

A consumer use behaviour study to evaluate mouth level exposure, mouth hold time and average daily consumption among Velo oral nicotine product consumers in the UK and Sweden

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OUTLINE

- 1 Background & Rationale
- 2 Study Objectives & Methodology
- 3 Market Comparison: UK vs Sweden
- 4 Consumer Behaviour Insights

Background & Rationale

Previous Research and Findings

Survey research (Prasad et al, 2022) demonstrated key oral nicotine pouch usage patterns including key differences across markets.

- Sweden, with its history of snus use, showed:
 - Longer mouth hold times (MHT)
 - Preference for higher nicotine strengths
 - Greater product familiarity
- The UK, a newer market, showed:
 - Shorter mouth hold time
 - Preference for lower nicotine strengths and fruit flavours

Current study was designed to build on these findings beyond self reported data by...

- Collecting quantitative and qualitative data through controlled testing and home use.
- Focusing on UK vs Sweden to explore how market maturity influences consumer behaviour.

Prasad K et al. (2022). Assessing consumer use and behaviour patterns of oral nicotine pouches in a multi-country study. *Int J Sci Rep*, 8(6):173–176.



Study Objectives & Endpoints

Objective: To understand the consumer behaviour (mouth hold time, average daily consumption, and interval time) and assess sensory perception of oral nicotine pouches amongst users in the UK and Swedish population, through a two-arm study: Central Location Testing (CLT) and Home Use Testing (HUT).



Endpoints

- Average mouth hold time and average interval between pouch use collected using the Smart Tin device
- Average self-reported mouth hold time and average daily consumption over 4-days home use testing, per product
- Sensory product evaluation questionnaire



