

Assessment A – Group Project

New Product Development

Team Hafren

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Scenario

- You are NPD Manager of a Powys based SME which currently specialises in the manufacture of electronic breathalyser systems. The market for these devices is predominantly within the police and security forces.

A new product development project

- Through a Knowledge Transfer Partnership with a local university, the Company has identified the possible commercial opportunities that may exist if the chemical alcohol detector system (which is at the heart of their breathalyser products) was adapted to cover the detection of other organic materials, including those generated in the breath as a result of various virus infections.
- In light of the current Coronavirus pandemic, the Company can see great potential in developing a device that could meet both clinical and personal requirements. As the NPD Manager you're approaching and development of this potential CDS in an "open innovation" manner - and presently have a series of small concurrent R&D projects being undertaken both in-house and in conjunction with your local university
- As this product will take the company away from its normal market sector, your concern is the lack of market intelligence that you know will be essential in the development of this product

The Task

Sourcing Marketing Knowledge for the development of CDS (Chemical Detector System)

1. Determine what marketing knowledge is likely to be required for the development of this new product.
 - Present your findings from your sources of marketing knowledge, and apply this practice to the business in order to ascertain;
2. What business are we in?
3. What business(es) could we be in ?
4. You will also include your interpretation of marketing sensing capabilities and market understanding and develop and definition(s) of value for at least two customer value proposition scenarios.

What Business are we in?

- Powys based SME providing electronic breathalyser systems
- Market is predominantly the police and security forces
- Current in the 'law and order' sector
- The audience (and market) is very targeted
- Procurement for product will be managed centrally by finance / procurement department (with input from other internal stakeholders) via a full tendering process
- The device is currently used by trained personnel, who will have received training for the device
- Accuracy is key as implications of a positive result are very high
- Price – items are bought in bulk, with a reduced unit price
- Low level marketing communications spend - as products purchased by procurement, decisions will be based on cost, availability, product effectiveness

What Business (es) would we like to be in?

- Following the coronavirus pandemic, we have identified the potential for the device to also be used to detect other organic materials including virus infections
- This is a diversification into the medical sector
- This move into new markets will have an impact on how the product is used, priced, where it is sold, how it is marketed etc.
- The move into developing a device which can detect other organic materials, including virus infections, means there are several options for possible markets we could enter:
 - ☐ Used as proof of entry to entertainment / sporting venues
 - ☐ Used as proof of entry to hospitals / care homes / dentists
 - ☐ Used as proof for flights, train journeys etc
 - ☐ Used as proof of entry into Prisons
 - ☐ Don't forget, it can also continue to be used as a breathalyser
 - ☐ Any scenario which involves confined spaces and there is the opportunity for the passing of viral infections etc, could benefit from this new device.

Determine what market knowledge is likely to be required for the development of this new product

- Before we go into detail about the likely market knowledge required for the development of this new product, we feel it is important to distinguish the difference between market research and marketing sensing.
- The 'difference between market sensing and marketing research is that market sensing describes the processes in the organisation that develop management understanding about the external world, while marketing research is mainly concerned with techniques of data collection and reporting – surveys, observation studies, market experiments and so on. The difference is between process (understanding) and technology (collecting data through formal techniques)'. (Piercy, 2009)
- The following diagram compares where marketing knowledge comes from with the process of management understanding. As Piercy (2009) goes on to say, the 'issue is superior understanding of customers, so the issue is the process of market sensing and understanding, not just the techniques of market research'.
- This diagram will be used to 'frame' the market knowledge we feel is likely to be required for the development of our new product.

2. Sources of market knowledge

2.1. Internal records
CRM data
Databases

Management
information
systems

What we know – i.e.. internal and historic existing knowledge
But could also be ongoing (data/analytics)

2.2. Surveys
Observation
Market tests

Marketing
research

**What we need to know, find out, explore, and
how we do it** – research questions, methods etc

2.3. Scanning
Trends
Clues

Marketing
intelligence

What we can find from existing knowledge,
eg. Academic, market, industry including
PESTLE, and trends – external and current

2.4. Ethnography
Internet
Futurology

Cross-
disciplinary
tools

**What we can find, use, interpret and develop a
definition of value** for, e.g.. Defining, creating and
delivering value = competitive advantage

MANAGEMENT INFORMATION SYSTEMS

What do we know?

