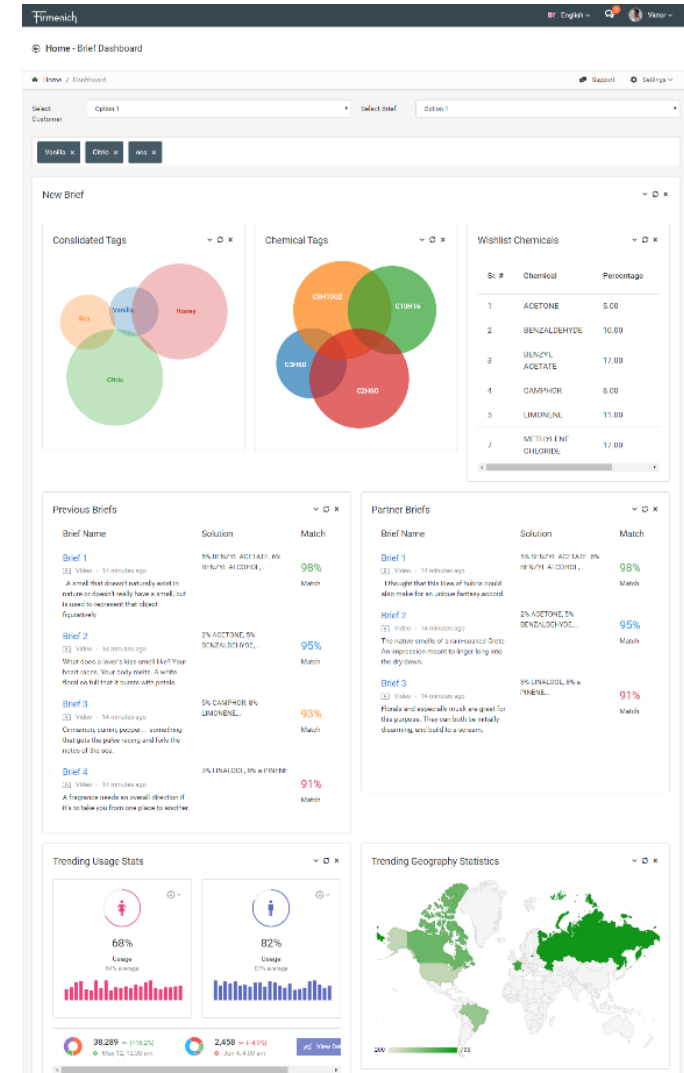
# Creative Brief Management Platform

- Enabling Customers to express brief in a creative way
- Helping our customer team in Go/No-go decision
- Providing Perfumers/Scientists with consumer insights
- Integrating with the other partner and third party systems
- Engaging our customer employees via Conversations

App UI



## Team – Brief Management Dashboard



# Stock Management



## Stock Management Experience

- Dashboard**  
Quick preview of newly added items.  
Quick preview of checked out list.  
Quick preview of expired products.
- Search**  
Look for specific products in the stocks by filtering on names, descriptions, etc.
- Add Product**  
Add new products to the stock.  
Associate product with Encyclopedia data.  
If product is not in Encyclopedia add product data in own app database.
- Check in/out**  
Scan to check in or check out products.  
Add notes when checking out products.
- Inventory**  
Checked out list.  
Know who has the product checked out.  
Checked in list.  
Inventory list.  
Product details.  
Advanced search.