Study Participants

Sample size

UK = 82 participants
Sweden = 72 participants
Total = 154 participants

Eligibility

- 21-65 years
- Regular Oral Nicotine Pouch Users



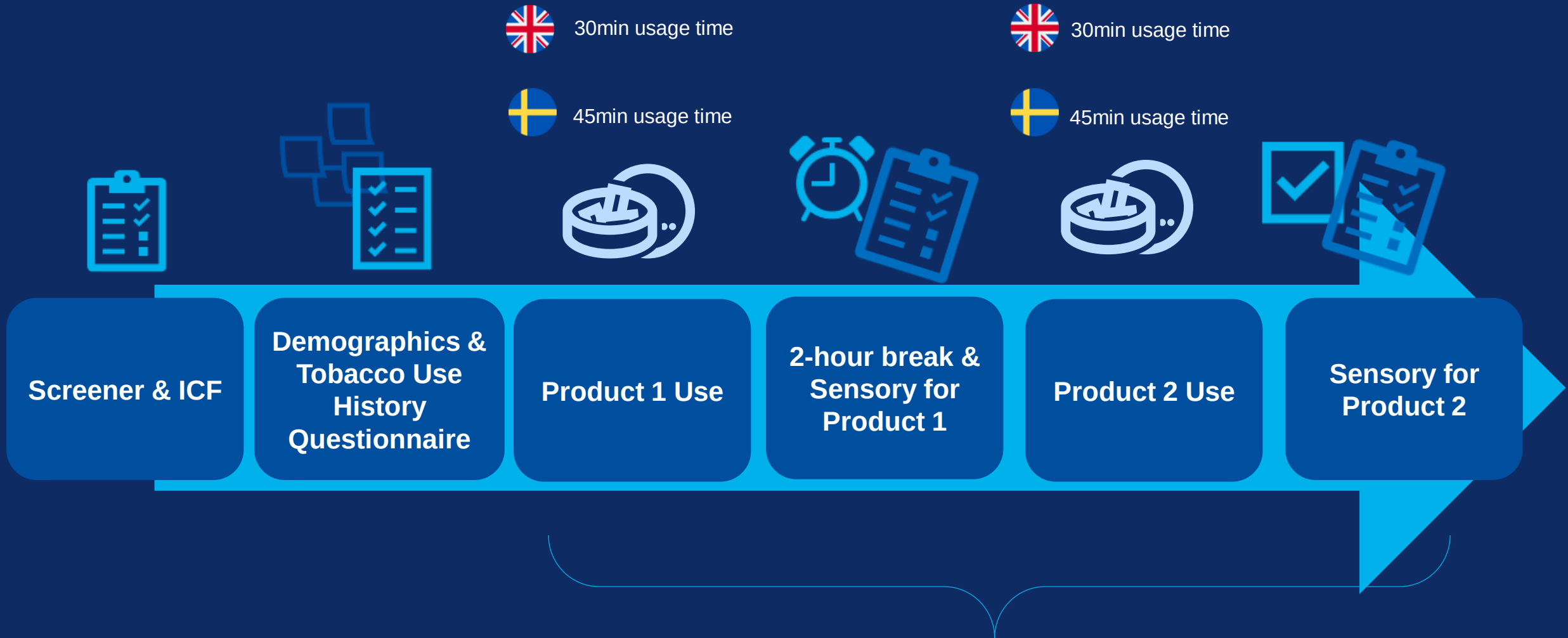
Products*

6 oral nicotine pouches per market of varied nicotine strengths and flavours

Central Location Testing

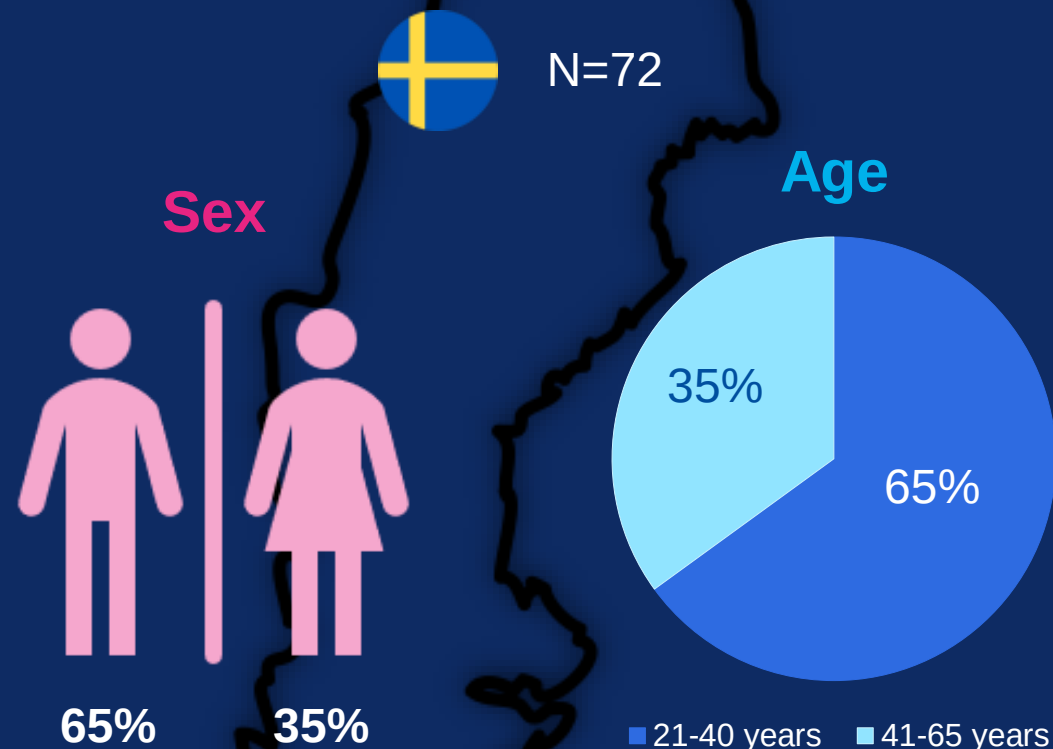
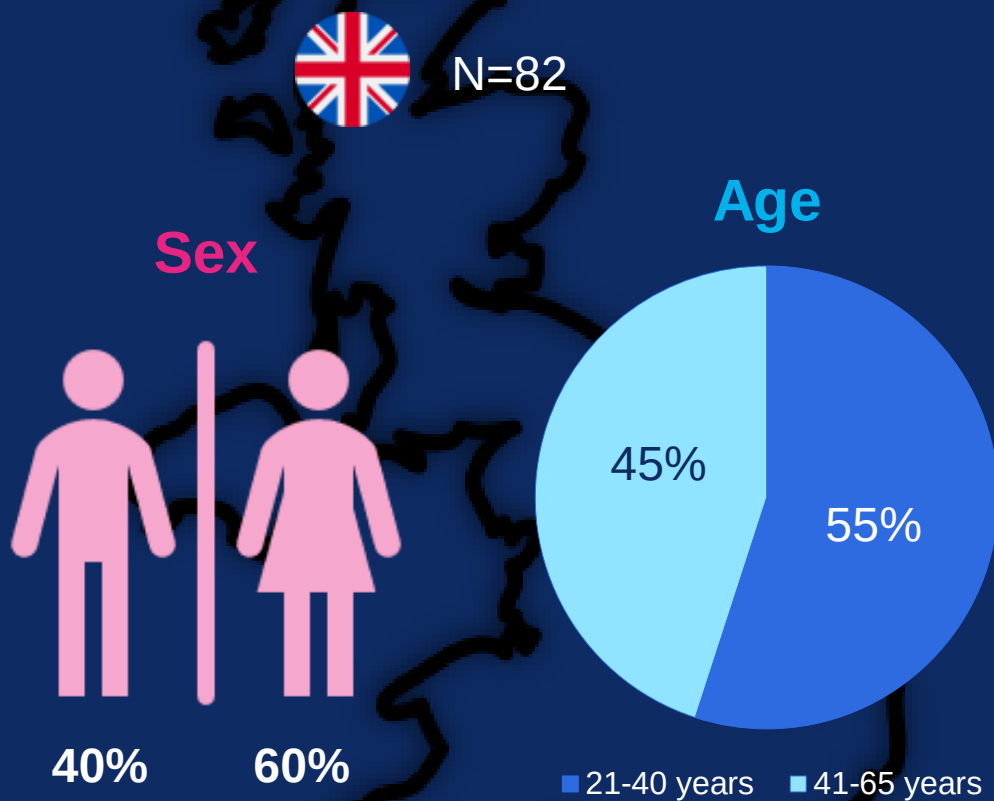