The company has a good skillset within the design /production department.

Questions:

1. Are the skills transferable with the possible introduction of the new product? Will the company have to employ more personnel to accommodate the changes ?
2. What further knowledge and expertise is required to develop the new device? Where does this knowledge / experience come from?

The current product is known to be used by fully trained personnel

Questions:

1. How would we deploy the use and training of the new device with untrained individuals?
2. Is training included within the cost of the devices, or are training costs additional? How is training delivered – online, face-to-face?

The company is fully aware of the production cost of making the current product

Question:

1. How much is it going to cost to produce each of these new units?

MANAGEMENT INFORMATION SYSTEMS

What do we know?

Sales for current device

Questions:

1. How many businesses within the current market would be interested in the new device?
2. What is unit price for current device, and what should unit price be for new device?

Knowledge transfer partnership with local university

Questions:

1. Who is managing relationship with University?
2. What level of expertise / knowledge can be obtained via university?

MARKETING RESEARCH

What we need to know / find out / explore / and how we do it?

- How much can we charge for the product? If the product is sold to the general public, are they sold individually or in multi-packs? Is there a reduced rate for multiple purchases. If selling to businesses - hospitals/ airlines etc, is the pricing strategy as per the original product?
- What will the desirable turnaround time be on the testing kit?
- How do we link the test result to the individual? – phone, NHS records, NHS app etc
- These devices could be used for clinical and personal reasons. Are there different instructions for guidance dependent on reason for use?
- Will the results of the device be mandatory for some scenarios? How is that managed in terms of peoples 'human rights'.
- How do we monitor the testing accuracy of these tests and continue to build on the success rates to enhance value?

MARKETING RESEARCH

What we need to know / find out / explore / and how we do it?

- Are there any other devices like this on the market and if so, what are the competitors selling in comparison to our proposed new product?
- How do we differentiate our product from others on the market?
- What audience (s) are we going to target?
- How will we get our product to market?
- Will this product be a one-off purchase with re-useable filters?
- Will there need to be variants of the products for different viruses?
- Establish a roadmap for building the product, what type of process will be used in the assembly of this product?
- Who will lead the development team – how will the project be monitored?
- What components will be made in house and what components will have to be bought in? What investments will need to be made in infrastructure of tools, machinery etc?

MARKETING RESEARCH

How we do it?

- Answers to the questions developed during the marketing research phase will be answered via:
 1. Primary research – focus groups, surveys etc
 2. Secondary research – academic papers, white papers
 3. Qualitative research & reports (Mintel etc) - this research and reports will give insights into how customers think and feel
 4. Quantitative research – numerical data and statistics

MARKET INTELLIGENCE

What can we find from existing knowledge?

[A guide to SWOT and PESTLE analysis \(with FREETaemplate\) \(localiq.co.uk\)](https://localiq.co.uk)

P (Political)	E (Economic)	S (Social)	T (Technology)	L (Legal)	E (Environmental)
1. Political & Government Stability 2. Taxation (Current & Future) 3. Trade Unions 4. Pandemic Policies 5. Grants and Future Funding	1. Consumer Spending 2. Government current and future spending 3. Inflation 4. Taxation 5. Exchange Rates 6. Supply chain volatility 7. Overall Economic Situation	1. Customer attitudes and buying patterns 2. Media 3. Brand Image 4. Cultural Shifts 5. Consumer spend	1. Technology demand 2. Technology Development 3. Levels of R & D 4. Lifecycle of the product 5. Government investment in technology 6. Internet issues (if required)	1. Intellectual Property Rights 2. Changes and effect of EU Law and Brexit 3. Regulatory Bodies 4. Pandemic Law Changes 5. Enviromental Legislation	1. Plastic Waste 2. Sustainability
P (Political) 1. Is use of devices mandatory for certain venues / scenarios? 2. If mandatory, will government fund devices themselves? 3. Pandemic policies will now be in place following Covid-19 pandemic	E (Economic) 1. Current cost of living crisis 2. Inflation rate currently at 7.9% in UK (NB: at time of producing report) 3. Previous issues with government spending on the awarding of contracts 4. Impact of Brexit and leaving EU on sourcing fixtures overseas	S (Social) 1. Cost of living crisis impacting on consumer spending patterns 2. Testing has become 'standard practice', but some people are very much against it 3. Social media has huge impact on consumer use / attitudes 4. Name / branding / device appearance will impact use, and can be used as differentiator	T (Technology) 1. Device must be easy to use, as will be used by trained individuals, but also members of the public 2. Need clarity about reporting mechanism for results and how these are linked to individual – app, NHS records, separate database etc 3. If mandatory, internet usage lower in certain areas and amongst certain groups	L (Legal) 1. Liaise with IP specialists as part of University partnership (KTP) 2. Brexit to have impact on import / export rates 3. Brexit to have impact on delivery times and processes (paperwork etc) if sourcing components from Europe. 4. Enviornmental legislation with regards to device itself and 'throwaway' elements.	E (Environmental) 1. How will 'throwaway' elements of device be disposed? 2. Can components be made by ourselves, to save air miles etc