## Concept

Digitalizing the stock management process in the product stock rooms

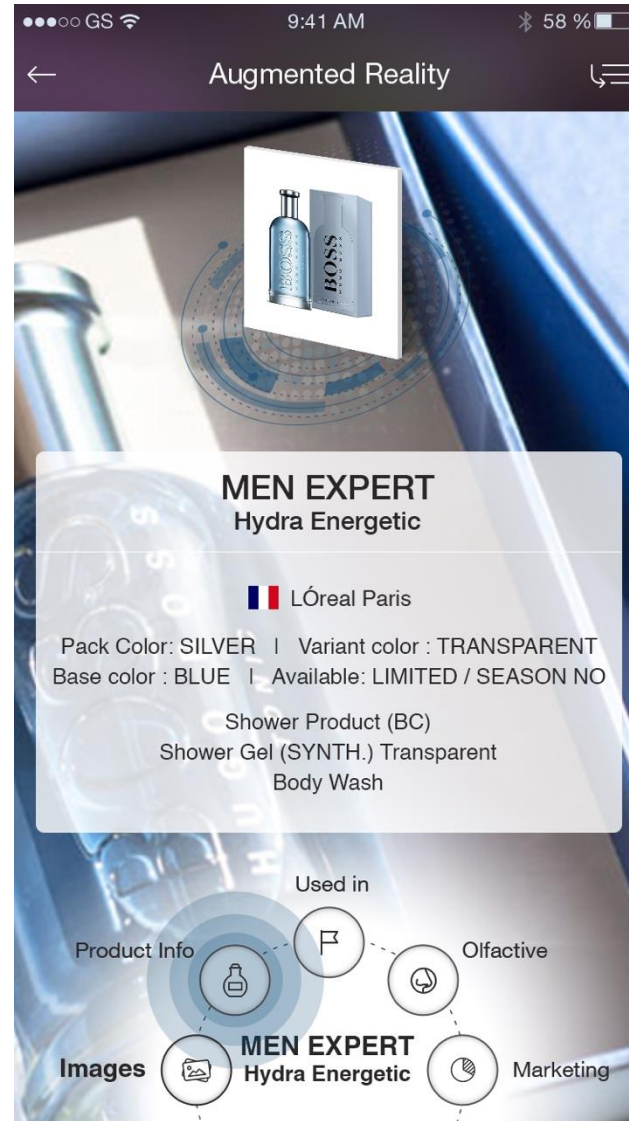
## Use Cases

- Help to manage product inventory.
- Use RFID/NFC technology along with mobile app to add, check in, check out
- Product Search
- Dashboard Reports

## Experience

The Lab team will be able to track samples and sample related information using the system

# Product AR Experiences



## Concept

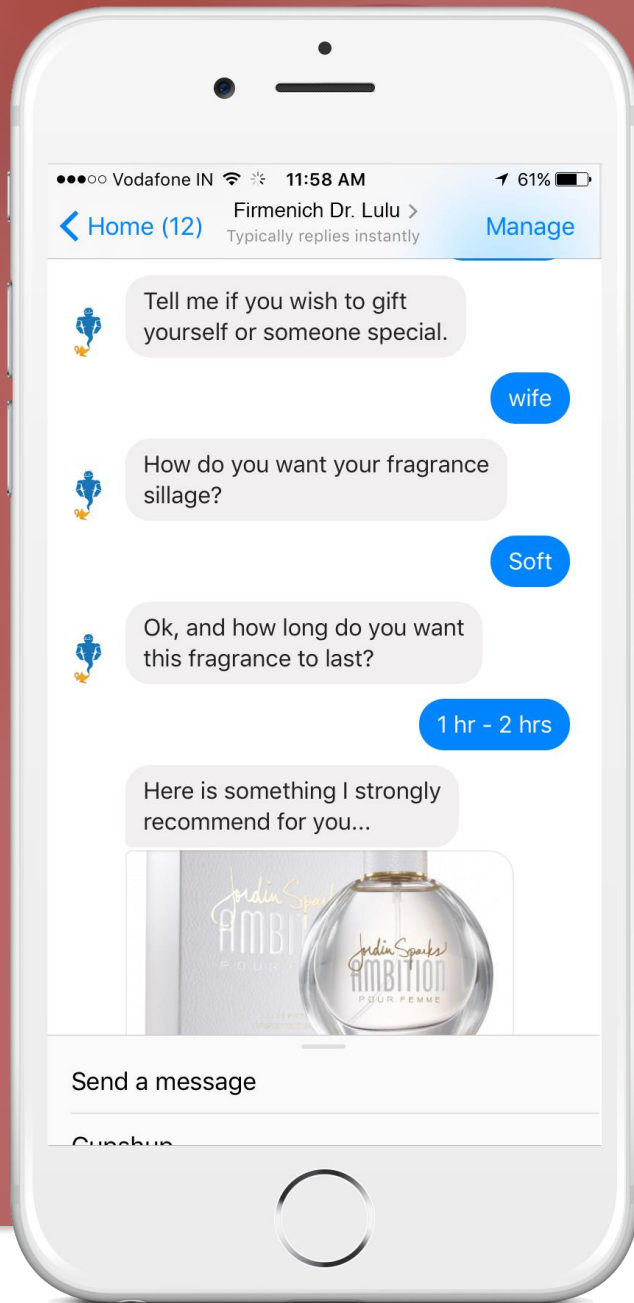
Create a Product Learning feature in an Inventory Management App for any fragrance company. The app would provide an interactive learning experience.

