

VITAL Business Case "Light" Concluding Report

Business Case Handover			
Idea:	Wearable baby monitor	Ref:	256
Lead VITAL Rep:	Sinead Cahill	Business Case Type:	Light
Service Provider Contact:	TBA	Non Confidential Summary Approved:	Yes /No

Brief / Situation Assessment

This document is a response to the brief provided by the VITAL Management as attached at Appendix I.

This particular project relates to the manufacture and sale of a vital signs monitor which can be worn by infants and vulnerable older people.

In summary this is the response to the following issues within the confines of 1.5 days:

- Executive Summary
- Market Size
- Market Attractiveness and competitive analysis
- Pricing Levels
- Investment requirements
- Innovation value proposition
- Likely and potential blockages
- Market entry and channels

1. Executive Summary

A summary of your interpretation and confirmation of situation assessment, the problem and proposed solution and potential value proposition should be provided for all business cases awarded.

The proposed business case concerns the manufacture and sale of a vital signs monitor which can be worn by infants, vulnerable older people. The idea owner is a trained product design engineer who has been employed in the biomedical/clinical sector within a hospital for the past twelve years. His current role involves evaluating and drawing up specifications for medical equipment.

A working prototype has been developed, but the idea owner admits that it needs some refinement. This product will also need some certification which has not yet been applied for. This is being billed as a consumer product as opposed to a medical device so it should not need complex testing, however CE marking will be a minimum requirement.

The initial market for this proposed product is infant baby monitoring but the product can also be targeted at elderly people monitoring which makes the offering somewhat unique.

In this plan we have focused entirely on the baby monitoring market sector.

A recent survey in the UK revealed that parents of young babies spent an average of €75 on a baby monitor. There were 729K new babies born in England and Wales in 2012 and 698K in 2013 so the potential market in Ireland and UK is huge.

Of course this product would have global appeal so we are looking at massive market potential.

However whilst wearable technology is a new and rapidly emerging one across the developed World, the market for baby monitoring is well established with many many competitors. Details of the current competition is covered in section 2 of this report.

Baby monitors are of course designed in the main to alert parents or guardians as to when their baby wakes and needs attention whereas this proposed product is designed to do that but to also collect data and measure and monitor a whole range of body and other conditions including, heart functions, Respiration, Body Temperature, Environmental Temperature and humidity, Position/Movement, Orientation, Relative Location, Direction, Impact detection, Drop/Fall.

Some of the later functions are aimed at monitoring elderly or infirm people. The user will be able to decide the various levels of functionality they wish to use.

Research shows a large number of competing products in the overall baby monitoring market but only a handful that could be described as direct competitors who use "intelligent clothing" as a product base. Two of these items identified are still in the development stage and although the companies involved have on-line pre-ordering established, they are not currently available.

A vast quantity of baby products including monitors are sold on-line and this is the preferred route to market for the inventor which we agree with. However large volume of on-line sales are dependent on products being widely known through product branding and advertising so this will be a major challenge for this business.

We have estimated that an additional €100,000 may be required to make the product market ready. This includes final prototype development, outsourcing of manufactured samples and finalising of manufacturing partner, testing and certification including CE marking and legal and IP costs.

It is important that any product developed needs to be extensively tested and modified as required given the niche market for which it is intended (Infant babies) prior to launch.

The channel to market would primarily be through on-line sales. This will require the establishment of an efficient e-marketing on-line "store".

Based on our analysis, **pricing would be in the region of €200 per unit**. For the purpose of this exercise we have used a sales price of €200 and have assumed that the cost of sales and overheads is 65% of the sales price for our projections (Section 3).

The financial projections prepared have been based on **broad assumptions** to help give this business case **a commercial perspective**. They should not be relied on in themselves and need further development and clarification.

The projections, including anticipated investment requirement are reflected at Section 3 and can be summarised as follows:

- Investment required for development €100,000
- Initial Profitability -€10,736 Loss in Year 1 (may be higher)
- Cumulative profit after three years equals the initial development costs
- Year 5 profitability €286K
- Return on Investment over 5 years 31%

We have identified a number of potential blockages at Section 10 which are surmountable but need to be addressed. These include the ability to generate on-line sales (how they will create product exposure) and the risk of any IP infringement.

We suggest for now that this business case could have significant potential if the product development can be successfully completed and a suitable manufacturing partner can be sourced. We also suggest that the investment and pricing levels above be further investigated by the promoter so as to more thoroughly develop the business case.

We encourage more robust information for this project prior to moving to a more detailed business case.

This light business case is by no means conclusive in itself but should act as an aid to further develop the concept and a more robust business proposition. It is based on the limited information provided from the VITAL handover and is completed within the budget constraints of 1.5 days.

2. Establishment of market size with market segment considerations

This should be as accurate as possible and should not be reliant upon estimates or extrapolations.