MARKET INTELLIGENCE

What can we find from existing knowledge?

- Post Covid-19 pandemic, have studies been completed (academic or industry) relating to consumer views towards viral infection detection devices
- Post Covid-19 pandemic, have studies been completed (academic or industry) relating to consumer attitudes towards adhering to results of viral infection devices
- Post Covid-19 pandemic, have studies been completed (academic or industry) into the best / preferred method for reporting viral infection results

CROSS DISCIPLINARY TOOLS

What can we find, use, interpret and develop a definition of value?

- **Ethnography** - 'Ethnography involves observing people in their own environment to understand their experiences, perspectives and everyday practices'. (Gov.UK, 2020)
- Various research techniques including observations, field notes, interviews, filming etc. These research methods can be used to provide us with market intelligence surrounding:
 1. What will influence our target audience to purchase this device?
 2. What (if any) challenges will customers face when using the product?
 3. How do we ensure people 'respect' the result of the device, i.e., if the device shows a positive result, how do we ensure people do not then enter a 'confined space'?
 4. How do we manage people's differing attitudes towards the use of the device? Some people have a 'laissez-faire' approach to viral infections, some people are very anxious about them. How do we manage people's differing attitudes towards the device and the usage?

**We will now include our interpretation of
marketing sensing capabilities
and develop and definition(s) of value, for 3
customer value proposition scenarios.**

Persona –1 (B-2-C)		
Persons	Name	Molly Evans
	Decision Role	Decision Maker
Demographics	Age	60
	Gender	Female
Decision Making	Style	Behavioural

Goals and Motivations	The goal is for Molly to visit her mum virus free. Although Molly has no underlying conditions herself, she must be very mindful of the outcome should her mum contract a virus from her when she visits.
Barriers and Challenges	• Fear of contracting a virus • Obtaining guidance from a trusted source re: testing • Inability to seek urgent medical advice to confirm if virus is present.
Our Key message	Being able to test at home on a relatively quick basis would overcome the barriers and challenges listed above

Personal and Home	Widowed and lives alone
Work	Retired

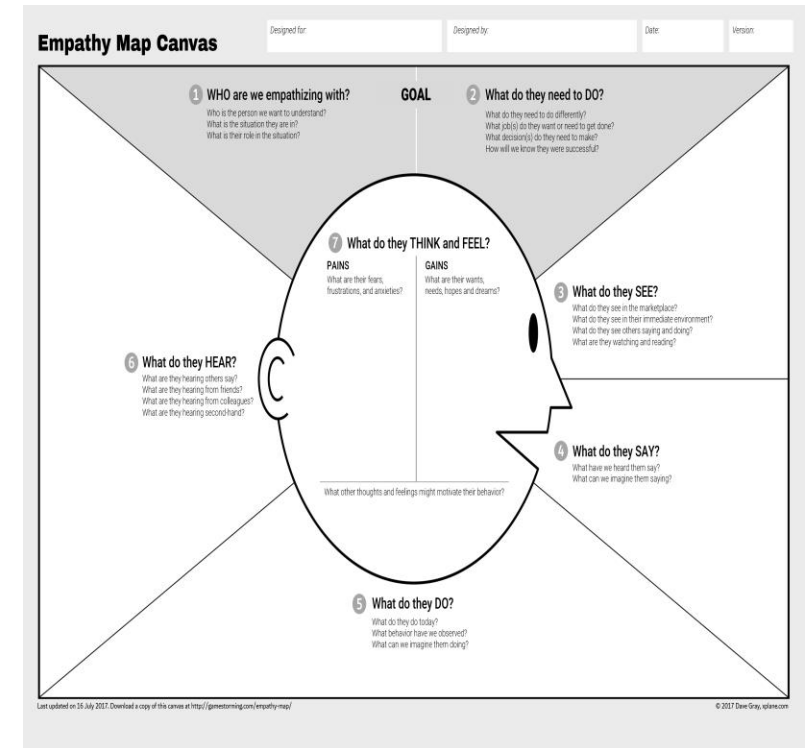
Buying Scenario	Molly has a responsibility to her mum to make her visits safe, easy and giving her the confidence to know she is virus free. Molly would purchase the device from a shop or online shopping. The device is likely to be a one-off purchase (if the device comes with various testing strips)
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Preferred Media	TV / Sky
Social Media Use	Limited Facebook Access
Devices	Android Mobile Phone