## Approach

- Researched and identified pre-trained model and computer vision to recognize the product (Open CV Library & Google Tensor flow)
- Designed a User Interface to display the dynamic product information

## Experience

The customer lab team would use the app to identify the products and get the product information using the device camera.



# Using Conversational Interfaces for exploration and conversion

The rate of respiratory disorders in North India has increased by 12% this year, Linalool compound is a known narcotic and can cause central nervous system disorder in the long run.



# WHAT WILL YOU CREATE TODAY?

Let's get started



Welcome to **CPetal**

Need an Account? [Sign Up](#)

Email Address

maxd@cplaromas.com

Password

\*\*\*\*\*

Sign In

[Forgot your password?](#)

Introducing the possibility to introduce an AI based avatar can act as an intelligent AI based assistant that can offer an altogether new experience of working with such tools.

Welcome to **CPetal Virtual Lab** where perfume scientists can create novel formulations using AI.

**Quinnox**  
accelerate success

Re-imagine  
**Formula Visualisation**

Perfume Scientist enters his formulation details and clicks on 'Validate Uniqueness' button to submit his formulation & look for relevant matches. He can also save this configuration by clicking on the 'Save Draft' button.

# Formula Visualiser

ACTIVITY LOG MY MESSAGES (2) NOTIFICATIONS (2) REPORTS

Search... Hi! Max D'Costa Perfume Scientist

Hello Max!  
Let's create a new fragrance, shall we?

## Enter your formulation details


What do you wish to call this fragrance?  
Wild Roses

Enter Ingredient Name	Enter Chemin Value	Enter Cost (£)
Linalool	Chemin@1	100.00
Hydroxycitronellal	Chemin@1	75.00
Bergamot	Chemin@1	50.00
Galbanum Oil	Chemin@1	50.00
Vetiver Oil	Chemin@1	30.00
Vanillin	Chemin@1	60.00
Musk Ketone	Chemin@1	40.00
Benzyl Acetate	Chemin@1	50.00
Heliotropine	Chemin@1	50.00
Rose Absolute	Chemin@1	50.00

(+ [Add More](#))

Save a Draft

Validate Uniqueness & Submit




## What happens next?


To help you make a unique creation, our AI based virtual perfume scientist will match your formulation against possible nearest matches so that you can make the necessary tweaks in your ingredients, costs and complexity parameters. So go ahead! Validate your formulation and create it.

On clicking the 'Validate Uniqueness' button & submitting his formulation, the AI assistant returns possible nearest matches for the submitted formulation. Here the Perfume Scientist can decide to go back and try another submission or do a quick view to see 'Similarity Visualisations' of the nearest matches to analyse the novelty factor.

# Formula Visualiser

ACTIVITY LOG MY MESSAGES (2) NOTIFICATIONS (2) REPORTS




Search... 

Hi! Max D'Costa  
Perfume Scientist 


45% Please wait!  
CPetal is validating your formulation!


## Oops!

I see matching formulations!