Methodology - Central Location Testing

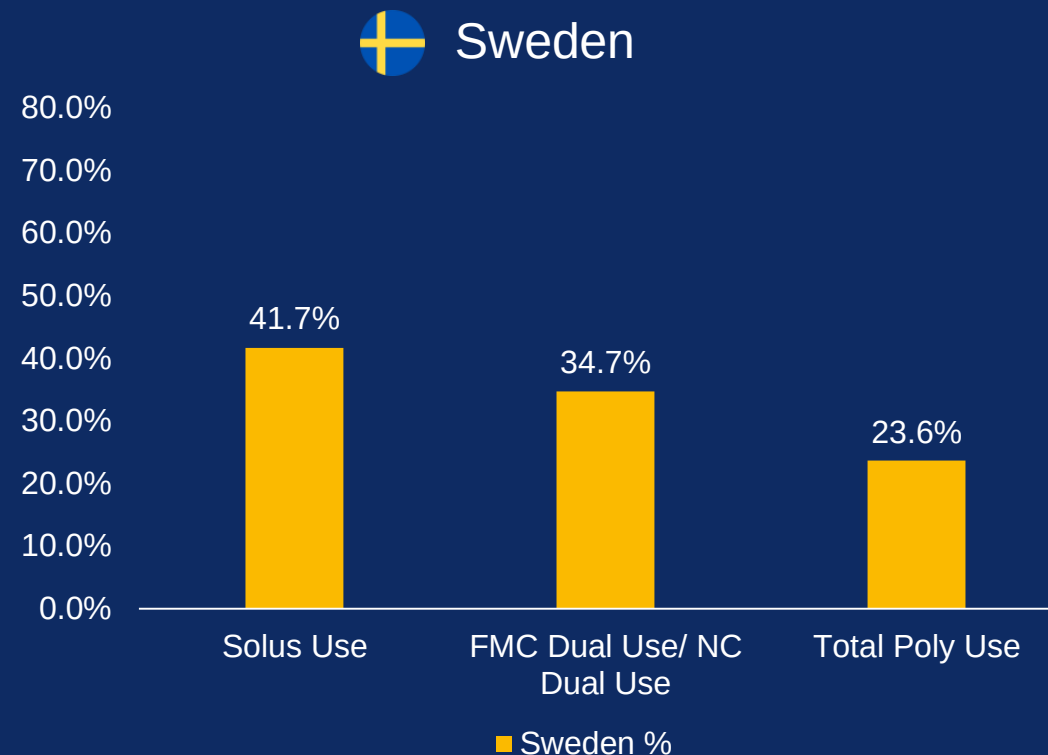
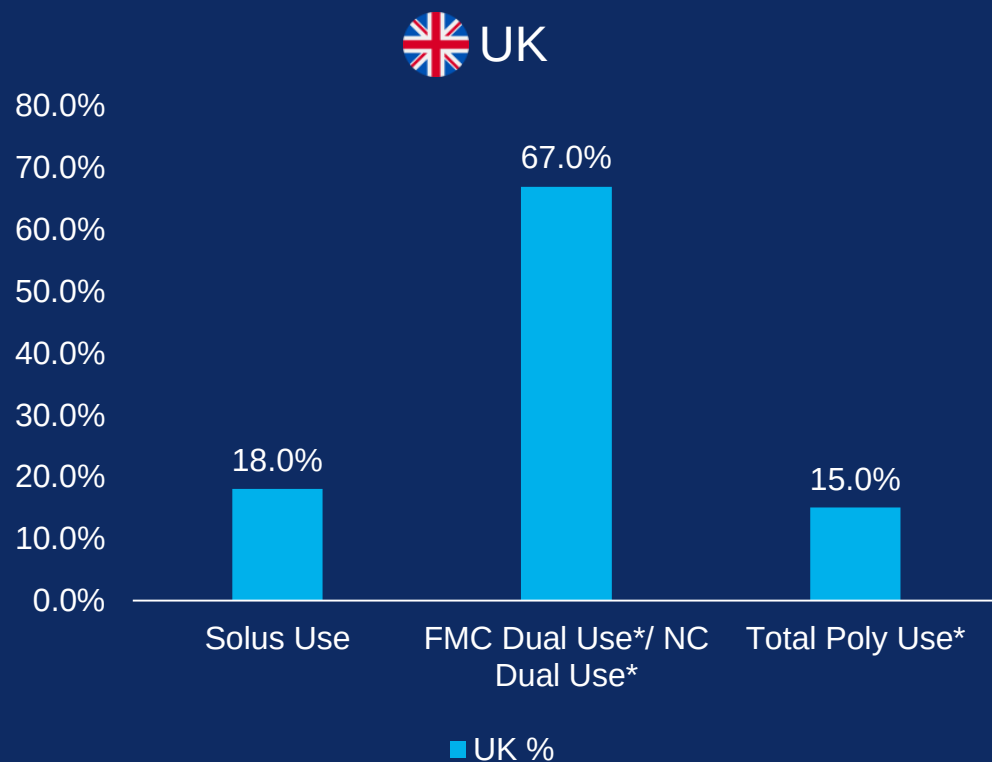


Repeated for 6 products over 3 separate days

Demographics Breakdown



Participant Solus/Dual/Poly Use*: Product Usage Comparison



*FMC Dual Use refers to the use by an adult** consumer of both FMC products and potentially reduced risk tobacco and nicotine products which, for many smokers, is part of a transitional period where those consumers move towards a complete switch to potentially reduced-risk products by reducing the consumption of combustible tobacco products and replacing them with one or more potentially reduced-risk products.

†BAT is clear that smokers should not delay making a complete switch.