The Empathy Map

- Before completing the empathy map for our B-2-C persona, we feel it's important to firstly clarify the need for this and where it originated from
- In 2010, a businessman called Dave Grey who was the founder of a company called Xplane, a company that focuses on accelerating positive changes for organisations, their people and the world designed the original empathy map, this tool was to help teams develop their deep, shared understanding and empathy for other people. Organisations were able to use this map to improve their customer experience and to design better work environments.
- In 2017 the map was updated, at this point many versions had been created and they vary widely. Dave Grey himself states that the map was created with a specific set of ideas and was designed as a framework with a lot of the thinking behind it had gotten lost in its translation over the years. So, a new version (which is the one below) was created.
- The revised version incorporated goals to help clarify the purpose of the activity. Made the “Think and Feel” element central and put it inside the head, to emphasize the difference between observable phenomena (outside the head) thoughts and feelings (inside the head), which can be guessed or inferred but never observed. Moved “Pains and Gains” from a box at the bottom to the inside of the head.
- The numbered sections make sense of the intended sequence of activities.
- When should an empathy map be used – It's most successful when used as a discovery and alignment tool to help people get on the same page and potentially uncover insights around how an audience thinks. The map in turn should create a relatively robust picture of the persona

(Xplane, 2023)



The Empathy Map

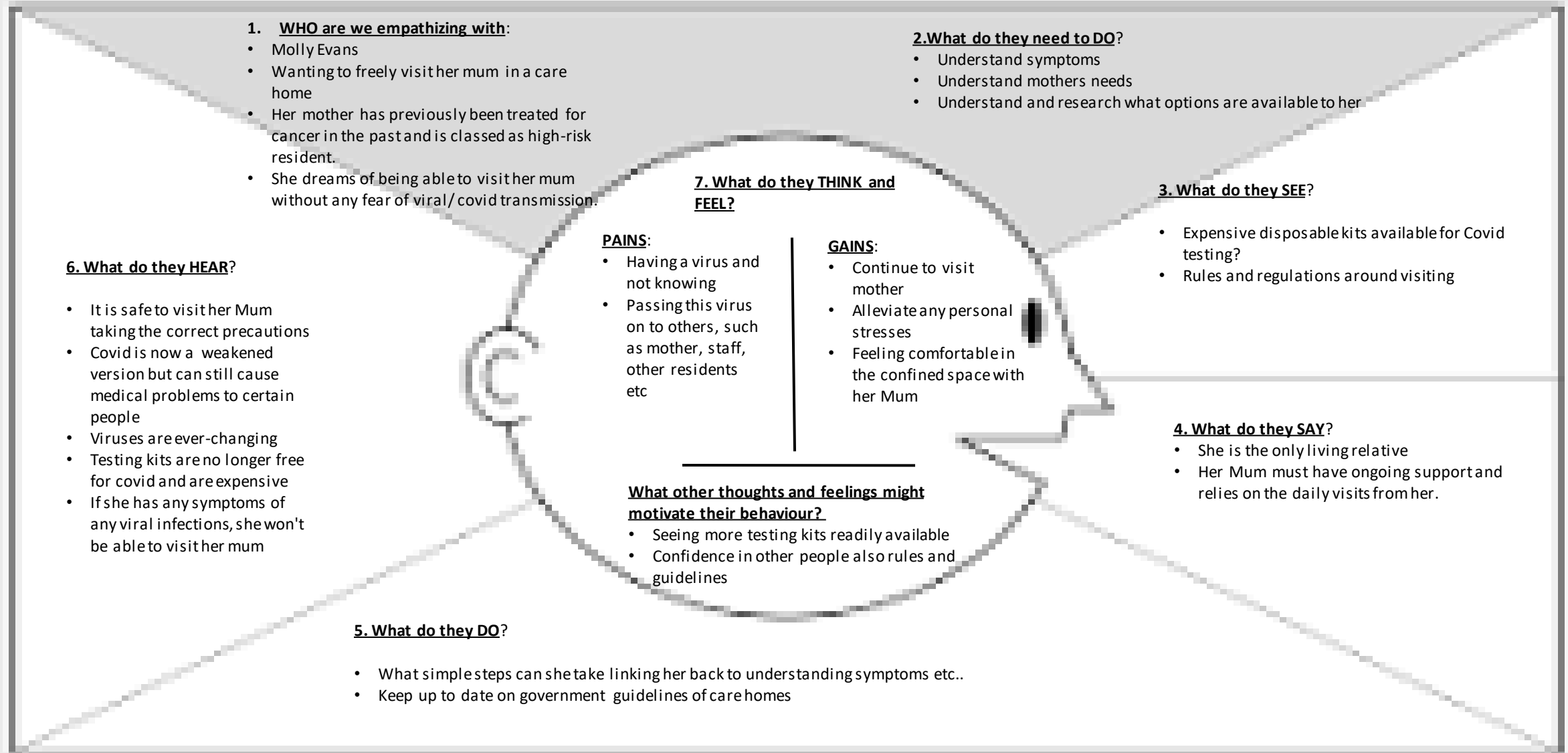


Fig 1 - Harris, 2020

Persona –2 (B-2-B)		
Persons	Name	Rachel Jones
	Decision Role	Decision-maker
Demographics	Age	45
	Gender	Female
Decision Making	Style	Analytical

Goals and Motivations	Ensure the most effective and efficient device for her door staff. Motivation – happy staff who fully understand how to use device.
Barriers and Challenges	Work patterns (evening) means Rachel has limited access to emails etc during traditional work times. Therefore, making decisions with other colleagues (who work traditional times) can be time-consuming
Our Key message	Success rate of our device in terms of detecting infections

