



MARKET RESEARCH

CHEMICAL DETECTOR SYSTEM

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OUR BIG IDEA

Use of a breathalyzer/chemical detector system technology to develop solutions that help common man in daily life.



MARKETING KNOWLEDGE

M

Market Research [1]

Surveys
Focus Groups
Personal Interviews
Observations
Field trials

P

PESTLE Analysis [2]

It gives a bird's eye view of the whole environment from many different angles that one wants to check and keep a track of while contemplating a certain idea/plan.

I

Management Info System

Obtaining Existing Information from the company & with partnership from the University

MARKETING KNOWLEDGE

C

Competitor Research [3]

There are some major constraints on what you can do in this area. The penalties of transgression may be substantial. There are both legal and ethical issues. There may be a very fine line between intelligence gathering and economic espionage.

E

Ethnographics [4]

Ethnography is a social science based on anthropology and its use in marketing studies is based on the idea that richer information and insight can be generated by deep immersion in the consumer's life, rather than asking questions.

F

Futurology [5]

Trained futurists have three key approaches:

- Careful Examination
- Scenario-building
- Visioning

WHAT BUSINESS ARE WE IN?



Law Enforcement [6]

Currently, the alcohol breathalyzers that the organization sells are used mainly by law enforcement. The products are used to detect alcohol levels in breath samples, usually in drivers of motor vehicles.



Prisons [6]

Drug and alcohol breathalyzers are used when a prison inmate is suspected of consuming illegal substances or alcohol. It is forbidden for these materials to be on the secure premises.



Transport Industry [6]

Interlock devices fitted to vehicle immobilizer which eliminates the potential for a driver under influence to be in control of the vehicle on public roads.

WHAT BUSINESS ARE WE IN?



Evidential System [6]

Evidential breathalyzers are used in forensic investigations & in witness services across the world.



Building and Construction [6]

Drug and alcohol breathalyzers are used when a Health & Safety issue has occurred or in an effort to avoid one happening. If a worker is suspected of consuming illegal substances or alcohol. It is forbidden to work under the influence on a site.



Heavy Industries [6]

Drug and alcohol breathalyzers are used when a Health & Safety issue has occurred or in an effort to avoid one happening. If a worker is suspected of consuming illegal substances or alcohol. It is forbidden to operate machinery/processes under the influence.

WHAT BUSINESS COULD WE BE IN?



National Health Service [7]

The National Health Service is a publicly funded healthcare system in the United Kingdom. It is the second largest single-payer healthcare system in the world. Virus detecting breathalyzers would decrease both resource requirement and transmission within health care settings



Border Security [8]

Every individual, no matter where they are from, has a unique life story that affects their current and future health. Migrants travelling to new countries often require health screening. Devices that provide quick and accurate health screening information would stop the spread of globally specific viruses, such as Zika



Cancer Research [9]

Prof Guido Verbeck is researching on sensors to detect cancer.

"air monitoring for unique chemical fingerprints is directly applied to breath chemistry, and hence the use for disease detection"

WHAT BUSINESS COULD WE BE IN?

Weight Issues

Weight loss/Gain ^[10]

Wisconsin startup Isomark has developed a technology can also “smell” if you’re about to gain weight.

Potential markets for this technology? Patients using feeding tubes in long-term care, folks enrolled in weight management programs, and athletes attempting to bulk up.



Smoking Cessation ^{[10][11]}

A nicotine-detecting breathalyzer to assess how much a person smokes by measuring their expired breath.

WHAT BUSINESS COULD WE BE IN?



Fitness [12]

A VOC analyser can assist athletes and keep fit enthusiasts in achieving their VO2 max whilst training and working out



Lactose/Fructose Intolerance [13]

Following a Lactose or Fructose specific drink, levels of hydrogen in the breath allow for a diagnosis of intolerance.

CUSTOMER VALUE PROPOSITION [4]