The product being offered in this instance is a vital signs monitor which can be incorporated into special vests to be worn by infants and by vulnerable older people.

This idea was developed as the inventor was doing some research into SIDS (Sudden Infant Death Syndrome) and products designed to prevent it.

Sudden infant death syndrome (SIDS) – also known as cot death – is the sudden, unexpected and unexplained death of an apparently well baby. In the UK, at least 300 babies die suddenly and unexpectedly every year. This statistic may sound alarming, but SIDS is rare and the risk of your baby dying from it is low. Most deaths happen during the first six months of a baby's life. Infants born prematurely or with a low birthweight are at greater risk, and SIDS is also more common in baby boys.

Most unexpected deaths occur while the child is asleep in their cot at night. However, SIDS can also occur when a baby is asleep during the day or, occasionally, while they are awake.

Most products on the market try to prevent babies from rolling on to their front (a suspected contributor to SIDS) and monitor by means of a sensor pad mattress which the baby will lie on. But the inventor felt a more effective product could be developed taking advantage of new developments in e-textiles.

The result is a wearable monitor – a vest with in-built fabric sensors which will monitor a range of vital signs and alarm if any one of the parameters moves outside the controlled limits. The garment is currently targeted at the baby market but the product is scalable and could also be used to monitor elderly or infirm adults.

The idea consists of

- A vest with in-built fabric sensors
- A monitor unit comprising a small flexi-circuit and a battery unit. This is held in a soft silicone 'bag' which is attached to the vest at the hip area. The battery is designed to be a self-charging piezo unit doing away with the need to charge the monitor
- An I-phone/ smart phone app which allows the user to set parameters and monitor the vital signs.
- An alarm wrist band. This soft band would house the simple vibrate unit and again a piezo unit to enable it to be self-charging. It would be worn by the parent/carer and will vibrate when any of the vital signs move outside the set limit.

All electronics will be integrated into the vest and will still be comfortable to wear. The system will use a combination of ISM Band RF and Wi-Fi for communications. Either 434 MHz Band or 868 MHz Band frequency will be used due to some perceived risks to babies from higher frequencies such as the 2.4 GHz Band.

The target market therefore is primarily those with or expecting new babies. This is a vast market. In 2013 in England and Wales alone there were over 729K new babies born. Recent research showed that parents spent an average of £70 (approx. €75) on a baby monitor. If 75% of these parent families purchased a monitor then the spend would be in the region of €41M – a vast market

So we feel that if the right product, at the right price, is brought to the market then parents (customers) will always be interested in a better product than is currently available.

The product has originated from research into Sudden infant death syndrome (SIDS) and the inventor suggests that this may be a particular target market, however there appears to be no definite current evidence that breathing or movement monitors help prevent cot death so the advice for example of BUBA

(UK) and the American Academy of Paediatrics (AAP) is to use one of those devices only if a doctor advises you to.

Approximately over 70,000 babies are born in Ireland each year so the Irish market for baby monitoring devices is worth in the region of €5.2 Million.

Research shows a large number of competing products in the overall baby monitoring market but only a handful that could be described as direct competitors who use "intelligent clothing" as a product base.

A vast quantity of baby products including monitors are sold on-line and this is the preferred route to market for the inventor which we agree with.

However on-line sales are dependent on products being widely known through product branding so this will be a major challenge for this business.

We have focused this plan only on the baby monitoring market. The move after establishment of this business into products to the elderly will require a different focus and possibly a different route to market.

3. Market attractiveness and competition analysis

This should consider short-term profit, medium and long term profit potential, growth rate of market, market openness, cost of entry etc. The competition analysis should include an assessment of the strengths and weaknesses of current and potential competitors and give consideration to an offensive strategic context to market entry competitive reactive preparedness including associated opportunities and threats. Consideration should be given to scenario modelling for disruptive and displacement innovation offerings.

3.1 The Global Market

Total births across the World are in the region of 134 Million per year. Of course the majority of these births are in developing countries and these are not the market for baby monitors. Suffice to say that the overall market for baby monitoring equipment is Billions of Euros.

According to the United Nations, the population under the age of five in developed economies including the United States, European Union and Japan totalled 54 million in 2010.

Research (Supplied by the Inventor) suggests that:

According to IBISWorld, the online baby product market had a total revenue of \$6bn with growth of 14.5% from 2008 - 2013. The online Baby & Infant Apparel market has had total revenue of \$4bn, with growth of 2.8%. More and more companies are entering this market due to the lower overheads. This is forecast to continue growing at an annualized rate of 3.9%.

Moving from the online markets to 'brick and mortar' stores, in the US alone this market has predicted revenue of \$11bn and annual growth of 1.8%. This is forecast to continue, with growth remaining steady over the next 5 years.

