American Vaping Behavior:
Desktop Research, Analysis, and Synthesis

Peer Product and US Vape Market Research

Prominent players in the U.S. e-cigarette & vape market:
Altria Group, Inc.
British American Tobacco
Imperial Brands
International Vapor Group
Japan Tobacco Inc.
NicQuid
JUUL Labs, Inc.
Philip Morris International Inc.
R.J. Reynolds Vapor Company
Shenzhen IVPS Technology Co., Ltd.
Shenzhen KangerTech Technology Co., Ltd.

Key Findings: Peer and Market Research
The U.S. e-cigarette & vape market is expected to expand at a compound annual growth rate of 27.3% from 2021 through 2028. The market growth is anticipated in response to an increasing awareness of safer tobacco alternatives and an increase in personalized vaporizers which provide the best user experience in vaping.

Key Insights from peer and market research findings
In response to the push to gain market share through better vaping user experiences, prominent players in the U.S. market are adopting various strategies to strengthen their foothold in the market, such as:

- Product innovation
- Research and development initiatives
- Customizing their products via design and battery power
- Offering a variety of flavors of e-liquid and different strengths.
- Focusing on using the lithium-ion rechargeable battery in electronic smoking devices
- Launching initiatives aimed at encouraging large numbers of smokers to switch to e-cigarettes.

Opportunity: Product Innovation
Product innovation through unique design elements and highly customized product offerings are most pertinent to the SMOORE endeavor.

Considerations include:

- Differentiation through form
- Battery aesthetics
- Battery technology
- Formulation strength and flavors
- Overall style
- Customizability of devices

(Sources: CDC.gov, Grandview Research, National Library of Medicine, Publichealthlawcenter.org, singlecare.com)

North American User Profiles

Target American users of premium vape devices have typically graduated from the small disposable vape pens because of a belief that vaping is healthier. They are also looking for something more elevated and adult, rechargeable with a customizable dosage. They are generally middle-aged blue-collar white males with a stable income or an income transitioning from lower-middle to middle class (about $60,000 per year). Although there is a substantial, but not dominant, segment of high-income white-collar vapers that have notable disposable income.

Preferences for visibility and social perception from vaping diverge along age and income lines. For example, negative US attitudes toward vaping drive higher-earning, older middle-aged men to avoid being seen vaping in public. While younger, middle-aged men view their DTL device as a status symbol of their transitioning income. However, there is considerable overlap between these two groups. Whether to add to their private collection or to show off to their friends, both are looking for a device that is high-quality in appearance, comfort, and performance. They want to trust they are purchasing from an industry-leading brand that represents and delivers innovation.

Report of use case scenarios, insights, and opportunities

Key findings: Distribution

In the U.S., vape users were likelier to buy Nicotine Vaping Products (NVP) from specialty vape shops or tobacco stores rather than other retail locations like convenience stores, drug stores, or gas stations. They were less likely to buy online than from any terrestrial retailer.

In some states and cities, specialty shops are the only way for them to purchase these devices. Specialty vape stores also allow customers to try out e-liquid flavors and browse the various kinds of vaporizers available to them. Because of these factors, the popularity of vape shops is increasing in many states and cities in the U.S.

Key insights from distribution findings
Users make purchasing decisions in person, where they can hold, touch, and feel the product in their hands. Specialty E-cigarette stores or smoke shops are where vape users purchase or browse products before ordering them online. Assuming regulation continues to drive vape users away from online purchases, the in-person shopping experience will be the primary sales channel for SMOORE.

Differentiator 1: Material choice
Finishes and attention to detail will be critical key differentiators from competitive products.

Differentiator 2: Tactile experiences
Since many US consumers in the market for new vape products will potentially be making purchases in person — their purchasing decisions are not only based on aesthetics. They will be heavily influenced by tactile experiences, such as button feedback, textures, finishes, and the smoothness of action in toggles and doors.

Key findings: Regulations

The type of retail stores that sell vape devices in the U.S. varies significantly from state to state and even city to city, depending on regulations. Full online bans exist in at least 12 states, with some banning online sales of certain types of products: liquids, flavors, and higher dosages, for example.

Up-to-date regulations by state can be found here.

These regulations are in response to the FDA's effort to reduce vape products among the youth. This, in turn, has affected the level of social acceptability across the country and means vaping in the U.S. is not as acceptable as in other countries. However, the lower the age and the lower the income of a vape user, the more likely they will accept being seen vaping publicly.