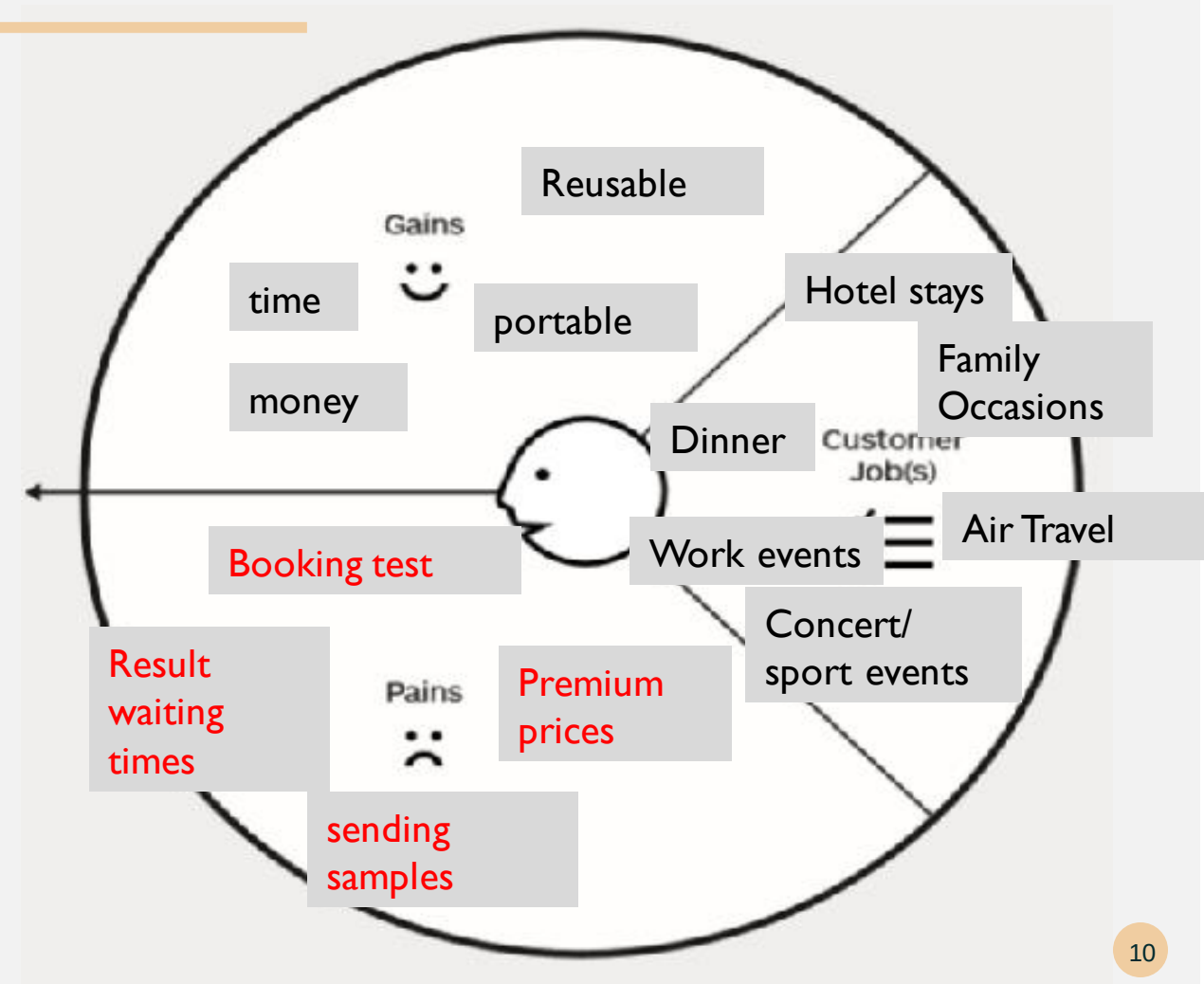
TRAVELLER

Product to aim:

TRAVELLERS

A device that:

- will test for presence of COVID-19 virus,
- provide results in a quick time frame,
- is re-usable,
- results to be accessed by an app / website,
- results to be shared with third parties - i.e Track & Trace, Airlines, Hotels, Bars & Restaurants