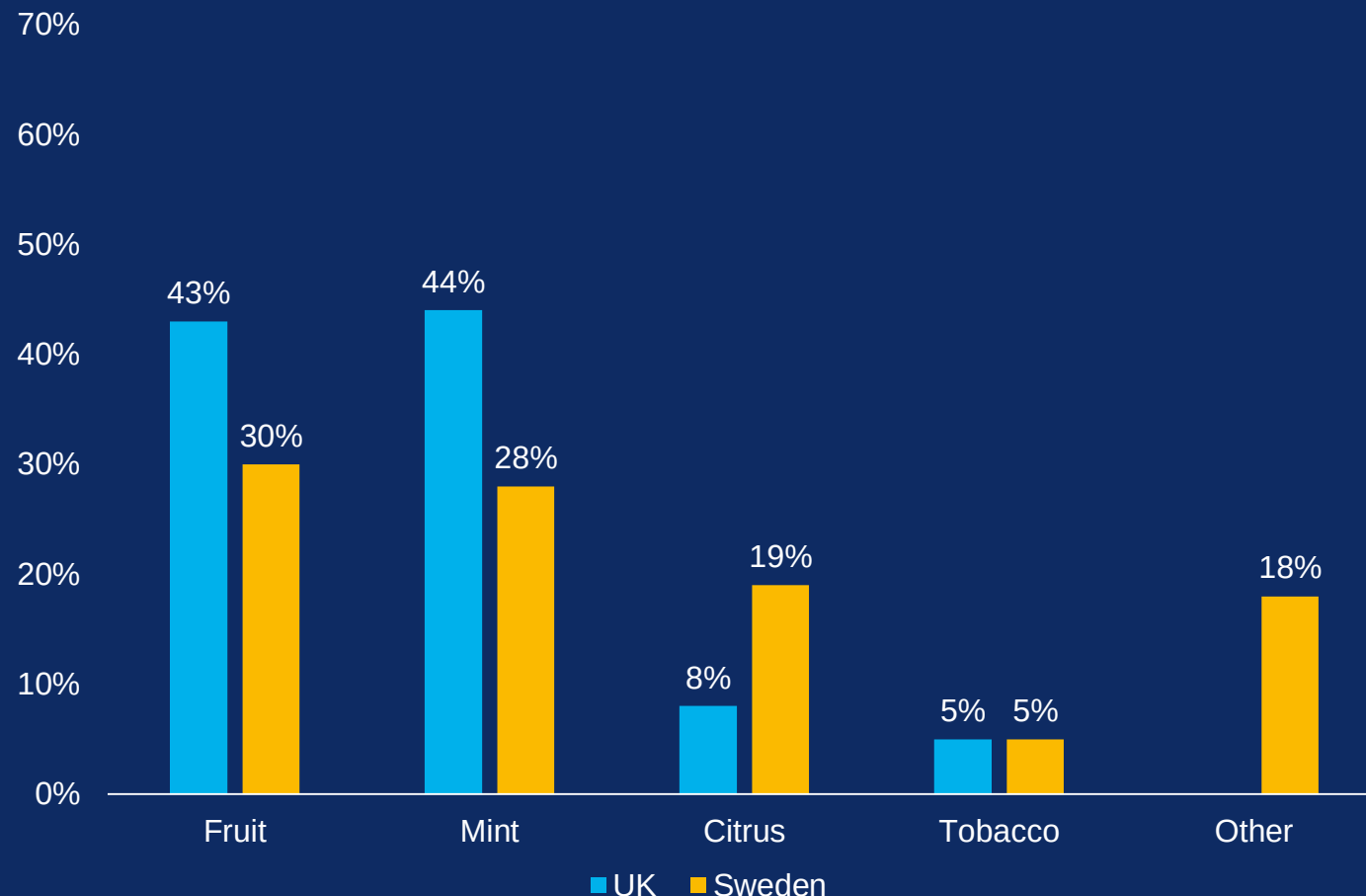
* NC Dual Use refers to the consumption of two potentially reduced-risk tobacco or nicotine product categories by adult** consumers who do not consume any FMC products.

* Total Poly Use refers to adult** consumers consuming two or more tobacco and/or nicotine products, which may or may not include FMC products.

**As defined by the relevant local law but shall in no circumstance refer to any person under the age of 18; and shall in no circumstance refer to any person under the age of 21 in the US.