 <p>100%</p> <p>1 MATCH</p>	 <p>98%</p> <p>2 MATCHES</p>	 <p>68%</p> <p>3 MATCHES</p>
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[Try Another Formulation](#) [Submit as a Deviation](#)

 [View Match Results](#)





On clicking the 'Validate Uniqueness' button & submitting his formulation, the AI assistant returns possible nearest matches for the submitted formulation. Here the Perfume Scientist can decide to go back and try another submission or do a quick view to analyse the novelty factor through various visualisation formats (e.g. heatmap visualisation) and others.

# Formula Visualiser

Hi! Max D'Costa  
Perfume Scientist

ACTIVITY LOG
MY MESSAGES 2
NOTIFICATIONS 2
REPORTS

View Match Results

	YOUR FORMULATION: AHGPG	IDOJUY	MATCH 100%	SIASET	MATCH 98%	MATCH 98%
	 INGREDIENTS: 100% COMPLEXITY: 25% COST: £100 <span style="font-size: small;">more +</span>	 INGREDIENTS: 100% COMPLEXITY: 25% COST: £100 <span style="font-size: small;">more +</span>		 INGREDIENTS: 100% COMPLEXITY: 25% COST: £100 <span style="font-size: small;">more +</span>	 INGREDIENTS: 100% COMPLEXITY: 25% COST: £100 <span style="font-size: small;">more +</span>	
925001	83	86		65	65	
925002	85	81		65	65	
925003	95	88		61	77	
925004	95	83		75	76	
903295	91	81		72	71	
918325	97	85		77	81	
905498	93	90		83	83	
944600	91	88		85	88	
956770	98	88		88	90	
959820	100	89		88	80	
939549	91	83		90	76	
943910	93	92		74	88	
937540	93	88		90	73	
992465	96	78		61	75	
949044	89	73		38	66	
905985	80	70		30	37	
924635	38	38		18	18	
910870	30	15		15	15	
925002	18	15		22	10	
903045	15	22		45	32	

On clicking the 'Validate Uniqueness' button, it displays a brief card view of nearest matches to the reference formulation along with some additional details like Ingredients, Complexity, Cost, and Match %). Here the Perfume Scientist can select the items which he wants to compare to see the ingredient level details.

# Formula Visualiser

ACTIVITY LOG   MY MESSAGES   NOTIFICATIONS   REPORTS   Search...   Hi! Max D'Costa, Perfume Scientist

## View Match Results

YOUR FORMULATION: AHGPG

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

- F1
  - 25 Ingredient 1
  - 50 Ingredient 2
- F2
  - 20 Ingredient 1
  - 30 Ingredient 2
- F3
- F4
  - 20 Ingredient 1
  - 30 Ingredient 2
- F4
  - 20 Ingredient 1
  - 30 Ingredient 2

Displaying formulations that closely match your creation

**MATCH 100%**

IDOJUY

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 98%**

SIASET

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 98%**

ITIOD

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 68%**

IDOJUY

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 68%**

IDOJUY

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 68%**

IDOJUY

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

**MATCH 68%**

IDOJUY

INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

COMPARE

Clear   Compare

On clicking the 'Compare' button it shows this 'Tree View' as one of the Visualization Options. Additional Visualization options can be selected from the top right section by selecting the appropriate visualization styles.

# Formula Visualiser


Hi! Max D'Costa  
Perfume Scientist

ACTIVITY LOG MY MESSAGES (2) NOTIFICATIONS (2) REPORTS

Search...

