

The UK economic and R&D impact of BAT's alternative nicotine products

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April 2021

What are alternative nicotine products?

Alternative nicotine products refer to a range of consumer products that don't burn tobacco to deliver nicotine to the user. Because there is no combustion and therefore no smoke, they are viewed as less risky alternatives to smoking tobacco cigarettes.^{1,2} Vapour products are the most popular category in the UK, followed by oral nicotine pouches. Neither of these products contain tobacco and are the focus of BAT's UK portfolio. Tobacco heating products are also available.



VAPOUR PRODUCTS

These are handheld battery powered electronic devices which heat an "e-liquid" to create a vapour which can be inhaled.



ORAL NICOTINE POUCHES

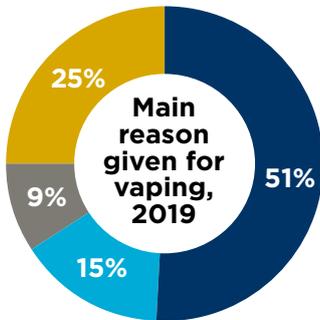
This is a non-tobacco oral nicotine product made of plant-based cellulose material, nicotine and flavourings, which is placed under the lip.



TOBACCO HEATING PRODUCTS

These are handheld battery-powered electronic devices that heat tobacco to generate a nicotine-containing aerosol with a tobacco taste, which the user inhales.

Reasons for using vapour products



- Aid to stop smoking³
- Perception that they are less harmful than cigarettes
- Cheaper than tobacco products
- Other

Source: ONS

59%

of vapers in 2020 were ex-smokers. A further 38% were existing smokers who also vaped.

Source: Action on Smoking and Health

How big is the market?

Vapour and tobacco heating product sales, total UK market, £m



Source: BAT

*BAT Forecast

Number of UK vapers



Source: ONS

BAT's alternative nicotine products business has a significant impact on the UK economy

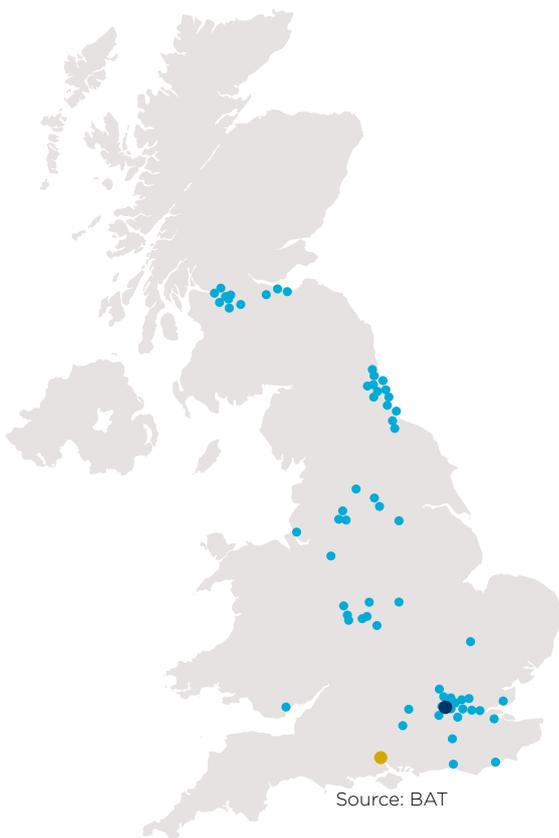
BAT supports economic activity across the UK through its operations linked to alternative nicotine products. These operations include research and development (R&D), marketing and distribution, with the company's products sold through its own specialist vape stores and websites, as well as independent vape stores, convenience stores and supermarkets. In 2019, these operations contributed £360 million to UK GDP.

The impact on the economy occurs through four channels: the direct, indirect and induced impacts of BAT's own activity, plus the total impact arising from retailers, wholesalers and distributors selling the company's products.

BAT's footprint across UK

In 2020, the company operated 65 vape stores with 200 staff.

- BAT vape store locations
- BAT global headquarters
- BAT R&D centre



Total economic impact of BAT's UK alternative nicotine products, 2019

£50 million



Direct impact

Employment and GDP supported by BAT's own alternative nicotine product activity



1,250 jobs



£125 million



Indirect impact

Employment and GDP supported across its supply chain



2,150 jobs



£110 million



Induced impact

Employment and GDP from the spending of workers linked to BAT's activity



1,600 jobs



£75 million



Retail impact

Total employment and GDP supported by the retail of BAT's alternative nicotine products



2,100 jobs



£360 million to UK GDP

For every £1 contributed directly to UK GDP, a total of **£7.20** is supported across the economy

7,100 jobs

For every 100 direct employees, a total of **570 jobs** are supported across the economy

Southampton is a global hub for BAT's research into alternative nicotine products

BAT's main global R&D centre for alternative nicotine products is based in Southampton. The company makes significant investments in research and science at this site, in areas ranging from battery technology and electronics, to biochemistry and pre-clinical toxicological trials.

Research spending at the site more than doubled between 2016 and 2020, and is expected to increase further in 2021.

Of the company's 2,240 total UK employees, some 320 are highly skilled specialists working in R&D in Southampton.

The company's R&D operations supported a total contribution of £210m to UK GDP in 2019. This occurred through the research teams' direct activities alongside supply chain operations supported by R&D procurement and the economic impact of involved workers spending their wages.