Participant Baseline Use Preferences & Use Patterns

Most Used Self-Reported MO Flavours



Average Self-Reported Daily Consumption

 : 4 pouches

 : 13 pouches

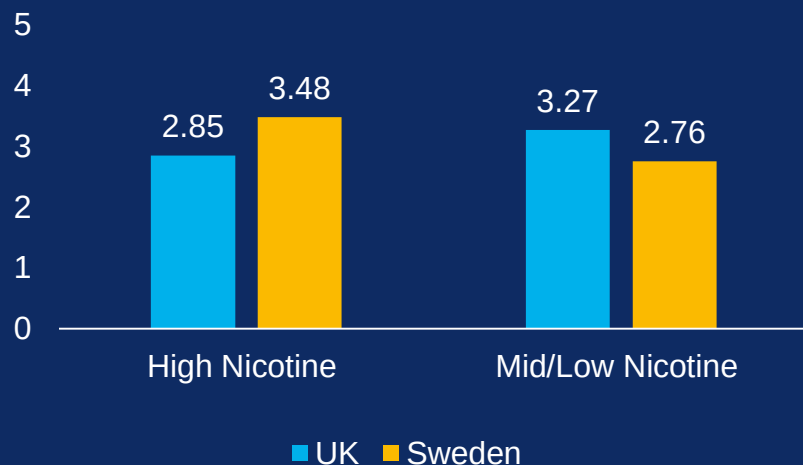
Average Self-Reported Mouth Hold Time

 : 22 mins

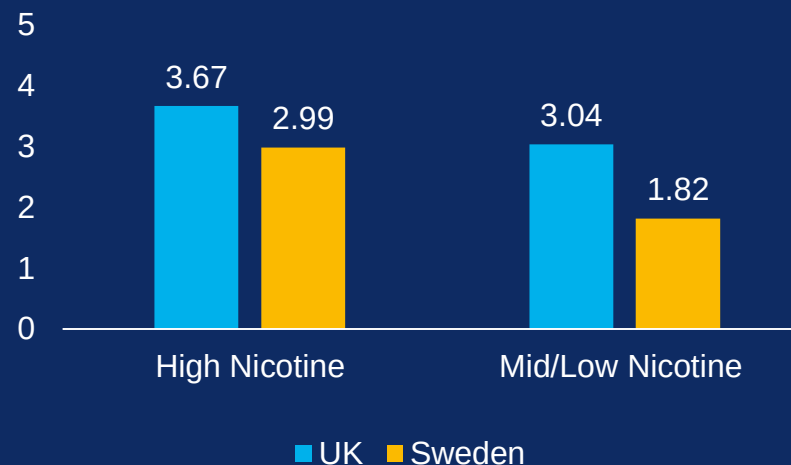
 : 47 mins

Sensory Product Evaluation : UK & Sweden

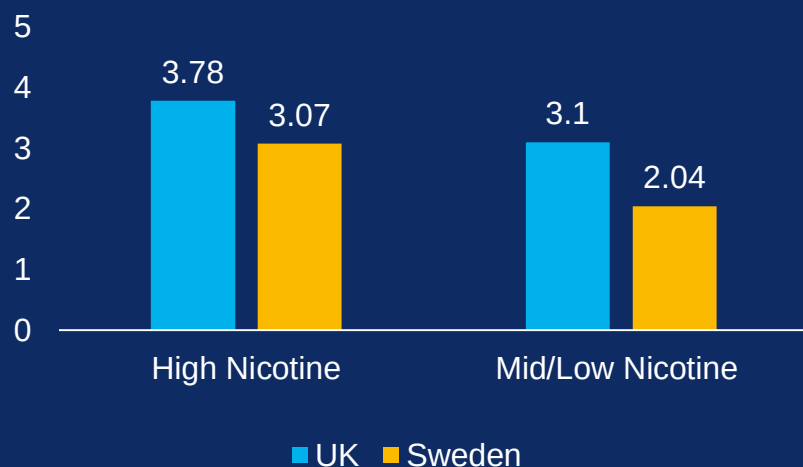
Immediate Nicotine Delivery



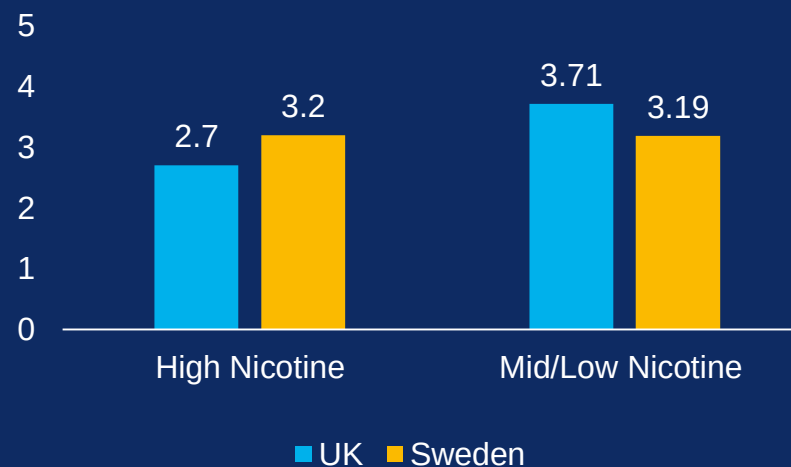
Tingling/ Physical Sensation



Intensity