## View Match Results

**YOUR FORMULATION: AHGPG**



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

more +

Switzerland

F1  
25 Ingredient 1  
50 Ingredient 2


F2  
20 Ingredient 1  
30 Ingredient 2

F3

F4  
20 Ingredient 1  
30 Ingredient 2

F4  
20 Ingredient 1  
30 Ingredient 2  
20 Ingredient 1  
30 Ingredient 2

**IDOJUJ**



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

more +

United Kingdom

F1  
25 Ingredient 1  
50 Ingredient 2


F2  
20 Ingredient 1  
30 Ingredient 2

F3

F4  
20 Ingredient 1  
30 Ingredient 2

F4  
20 Ingredient 1  
30 Ingredient 2  
20 Ingredient 1  
30 Ingredient 2

**SIASET**



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

more +

Canada

F1  
25 Ingredient 1  
50 Ingredient 2

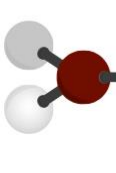
F2  
20 Ingredient 1  
30 Ingredient 2

F3

F4  
20 Ingredient 1  
30 Ingredient 2

F4  
20 Ingredient 1  
30 Ingredient 2  
20 Ingredient 1  
30 Ingredient 2

**ITIOD**



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

more +

Switzerland

F1  
25 Ingredient 1  
50 Ingredient 2

F2  
20 Ingredient 1  
30 Ingredient 2

F3

F4  
20 Ingredient 1  
30 Ingredient 2

F4  
20 Ingredient 1  
30 Ingredient 2  
20 Ingredient 1  
30 Ingredient 2

CREATE FORMULA  
MENU ITEM 2  
MENU ITEM 3  
MENU ITEM 4

This is another Visualization option showing matches at the Ingredient level.

# Formula Visualiser


ACTIVITY LOG   MY MESSAGES <sup>2</sup>   NOTIFICATIONS <sup>2</sup>   REPORTS

Search...

Hi! Max D'Costa  
Perfume Scientist

## View Match Results

**YOUR FORMULATION: AHGPG**



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100


**+**  
CREATE FORMULA

**+**  
MENU ITEM 2

**+**  
MENU ITEM 3


**+**  
MENU ITEM 4

**IDOJUY** MATCH 100%



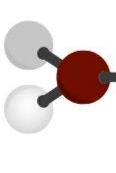
INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

**SIASET** MATCH 98%



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

**ITIOD** MATCH 98%



INGREDIENTS: 100%  
COMPLEXITY: 25%  
COST: £100

**AHGPG**

```
graph TD; AHGPG -- 25 --> 4567; AHGPG -- 50 --> XPUN; XPUN -- 20 --> 5637; XPUN -- 30 --> UYTN; UYTN -- 20 --> 3410; UYTN -- 30 --> 6903;
```

**IDOJUY**

```
graph TD; IDOJUY -- 25 --> 4567; IDOJUY -- 55 --> XPUN; XPUN -- 20 --> 5637; XPUN -- 30 --> UYTN; UYTN -- 60 --> 3410; UYTN -- 20 --> 6903;
```

**SIASET**

```
graph TD; SIASET -- 25 --> 4567; SIASET -- 50 --> XPUN; XPUN -- 20 --> 5637; XPUN -- 30 --> UYTN; UYTN -- 20 --> 3410; UYTN -- 30 --> 6903;
```

**ITIOD**

```
graph TD; ITIOD -- 25 --> 4567; ITIOD -- 55 --> XPUN; XPUN -- 20 --> 5637; XPUN -- 30 --> UYTN; UYTN -- 60 --> 3410; UYTN -- 20 --> 6903;
```

This is the 'Mind Map' visualization view at the Ingredient Level.