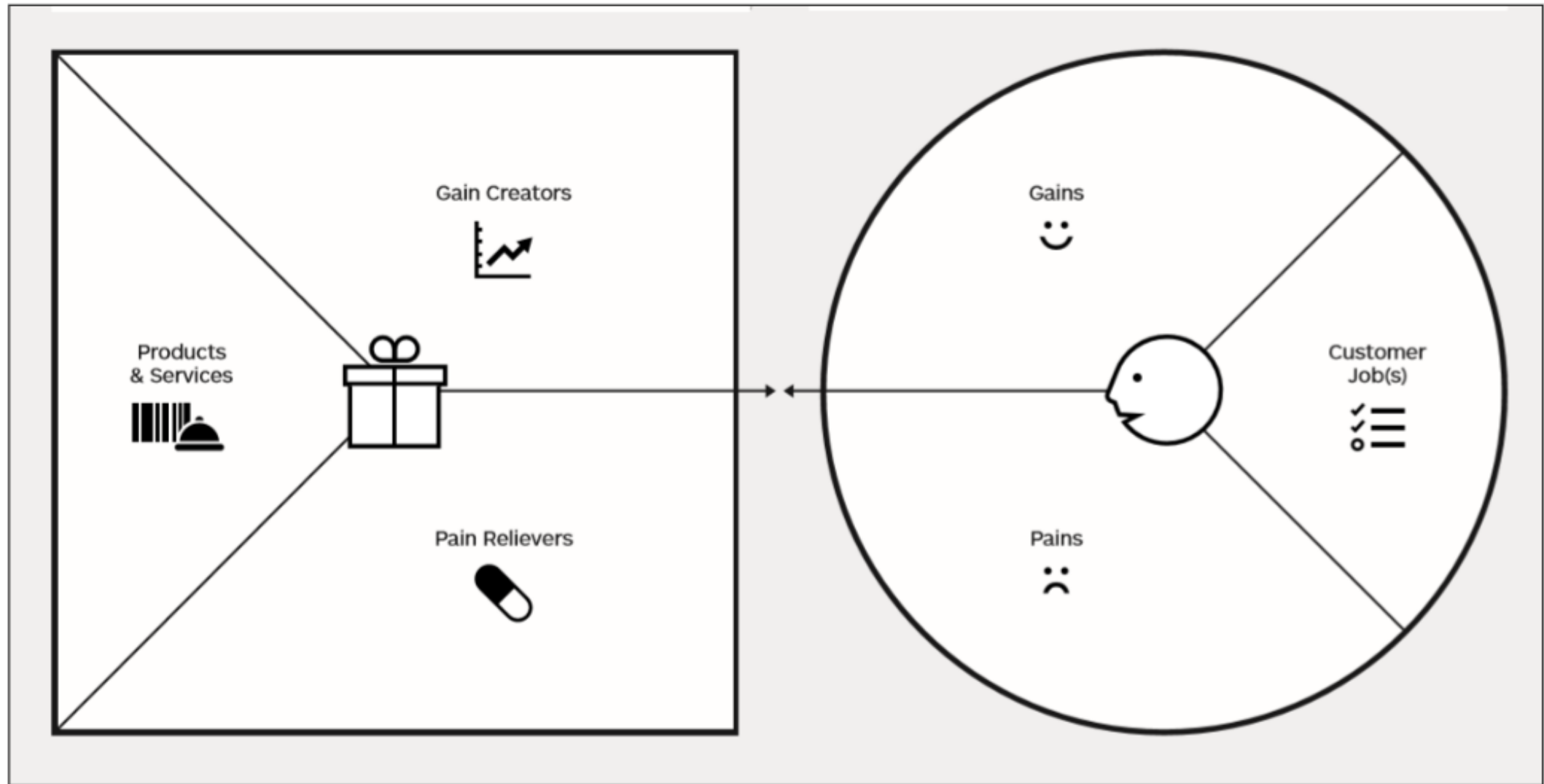
Social Media use	Facebook
Devices	iphone

Personal and Home	Married with 2 children
Work	Rachel is Head of Security for JD Wetherspoons. Rachel is responsible for the management of all door staff at JD Wetherspoons venues in the UK.

Buying Scenario	Rachel is responsible for ensuring that all door staff are supplied with the most effective device to complete their role. During pandemic situations, devices are used for proof of infection, and therefore proof of entry to venues. Price plays a key role in the decision-making process but so does ease of use, the clarity of the result display (some customers could be intoxicated). Devices are bought in batch to pay lower unit price. Delivery times are also important as long lead times could impact ability for door staff to do job. Distribution of devices is also important with devices distributed to individual premises via a network of distribution centres. Rachel is on various security-based forums on Facebook, and due to her work patterns (evening) communications need to be at time when she is ready to read them.
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Value proposition canvas

- Before completing a value proposition canvas for our B-2-C persona, we feel it is important to first clarify value proposition.
- Value proposition 'is believed to have first appeared in a McKinsey & Co. Industry research paper in 1988, which defined it as "a clear, simple statement of the benefits, both tangible and intangible, that the company will provide, along with the approximate price it will charge each customer segment for those benefits". (Twin, 2023)
- A value proposition canvas (sometimes called a map) describes 'the features of a specific value proposition in your business model in a more detailed way. It breaks your value proposition down into products and services, pain relievers and gain creators'. (Osterwalder et al, 2020)