CUSTOMER VALUE PROPOSITION

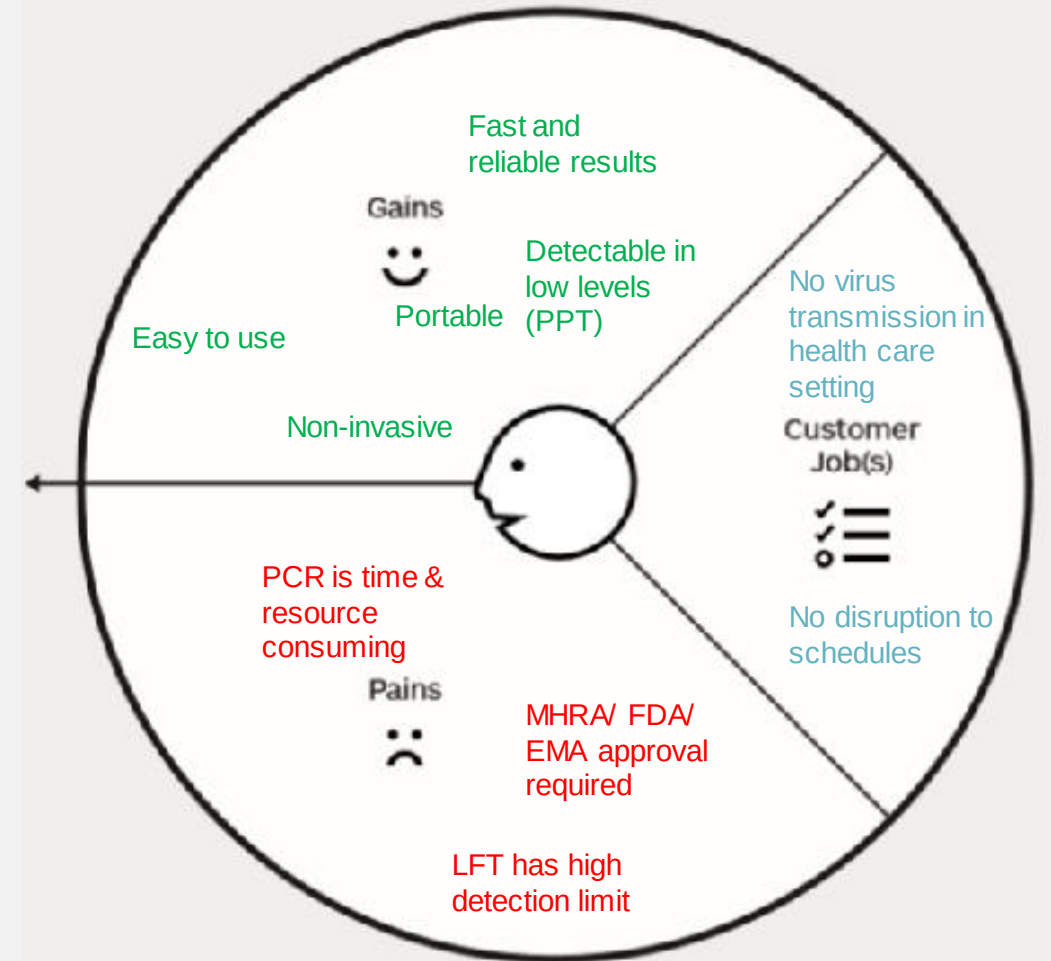
NATIONAL HEALTH SERVICE

Product to aim:

Pre-appointment/ Accident & Emergency

A device that

- Will test for presence of COVID-19 virus in a patient
- Provide results in a quick time frame using a non-invasive sampling technique
- Simple to use handheld device, with very little training required



IN DEPTH PROCESS

BUYER PERSONA - EVENT MANAGEMENT & SECURITY



BACKGROUND

Undergraduate in Events ,
Event Security Supervisor,
Worked in Event Security & Hospitality for 20 years.



DEMOGRAPHICS

Age 45
Male
Married
2 Children



GOALS

Not to be seen as the classic officious security employee,
Would like a quick and easy way to tell if someone attending an event without proof of vaccination can be let in without causing delays in others getting into the event in a timely manner.

Alun Jones



HOBBIES AND INTERESTS

Football,
Rugby,
Socialising,
Motorcycles,
Rock Music (plays in a band)



CHALLENGES

Getting people in(and out) of events without any delay or disruption.

Covid has presented an issue with getting attendees into an event quickly without causing delays, despite the advice, people turn up without proof of vaccination. This could cause major upset and disruption at event entry points.



COMMON OBJECTIONS

Cost of the device,
Easily portable (weight/dimensions),
Hygiene,
Quick results,
Definitive result



MAJOR FEARS

Unruly attendees causing upset.
Delays in attendee entry to event.

A DAY IN THE LIFE...

EVENT MANAGEMENT & SECURITY

Scenario:

Coldplay playing their last ever gig (Hooray!)