Overall Likeability

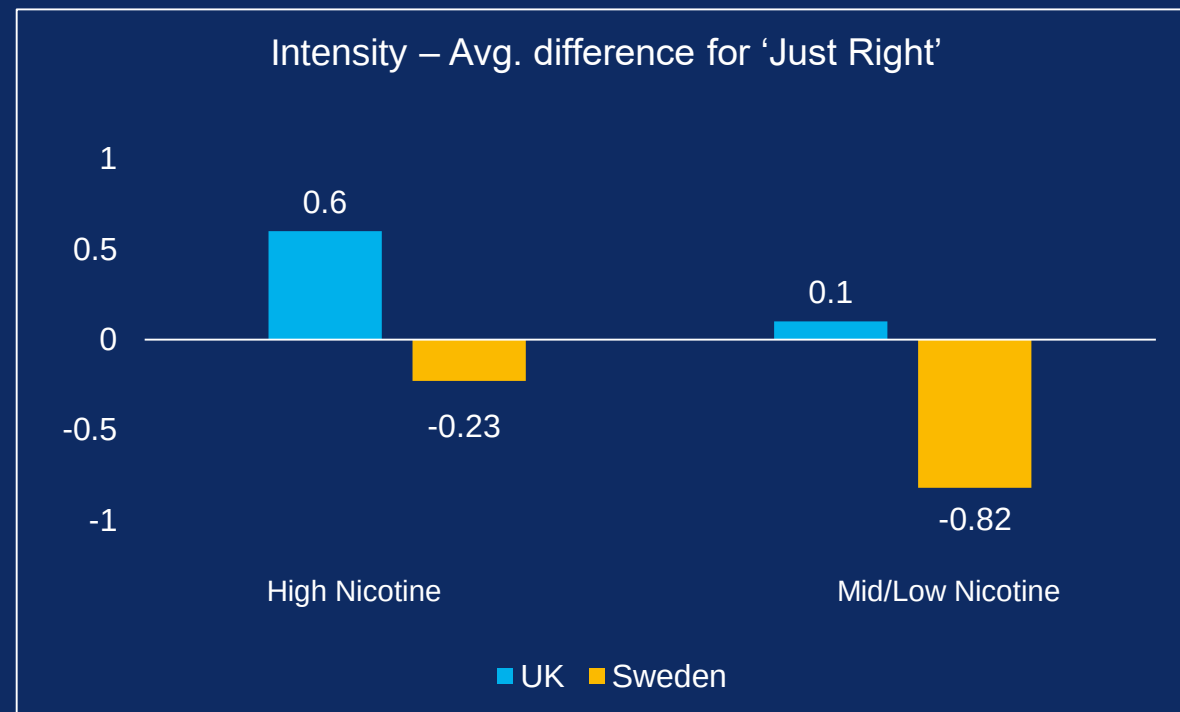
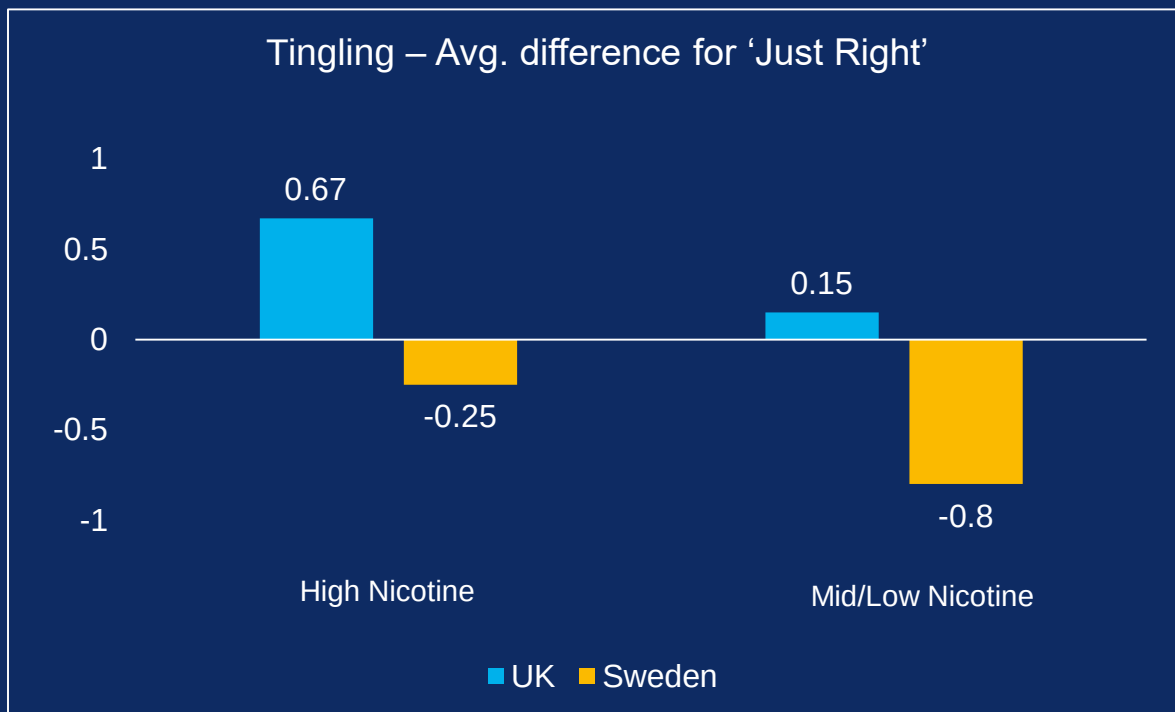


UK participants preferred mid/low nicotine for its balance of delivery and likeability, while **Swedish users favoured high nicotine** for its stronger impact and sensation.

Evaluating 'Just Right' Perceptions: UK & Sweden

UK users rate high nicotine products to have a higher intensity and tingling sensation, while Swedish users rate mid/low nicotine products to have lower intensity and tingling sensation.