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Fig 2 - Harris, 2020

VALUE PROPOSITION CANVAS

VALUE PROPOSITION



CUSTOMER SEGMENT

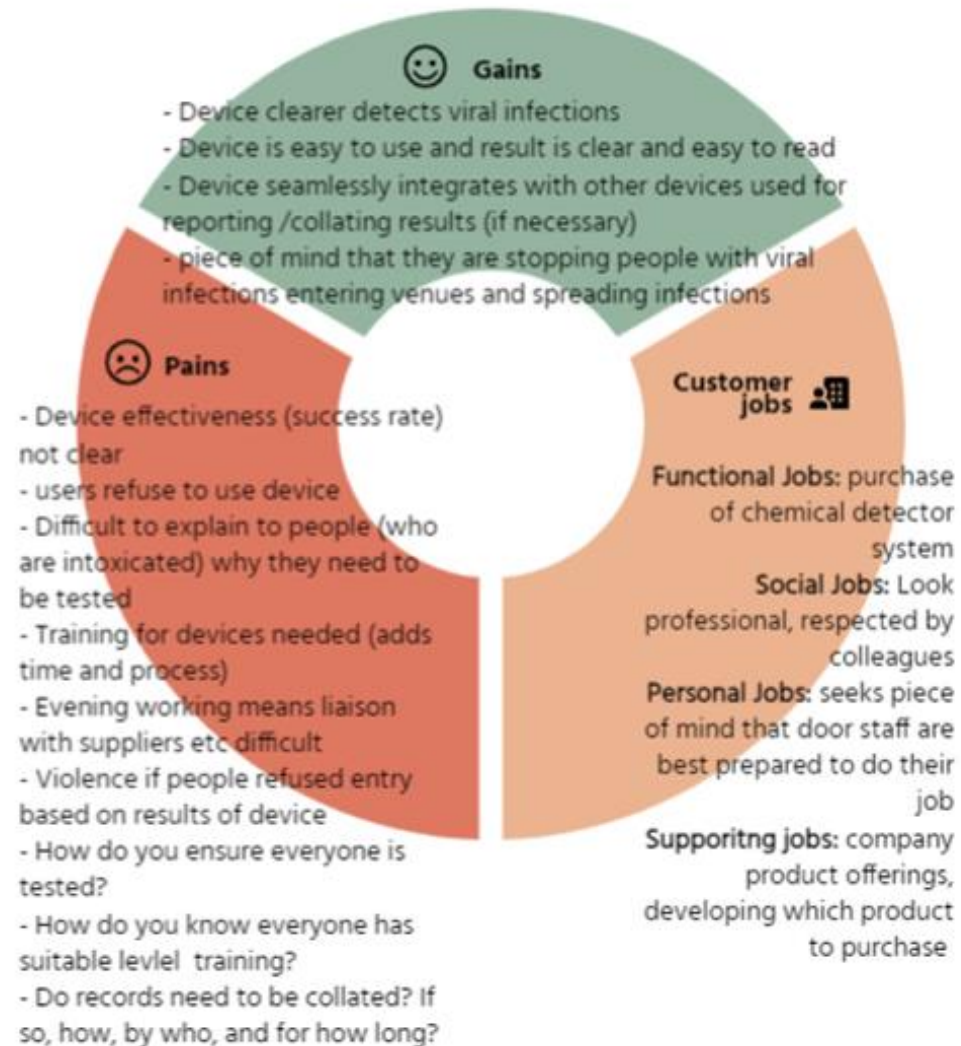


Fig 3 – edit.org, 2023

Persona – 3 (Individual)		
Persons	Name	Mike Swanson
	Type	
	Decision Role	Decision Maker
Demographics	Age	50
	Gender	Male
Decision Making	Style	Analytical

Goals and Motivations	Mike enjoys public events and expositions such as Comicon and film/tv meet up events. To keep himself and those around him as safe as possible, Mike wants to use the device to ensure that he's not infected before he attends any event.
Barriers and Challenges	If the device concludes that Mike is infected, he could ignore the result and go to an event anyway. This would limit the effectiveness of the device.
Our Key message	Mike would have peace of mind knowing he could attend an event virus free.