Start time: 19:05

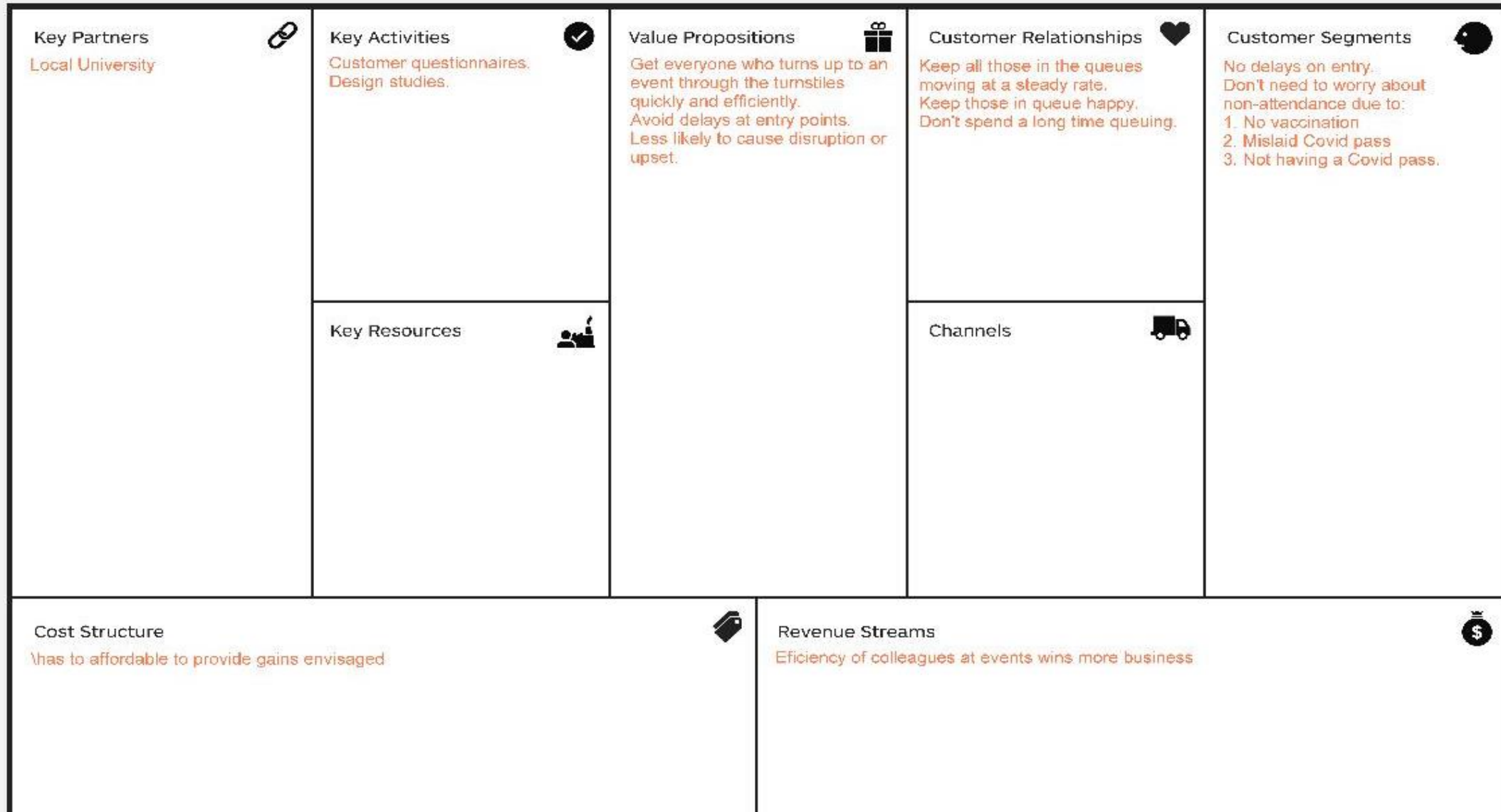
Venue: Manchester AO Arena

Auditors from a local university observed the main entrance to the Arena, keeping a log of instances where attendees were denied entry to the gig through not being able to produce a valid Covid pass, recording what reason triggered this, what occurred and Alun's thoughts.

Time	Activity (what I see)		Notes (what I think)
18:30	A older couple turned up with no Covid pass, and were not vaccinated. I had to make space in queue to turn them away.		If only I had a quick detector that could test people in seconds they could have attended the gig.
18:42	A group turned up who had left their printed Covid passes in their car. I had to make space in queue to turn them away so they could retrieve their passes - they missed the first act of the gig .		If only I had a quick detector that could test people in seconds they would not have missed any of the gig.
18:52	2 Teenagers who had been drinking beforehand, did not have Covid passes. When I turned them away, they wanted to fight/cause disruption. Trouble started with others in the queue. Police had to escort the teenagers away.		If only I had a quick detector that could test people in seconds the trouble might have been avoided.
19:05	2 Groups of 4 turned up late (gig had started) Had trouble finding their Covid passes on their phones (been drinking but merry) I had to be patient while some of them re-downloaded them and i had to keep both groups patient with each other.		If only I had a quick detector that could test people in seconds they could have attended the gig.
19:15	A father and his young daughter turned up late (gig had started) They had a train delay. Their Covid passes were on another phone (which had been left at home) - the child was inconsolable - I helped the father download a new Covid pass. They missed quite a lot of the gig.		If only I had a quick detector that could test people in seconds they could have entered the gig more quickly.