BAT's research into the effects of vapour products

The company's scientists have conducted 164 tests on its Vuse brand of vapour products to investigate the impact on users, including:

27 

Behavioural science tests

to understand how customers use the vapour product

82 

Chemistry tests

to analyse what chemicals are in the vapour

35 

Biological tests

to see how the vapour reacts with human cells

20 

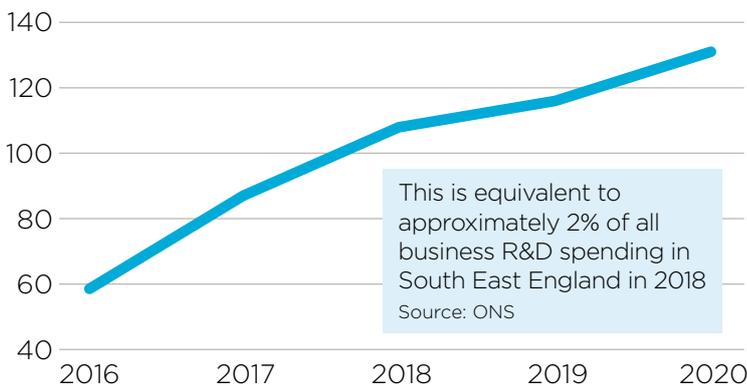
Clinical tests

to understand how vaping affects the whole body

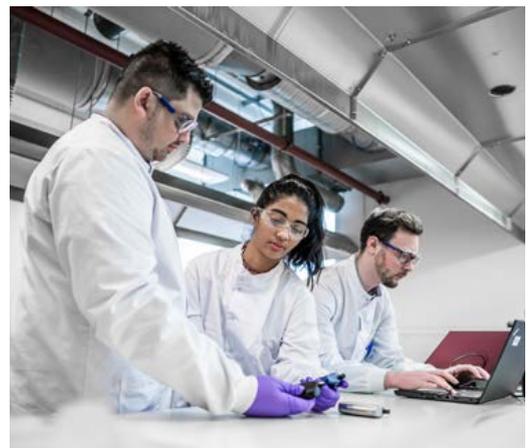
BAT researchers concluded that these tests show that its Vuse ePen 3 vapour product emits 99% less toxicants than cigarettes.*

*Comparison to 1R6F ref cigarette in reference to 9 harmful components WHO recommends to reduce in cigarette smoke. This quality does not necessarily mean this product is less harmful than tobacco products

Annual BAT spending on R&D in the UK, nominal £m



Source: BAT. Includes BAT R&D spending on alternative nicotine products in UK only.



BAT Investments Ltd. were the UK's seventh-largest patent applicant to the Patent Cooperation Treaty in 2019.

Source: WIPO UK country profile

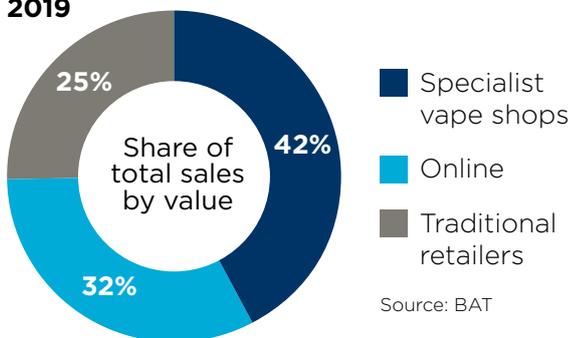
BAT filed more than 170 patent applications in the UK in 2019 on new alternative nicotine products inventions.

Source: BAT

The sale of alternative nicotine products by the wider retail sector supports economic activity in the UK

BAT is one of a large number of sellers of alternative nicotine products in the UK. The broader retail landscape for these products includes sales through traditional retailers such as supermarkets, though the majority of sales happen through websites and specialist vape stores. This retail activity supports further jobs and GDP contributions across the UK economy.

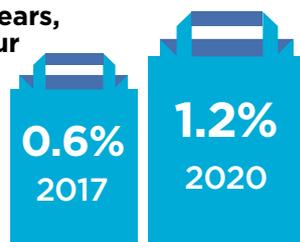
Alternative nicotine product sales channels, 2019



According to BAT estimates, alternative nicotine products are sold in:

- 24,500 independent convenience stores
- 7,400 petrol stations
- 5,000 pharmacies
- 1,200 independent vape stores
- 9,600 supermarkets

Over the last three years, total spend on vapour products as a share of total nicotine products in independent convenience stores has doubled.



Source: Retail Data



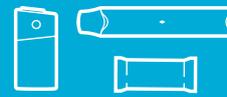
Total economic impact of UK alternative nicotine products retail 2019⁴

£280 million

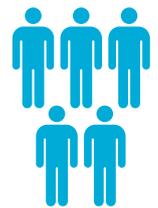


Direct impact

Employment and GDP supported by alternative nicotine product retailing



9,400 jobs



£260 million



Indirect impact

Employment and GDP supported in retail supply chains



4,400 jobs



£265 million



Induced impact

Employment and GDP supported by the spending of retail and supply chain workers



4,000 jobs



£805 million to UK GDP

17,800 jobs

For every £1 contributed directly to UK GDP, a total of **£2.90** is supported across the economy

For every 100 direct employees, a total of **190 jobs** are supported across the UK economy

4. Our estimates capture the economic impact of the retailing of these goods, as well as the impact of BAT's own R&D and head office activity. The estimates exclude any impacts from the manufacturing, R&D and administrative activity of non-BAT RRP companies due to lack of available data.



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As of April 2021, Vype products have transitioned to the Vuse brand.

BAT for the purposes of this report refers to one or all of the following entities: BAT PLC, BAT UK LTD, BAT Investments LTD, and Nicoventures Retail (UK) LTD.

Operations at BAT's Southampton R&D centre also relate to combustible products. However, all figures in this report refer to alternative nicotine products only.

The modelling and results presented here are based on information provided by third parties, including BAT, upon which Oxford Economics has relied in producing its report in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

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