In 2012, the UK baby products market posted current value growth of 4% to reach sales of approximately £418 million.

3.2 The Target Market

The target market for this product would be mainly first time parents or parents of children with particular health problems or viewed as "at-risk". The inventor also foresees this product growing into the care of the elderly or vulnerable adult markets. The target market for this proposed product will initially be UK and Ireland. As previously stated the overall market for baby monitors of all types is approximately €45~€50 Million.

The overall baby monitor market is serviced currently by a range of product types including:

- **A sound or audio monitor transmits sound only**, via an integrated microphone in the baby unit and a speaker in the parent unit. Most manufacturers offer basic sound monitors.
- **Some sound only monitors use DECT (digital enhanced cordless telecommunications) technology.** These baby monitors offer an improved quality of sound as they are designed to keep unwanted noises and interference to a minimum using data encryption. This includes interference from wireless networks which many households have today. Some manufacturers, such as Philips, who produce the Avent brand, guarantee zero interference and a secure connection with their infant monitors which use DECT technology.
- **A digital video monitor is one that allows the parent to both see and hear the baby.** The unit in the nursery has a camera installed similar to a webcam and the parent unit has an integrated screen. Some video monitors allow the installation of more than one baby camera across different rooms, all connecting to the same parent unit, which is especially useful if you have more than one

baby to keep an eye on. Many new parents find that, having tried a video monitor, they would never go back to a sound only baby monitor, but they are, of course, more expensive. There is a huge choice of video baby monitors from companies such as Philips Avent, Graco, Luvion and Motorola

- **A movement monitor incorporates a pad with sensors which is placed under the mattress and alerts the parent if the baby has not moved for a set period of time.** If you have more than one baby in the room you can buy additional sensor pads so that they can all be monitored with the same parent unit. As many parents like to have sound capability too, this is usually used in conjunction with an existing sound baby monitor rather than on its own. A sound and movement monitor combines the two types (as the name would suggest!) Angelcare specialises in these types of baby safety monitors.

- **A breathing sensor monitor is similar to a movement monitor, but it uses a sensor that is attached to the front of the baby's nappy.**

This sensor alarms if breathing stops, so this type of monitor is focused on the baby's breathing, as opposed to the baby's movements. Many parents use the breathing monitor as well as a regular sound monitor.

Some specific current products are detailed later in this section.

The proposed product will be aimed at the high-end niche section of this market serviced by the movement and breathing sensor monitors.

Given that the proposed product offers a wide range of extra monitoring and data collection it should have no difficulty in differentiating itself from existing products on the market and offering a clear USP.

It is also significant that wearable technology is growing rapidly.

· 1,028,800 million wearable devices predicted to be sold in the UK this Christmas (2014) across core wearable technology areas

· People in the UK are forecast to spend £104.7 million on wearable technology this Christmas, more than Germany, Spain and The Netherlands who were also polled

· The wearables market as a whole is forecast to be worth £313.6 million in 2014 for UK retailers, the second highest in Europe after Germany

Most people associate wearable technology with smart watches or other gadgets but development is progressing at pace with apparel designers and manufacturers for clothing with advanced technologies. Some of the developments include early detection for epilepsy sufferers or bras that can detect signs of breast cancer.

Experts predict that these products will become more market accessible over the coming years and therefore the timing of entry of this proposed product to the advanced baby monitoring market is very suitable.

According to research released today by Samsung Electronics, 2014 is set to be the year that the wearables sector begins making a significant economic impact with its predicted value across the UK, Germany, Spain and the Netherlands expected to hit £924.2 million by the end of the year. The value of the market in the UK is predicted to total £313.6 million by the end of 2014 with Christmas set to be the time that retailers can expect the wearables sector to have the most impact on sales.

3.2 Profitability:

Without a full Business Plan, a full Market/Customer Analysis and a degree of certainty relating to the level of investment available it is not possible to conclude an adequate Commercial Plan at this juncture.

Team BDS have used an illustrative model to help form decisions on this early business assessment under 3 headings

- Cost of Development
- Projected Profit Analysis
- Indicative Rate of Return

The product we believe can be successful in the market, following successful development and testing combined with successful marketing. A degree of expenditure will be required to fully test and commercialise the product.

We anticipate that it may initially be loss making until sales volumes are built into the second and third year. Our projections (which are only indicative) suggest that the business could be profitable in year two of trading with the initial investment recovered after year three. This is predicated on a number of factors, including the volumes predicted being achieved at the prices suggested.

Our model also assumes that the required development can be concluded successfully to make the product "market-ready".

It must be borne in mind that the following workings are indicative by nature and are not conclusive. For the purpose of this exercise inflation and taxation issues have not been taken into account.