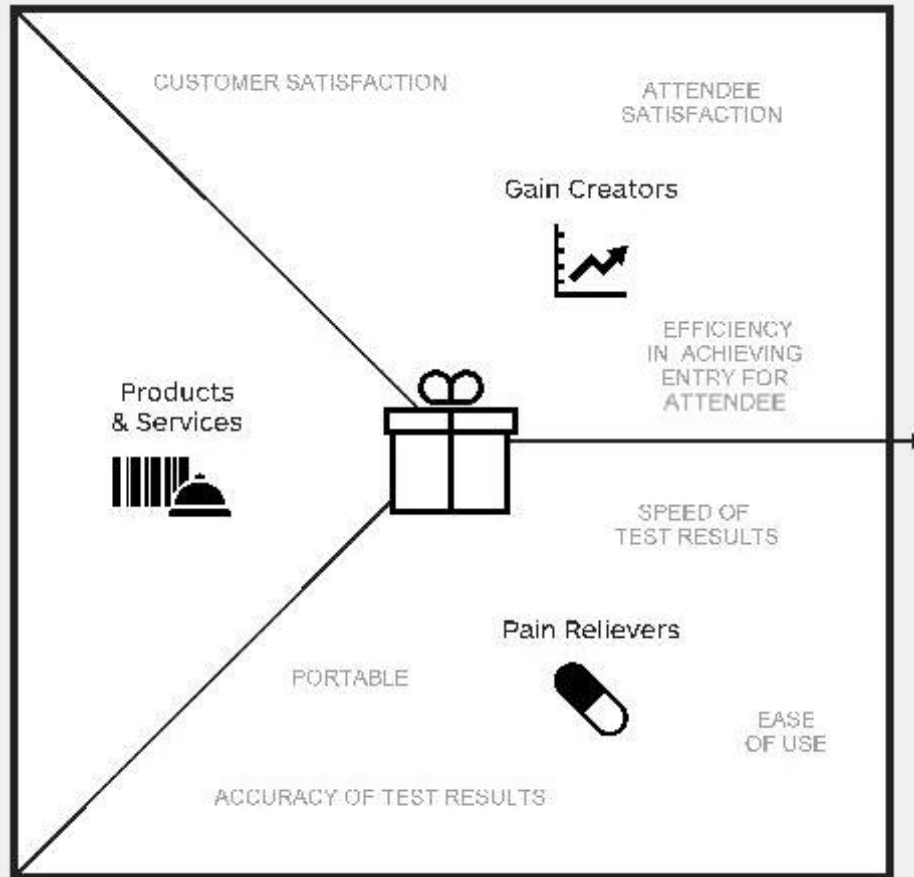
BUSINESS MODEL CANVAS

EVENT MANAGEMENT & SECURITY



VALUE PROPOSITION CANVAS

EVENT MANAGEMENT & SECURITY



Proposition aim:

EVENT ATTENDEES

A means of:

- Efficiency in achieving attendee entry to events,
- Through results in a quick time frame,
- Achieving accurate results,
- Re-using the same test kit,
- Keeping crowd disruption to a minimum.