Key insights from regulation findings
The social stigma in the U.S. market means mature and elderly vape users are less likely to use their vaping devices conspicuously in public places where they may draw attention. In this case, they are not vaping to conform to social pressure but for themselves and because they enjoy it. Given these emotional needs, they will favor a high-quality device they trust will consistently give them the smoke level they need to stay low-profile when smoking in public. A design with extra attention on bold details and quality finishes, will fit with DTL industry trends and elevate trust. It will also appeal to the social status the younger, mature users are seeking.

Opportunity: Appearance
A bold design that speaks of quality and market leadership will win favor with more mature DTL users in the American market as they seek to smoke stigma-free. For those that skew younger, a stylistically superior device that looks more innovative than the disposable devices they are graduating from favors their needs. For either, a device geared toward portability with a distinct quality look and feel will fulfill their needs for refinement and elevated social status, especially when seen by fellow vaper users.

Opportunity: Customizability
Customizability in a premium device will be critical in reaching all segments and demographics of American vape users and winning their trust. This can happen in the GUI and smoke settings.

Use Case Findings and Insights: Discreet Ease of Use

Based on our preliminary research, US-based users of vape devices are using them more in intimate or private situations. Since several public spaces have bans on all smoking activities (including e-cigarettes/vaping), users have no choice but to seek powerful devices they can use in their vehicles or secluded environments. When used in public, larger vape devices should be designed to be quick and easy to use so users can confidently access their features even when they want to avoid attention. For instance, easy access to lower smoke modes, so big clouds of smoke are not emitted when the temperature setting is highest.

Opportunities

Quick access to preset power settings allows users to switch between modes for different situations easily. Allow users to fine-tune and create their own presets for customized settings throughout the day. This also allows for total cloud control in public to be low-profile. Smooth action on lock mechanisms will enable users to lock and unlock the device inconspicuously. However, designs optimized for simplicity of function will still incorporate richness of form. They will draw attention to sleek details and unique elements, attracting attention, envy, and praise in vape social circles.

Use Case Findings and Insights: Premium Use

A luxury-looking and sleek feeling device puts SMOORE in a different competition category from disposable single-battery vape devices and appeals to more experienced and professional vapers. In the premium market, over-designed vaporizing devices risk appearing "cheap." In addition, dual-battery vape devices on the market have a more "complex" aesthetic and often use low-quality materials.

Opportunities

Several opportunities exist for the SMOORE device to be perceived as high-quality, high-tech, trustworthy, luxurious, and a leading brand. Focusing on the accentuation of that which makes SMOORE more desirable to a high-end, mature vaping audience.

- An innovative, futuristic appearance
- Lux finishes and textures (main body and Tank)
- A solid hand-feel and a design that looks "touchable" or comfortable
- Superior functionality
- Advanced battery mechanics and form
- Customization options
- GUI that is designed in parallel with the hardware for a holistic user experience. A seamless flow between physical and digital elements

Use Case Findings and Insights: Durability and Reliability

This product is considered a portable device, and there are concerns about e-juice leakage. This type of issue will impact the perception of a device's premium stature. Considering how we can design a product and user experience that reduces the opportunities for leakages will add.

*The key ideas that support this leakage issue can be found on page 32 of ALL-DTL E-cig Study Quant Report_v5-7-2-2023, where the primary pain point of DTL is listed as oil leakage or here on Vaping 360.

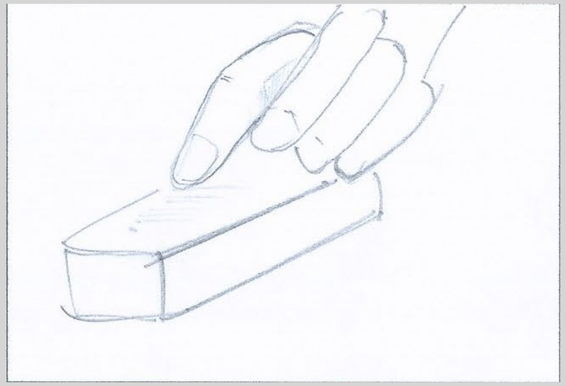
Opportunities

Design elements and features that encourage and nudge or train the users to store the device upright, as well as a sturdy design, are essential. Even though most users likely know not to store vape devices vertically, small reminders from the brand could be useful to help avoid any fault being assigned to the quality of the product or brand. The exploration of design cues that encourage users to place their device in a standing "vertical" position is one idea for exploration. However, primary opportunities for durability and reliability are:

1. A Stable and sturdy footprint or base
2. A compact and comfortable form
3. A strong connection point between Tank and main body (MOD)
4. The Battery door connection method

THE UX

This user journey map is a process for us to better understand the user experience and identify opportunities to design for physical, digital, and psychological needs.