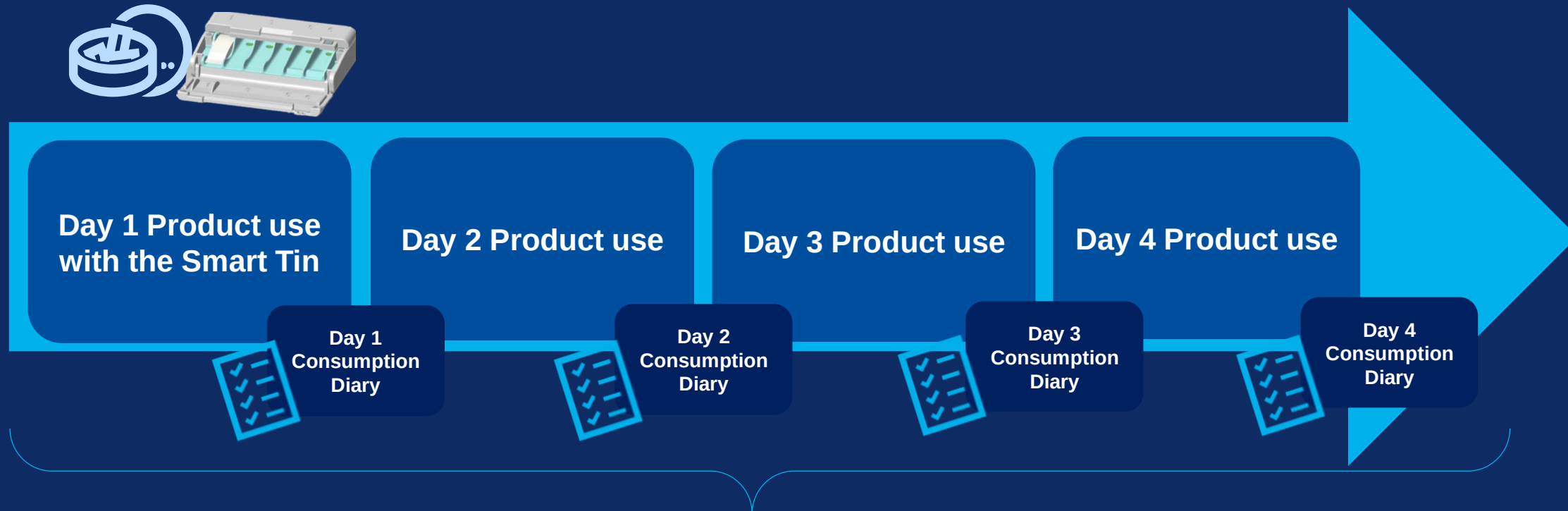
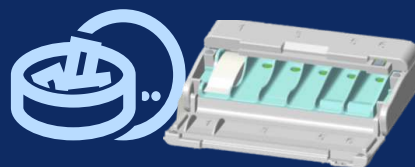
This contrast highlights different baselines of sensory expectation.



Home Use Testing



Methodology – Home Use Testing



Repeated for 3 separate products over 12 days total

The Smart Tin

Smart Tin is a device that was developed to quantify data on Average Daily Consumption, Mouth Hold Time and Interval Between Use Time for Oral Nicotine Pouches