CUSTOMER VALUE PROPOSITION

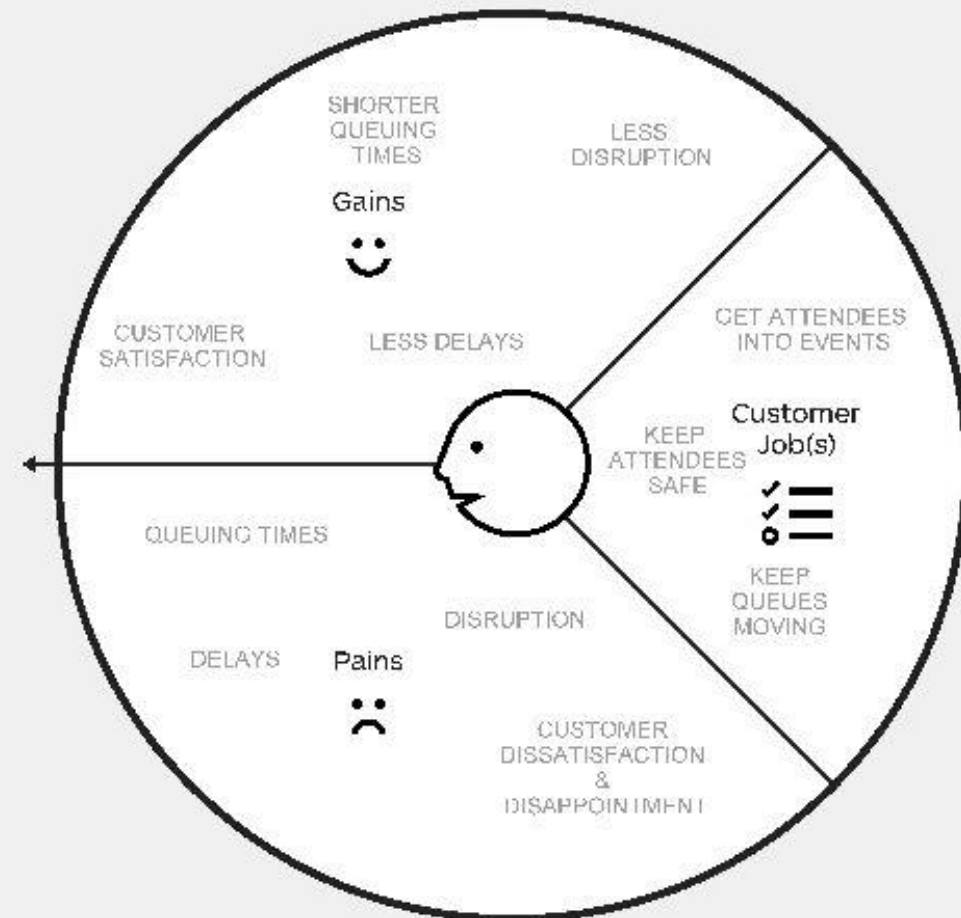
EVENT MANAGEMENT & SECURITY

Product aim:

EVENT ATTENDEES

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REFERENCES:

1. Five basic methods market research – [online] available at [The five basic methods of Market Research - Verizon Small Business Essentials Resources](#) [Accessed: 30/03/22]
2. Pestle Analysis – [online] available at - [What is PESTLE Analysis? An Important Business Analysis Tool](#) [Accessed: 01/04/22]
3. Piercy (2009). Market led strategic change, Fourth Edition, pp. 247
4. Kadens, RJ, Linda, G and Prince, M. (2012). Leading Edge Marketing Research: 21st-Century Tools and Practices, SAGE
5. Hyman, MR, and Kostyk, A. (2019), A Prospectus on Marketing Futurology, *European Journal of Marketing*
6. Lion Laboratories (2022) *Products*. [online] Available at: <<https://www.lionlaboratories.com/products/>>, [accessed 01/04/22]
7. NHS – [online] available at <<https://www.nhs.uk/>>, [Accessed: 31/03/22]
8. GOV.UK (2021), Assessing new patients from overseas: migrant health guide – [online] available at <<https://www.gov.uk/guidance/assessing-new-patients-from-overseas-migrant-health-guide>> [Accessed 04/04/22]
9. Breathalyser applications – [online] available at [Dallas Innovates](#) [Accessed: 01/04/22]
10. Breathalyser applications – [online] available at [Four cool ways breathalyzers are used as medical tools \(medcitynews.com\)](#) [Accessed: 02/04/22]
11. Oxford Academic, Breath Analysis: Potential for Clinical Diagnosis and Exposure Assessment *Clinical Chemistry*, Volume 52, Issue 5, 1 May 2006, Pages 800–811, Available at: <<https://doi.org/10.1373/clinchem.2005.063545>> [Accessed 27/03/22]
12. Health Online (2020) Everything to Know About VO₂ Max, Available at <<https://www.healthline.com/health/vo2-max>> [Accessed 28.03.22]
13. John Hopkins Medicine, (2022) *Gastroenterology and Hepatology* Available at: <https://www.hopkinsmedicine.org/gastroenterology_hepatology/clinical_services/specialty_services/breath_testing.html> [Accessed 28/03/22]
14. Wided Batat (2019). Experimental marketing

THANK YOU

We are now open to questions