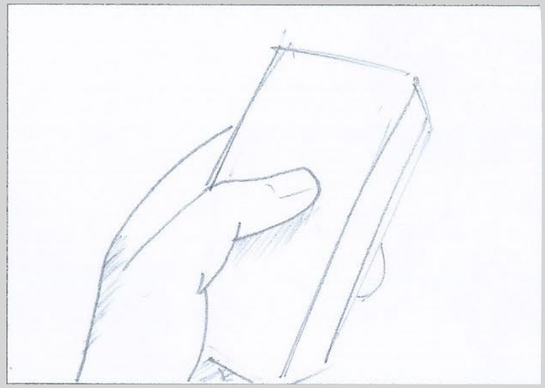


User taps on device to see high level metrics

- Battery level
- Fluid level
- Time

Opportunity to have a docking station to ensure that the device is fully charged in the morning.

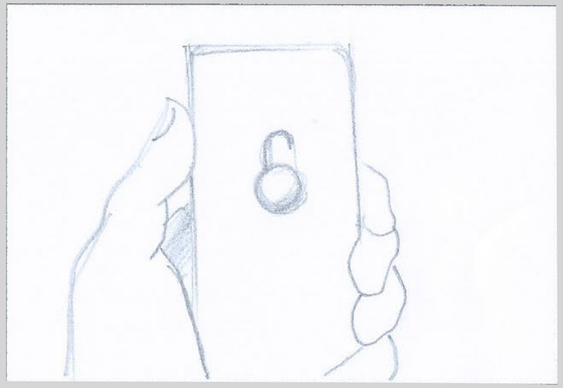
User tops off juice/fluid level at the start of the day — sometimes he changes the tank to a different flavor depending on his mood.



User adjusts power settings/changes for the time of day — perhaps to a less powerful setting in the morning.

He takes a few minutes inside his home and pulls a drag or two and enjoys before he leaves for the day.

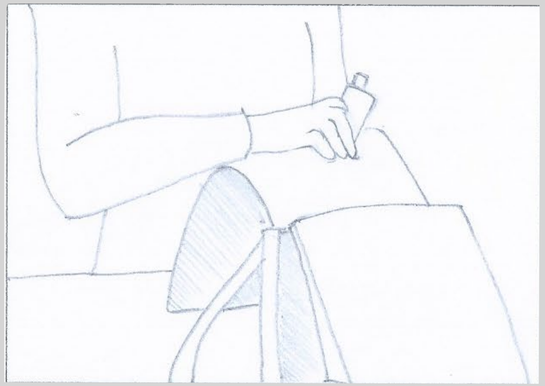
Opportunity to let users see and check all their levels before the day starts.



He makes it a habit to lock the device to prevent accidental firing when the device is in his pocket or bag.

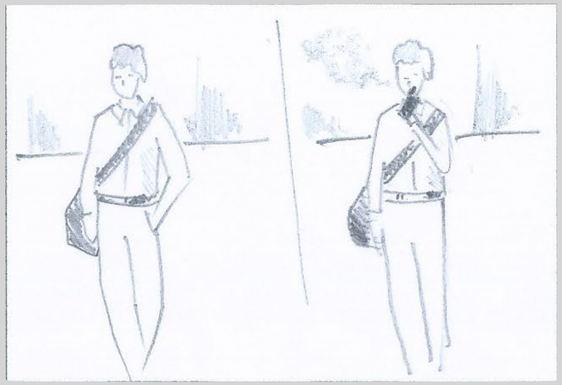
This could be a physical button or a GUI lock.

Opportunity to design a seamless locking and unlocking experience where the user does not have to think about the action too much.



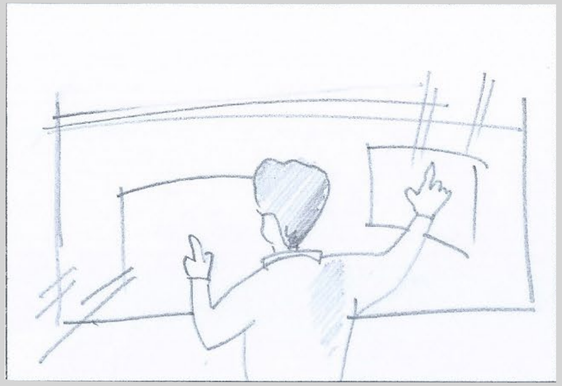
He places the device into his bag — preferably with the tank facing up (vertically) to avoid any leakage.

Opportunity to design features or ergonomics that encourages the device to be placed in an upright position.



User sometimes takes a quick drag outside but since the device is set to a low setting it's okay and it does not produce a large vapor cloud.

Opportunity to think about a design that is discreet so that it can be used in public without being noticed.