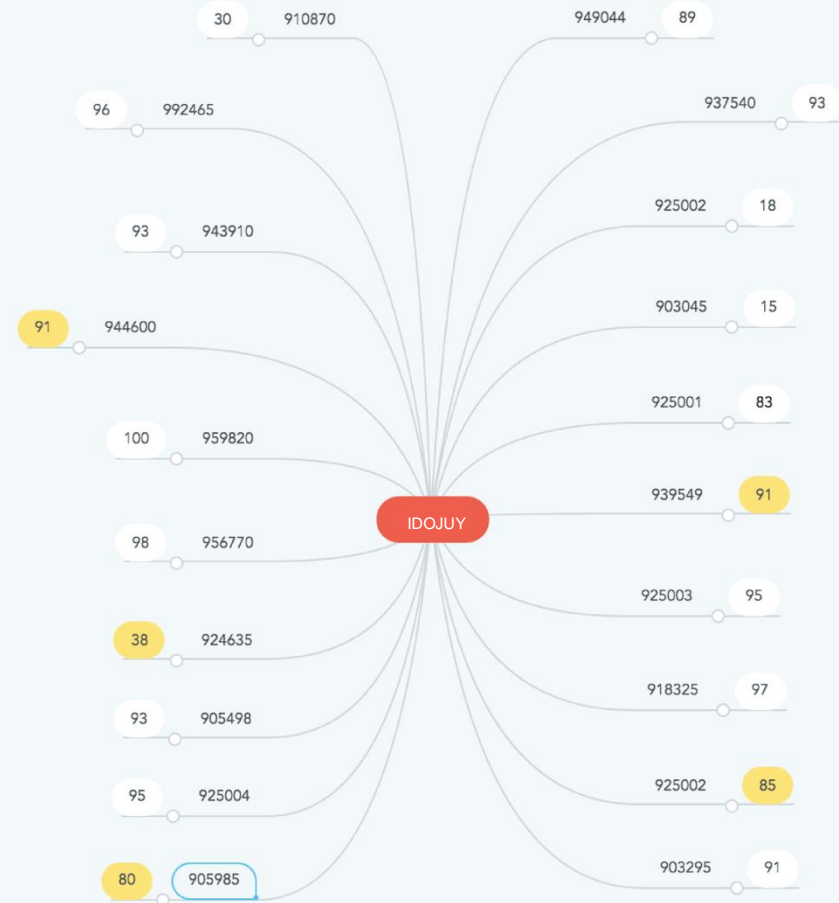
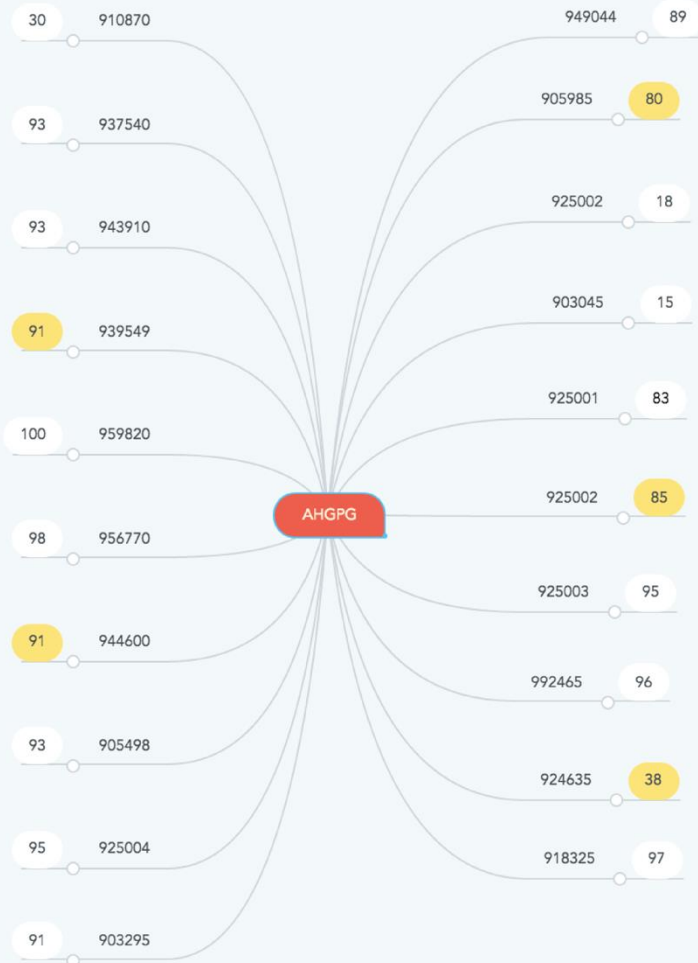
### View Match Results



YOUR FORMULATION: **AHGP**

IDOJUY

MATCH  
**100%**



▶ NEXT



CREATE  
FORMULA



MENU  
ITEM 2



MENU  
ITEM 3



MENU  
ITEM 4



» ACCELERATE  
SUCCESS

**Thank you**

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