Personal and Home	Married with children
Work	Mike works with the University of South Wales as an IT technician

Buying Scenario	Mike feels as though he has a responsibility at public events to not attend if he was infected with some kind of virus. Therefore, Mike buy's a device that can rapidly tell him if he's infected or not. Mike only needs one device so he'd likely be paying full price. There is very little logistical challenge, just a delivery vehicle is required.
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Preferred Media	News channels, (BBC, ITV)
Social Media Use	Very little social media use
Devices	Mobile phone (smartphone)

The Empathy Map

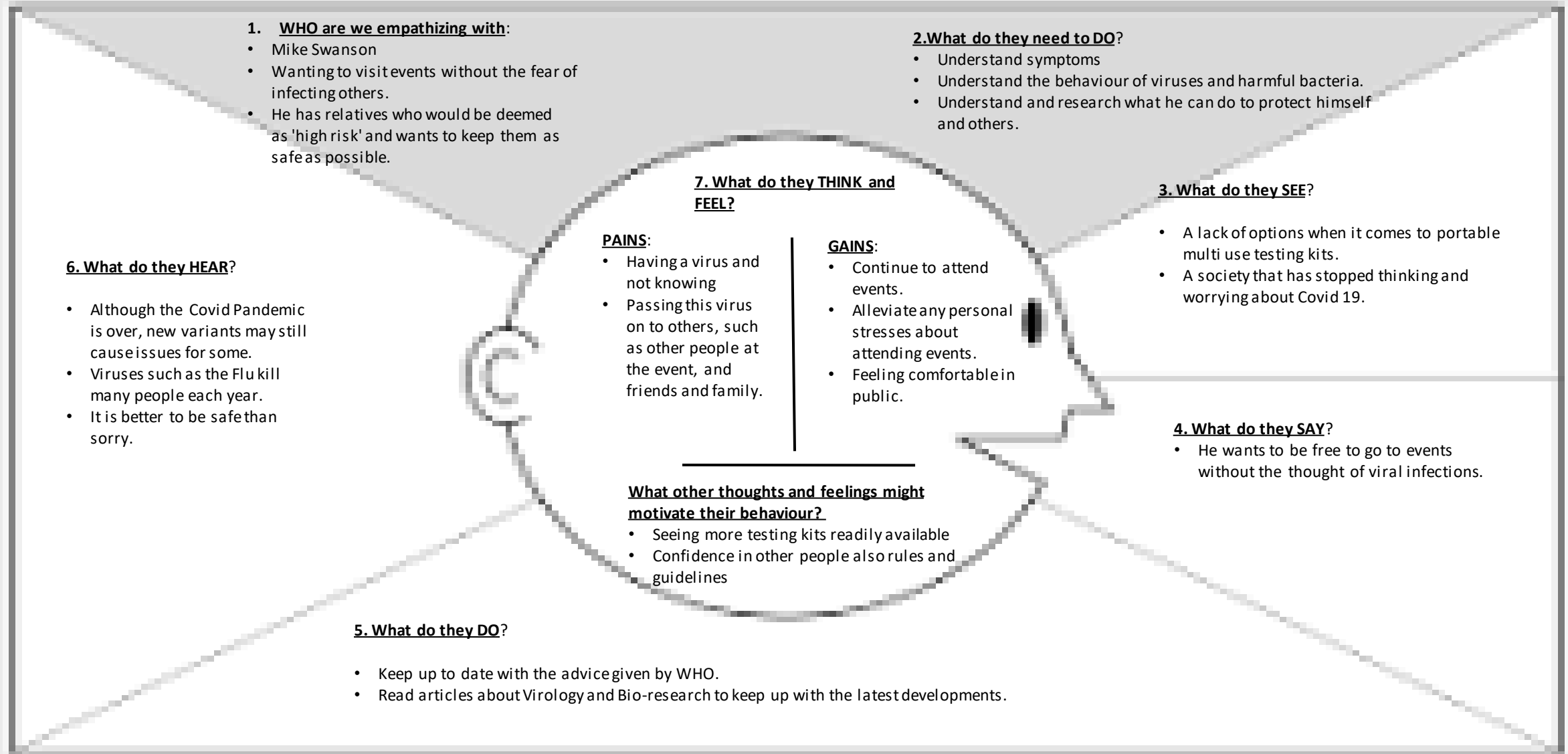


Fig 4 - Harris, 2020

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Pictures / Diagrams:

Fig 1: Harris, J., 2020. *Market Intelligence*, s.l.: Jackie Harris.

Fig 2: Harris, J., 2020. *Market Intelligence*, s.l.: Jackie Harris.

Fig 3: edit.org, 2023. Available here: EDIT.org - online editor. (Accessed: 13/7/23)

Fig 4: Harris, J., 2020. *Market Intelligence*, s.l.: Jackie Harris.