Throughout the day the user is busy and in the office so he can not use his device.

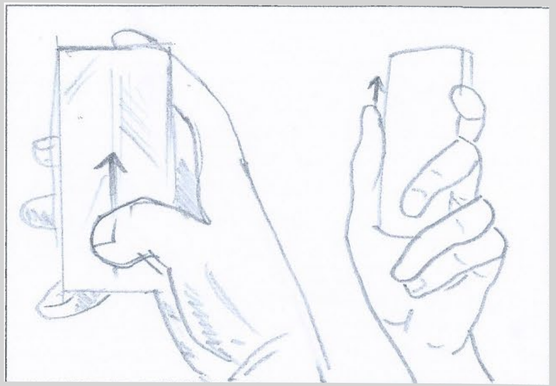
Somedays are stressful and he is thinking about when he can relax with his vape.

Towards the end of the day he is starting to wind down and is thinking about relaxing — he has been waiting all day.

Once he gets outside and to his car he turns up the power and takes serval drags before hitting the road.

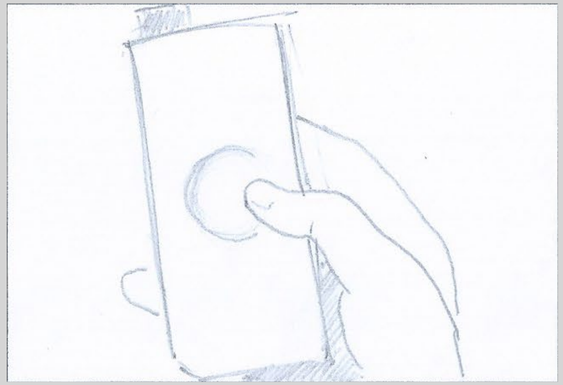
Opportunity think about quick access modes.

Sometimes the drive home is long or there is traffic so he wants to take a few drags on his drive.



He pulls out the device and needs to easily unlock it with one hand — sometimes the digital unlock is easier to use since it can be a bigger gesture vs a smaller physical lock/unlock feature.

Opportunity to design full operation with a single hand or even just one thumb.

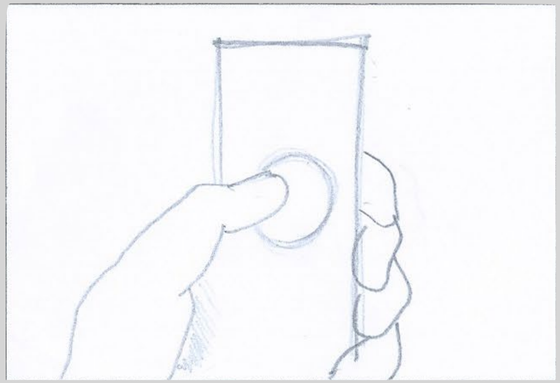


Since he is driving it could be unsafe to produce a massive cloud so with a two step simple operation he is able to adjust the power with one hand. This can be done manually by adjusting the exact power level or by selecting a preset such as "lite mode".

Opportunity to design easy methods to switch vape modes

He is able to enjoy his vape safely on his drive.

He doesn't want to draw a lot of attention as he is driving and since there is not a large cloud exiting his vehicle as he is driving down the road he can enjoy it discreetly.

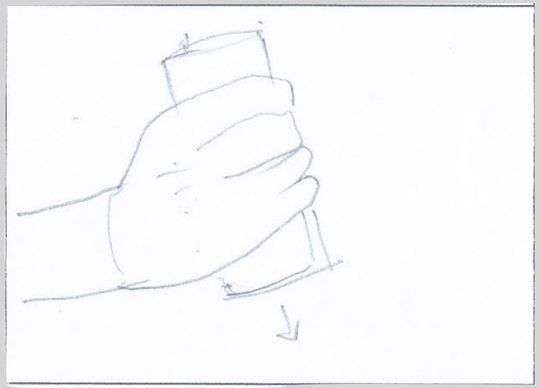


Once he gets home he is in full relax mode and with a simple choice of a preset he is able to change the settings to his "at home" configuration.

Opportunity to have modes change automatically change based on time.

He sits back and enjoys his device — he might be on his ipad, phone, playing a game or watching TV so he does not want to be distracted with another digital device. This is where the physical tactile element will be very important.

Opportunity to have the display screen fade back when user is trying to fully relax and not be distracted with additional screens.



The user finishes for the evening and places the device vertically on a docking station that ensures that it will be fully charged for the next day.

Opportunity to develop a dock that ensures that the product is always upright and fully charged — this could reduce the frequency that a user needs to remove the battery from the device.