The tin can hold up to 6 pouches and operates with LED powered technology

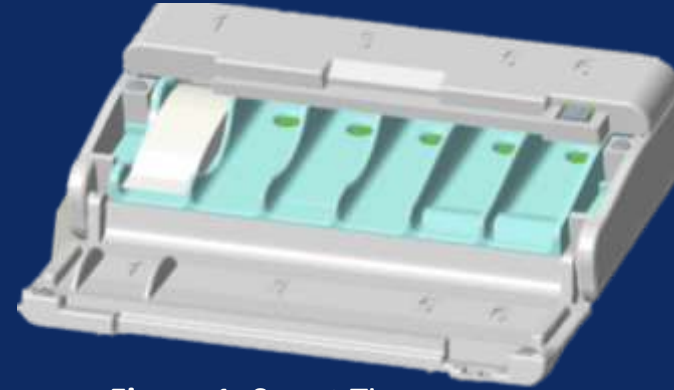


Figure 1: Smart Tin

Data Collected on the Smart Tin



Average Mouth Hold Time*

UK : 28 minutes

Sweden : 51 minutes



Average Pouch Usage Interval Time*

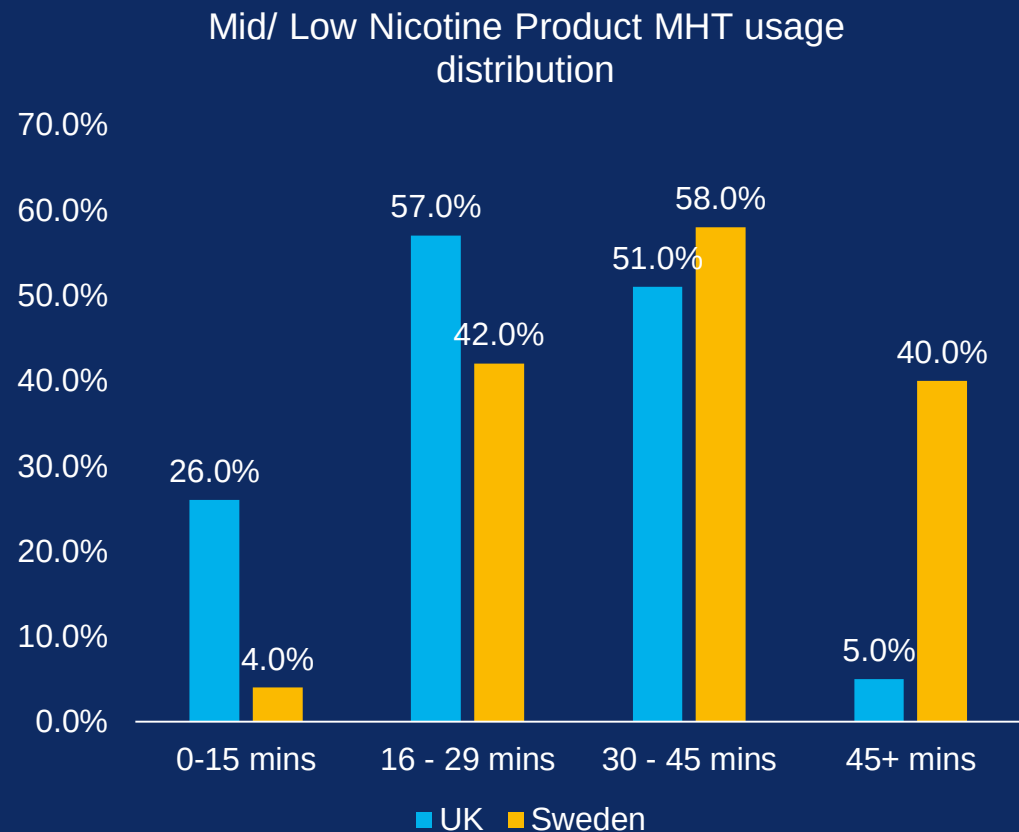
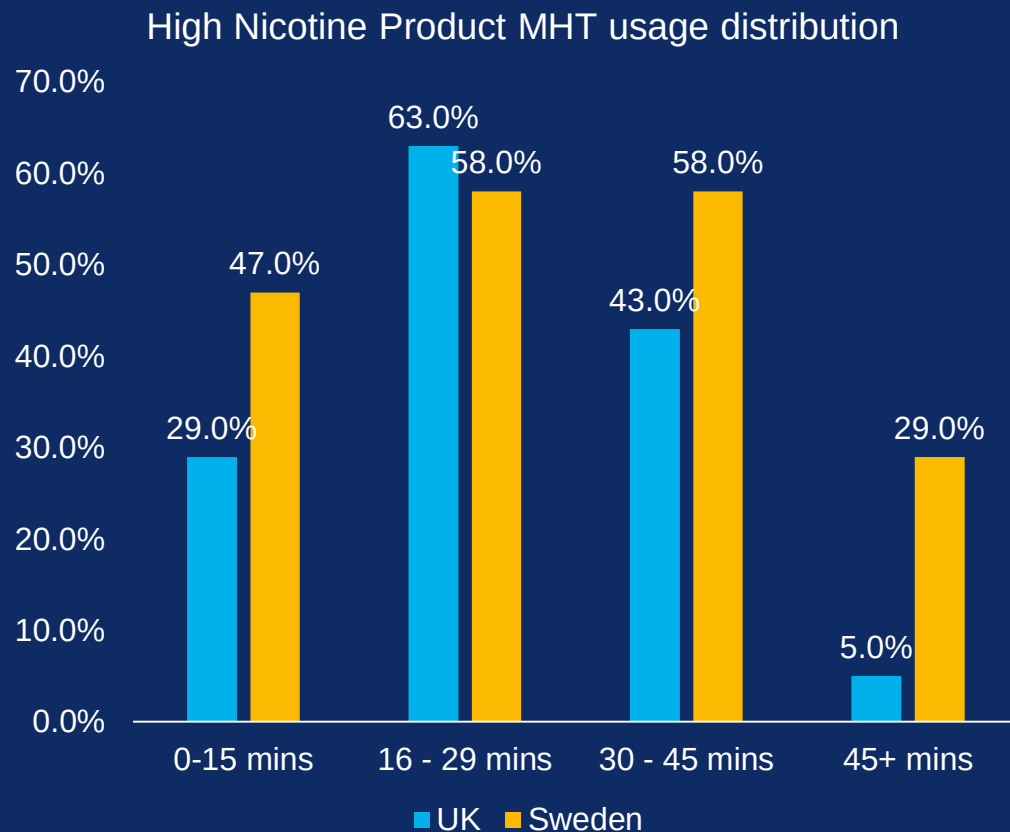
UK : 3 hours 24 minutes

Sweden : 58 minutes

Self Reported Mouth Hold Time Market Comparison



Participants were asked on each day of HUT to estimate how long they held the pouch(es) in their mouth. Sweden reports a higher mouth hold time on average.



Participants' Self Reported Usage Patterns



Average Daily Consumption

Sweden had significantly higher average daily consumption of pouches (11) than the UK (2)



Inspection of Pouch Before Use

Sweden users (70% vs. 58%) inspected more pouches before use, suggesting greater pre-use scrutiny



Pouch Location in mouth (top vs bottom vs other)

Swedish users (98%) overwhelmingly preferred placing pouches on the top lip, unlike the more varied UK placement (69%).



Manipulation of pouch in their hands

Swedish users (24%) were slightly more likely to manipulate pouches by hand before use than UK users (21%).



Movement of pouch when in mouth

UK participants (23%) were twice as likely to move the pouch in their mouth compared to Swedish users (11%)

Conclusion

- This study confirms and expands on previous findings (Prasad et al., 2022), showing clear behavioural differences between a nascent market (UK) and an established market (Sweden).
- UK users prefer mid/low nicotine and fruit flavours, with shorter mouth hold times
- Swedish users favour high nicotine, mint flavours, and longer mouth hold times, reflecting deeper product familiarity.

Next Steps

- Phase 2: Broaden product range to include more MO formats and nicotine strengths.
- Expand sample size and include additional markets to validate behavioural trends.

Thank you!

Any Questions ?