We anticipate an investment requirement of circa €100,000 in order to complete the final development / testing & commercialisation of the product, cover initial losses and provide a degree of working capital. This conservative figure is broken down as follows:

3.2.1 Cost of Development

	€	€
Capital Expenditure		
Office set up and fit out	-	
IT Systems (On-line store)	8,000	8,000
Technical Specification Costs		
Project Management	12,000	
Product Development (Sourcing of outsourced manufacturer)	15,000	27,000
Development Costs		
Technical Specification & Prototype Development	15,000	
Testing & Validation (Inc CE Marking)	10,000	
Research Costs		25,000
Legal & Professional		
Due Diligence	8,000	
Legal Contracts	5,500	
IP Costs	10,000	
Consultancy Fees		23,500
Contingency	20%	16,700
Total Capital and Development Costs		<u>100,200</u>

3.2.2 Projected Profit Analysis

Projections based on Outsourced Manufacture							
	Year 1	Year 2	Year 3	Year 4	Year 5		
	€	€	€	€	€		
Sales Proceeds	10,400	160,000	240,000	288,000	340,000		
Direct Costs							
- Outsourced Production Cost per Unit							
Year 1	50%	5,200					
Year 2	45%		72,000				
Year 3	43%		103,200				
Year 4	40%			115,200			
Year 5	37%				125,800		
- Total Outsource Costs		5,200	72,000	103,200	115,200	125,800	
Other Direct costs							
- Royalty Payments		-	-	-	-		
- Distribution costs (per unit)	€8.00	416	6,400	9,600	12,800	16,000	
- Sales & marketing	15%	10,000	24,000	36,000	43,200	51,000	
- Other direct costs	€10.00	520	8,000	12,000	16,000	20,000	
Total Direct Costs		16,136	110,400	160,800	187,200	212,800	
Contribution	-	5,736	49,600	79,200	100,800	127,200	
Allocation to Central Overheads		5,000	15,000	15,000	15,000	15,000	
Residual Profit	-	10,736	34,600	64,200	85,800	112,200	
Residual Profit brought forward		-	-	10,736	23,864	88,064	173,864
Residual Profit carried forward	-	10,736	23,864	88,064	173,864	286,064	

3.2.3 Indicative Return on Investment

	€
Capital Cost	(100,200)
Profit (Loss) - Year 1	(10,736)
Profit (Loss) - Year 2	34,600
Profit (Loss) - Year 3	64,200
Profit (Loss) - Year 4	85,800
Profit (Loss) - Year 5	112,200
Indicative Internal Rate of Return	31%

Caveats

It must be borne in mind that the above figures are indicative and are contingent on a number of factors. They should not be relied on exclusively and have been prepared solely for illustrative purposes. These need to be further challenged and analysed during a detailed Business Case review and/or during due diligence by any potential investor / partner.

3.3 Growth Rates of Market

Please refer to Section 3.1 above.

3.4 Competition Analysis

There are a wide variety of Baby monitor/Baby care manufacturers across the world, however apart from his product, the inventor claims that only three other companies which have entered the 'intelligent clothing' market.

Our market research backs up this claim.

The majority of monitors available on the market operate a two-way system transmitting sound, video and maybe temperature and the baby's breathing. The inventor has identified that a common problem with these monitors that measure the baby's breathing is that the sensor can fall off, leading to false alarms, which in turn leads to parents losing faith in the product.

Current products on the market include: those of the mattress type and the three referenced as closest competitors in the intelligent clothing sector by the inventor;

iBabyGuard™ <http://www.ibabyguard.com/>



Price: - USD \$ 199.00 (€161)

iBabyGuard™ - sounds an alarm alerting the carer to check the baby when no breath has been detected for over 15 seconds.

'Intelligent clothing'

Rest Devices - MIMO. <http://mimobaby.com>

The company claim that they have created a brand new onesie-based infant monitor that monitors respiration, body position, skin temperature, audio, and activity level. It connects via WiFi and pushes the information to a smartphone app so that parents can view their baby's information anywhere, anytime. In addition, parents can set customizable alerts to be notified if there are changes in respiration, temperature, if a baby rolls onto its stomach, and for wake/sleep.

The Mimo kimono is made of soft cotton with respiration sensors pressed to the top of the kimono, keeping anything from touching your baby's skin. Information from the sensor is sent by the Turtle via Bluetooth to the Lilypad, which then relays that data and live audio through the cloud to a connected smart device.

The starter kit comes with 3 machine washable Mimo kimonos, 1 Turtle, 1 Lilypad, and charging and programming cables and **retails for US\$199.99 (€161)**



Owletcare - Owlet. <https://www.owletcare.com>

This product is listed on their web-site as still under development with no definite shipping date.

Owlet is an innovative vitals monitor, using pulse oximetry to monitor blood oxygen levels and heart rate of babies. Owlet is a small bootie that the baby wears while sleeping. It signals heart rate and respiration and you can check in on your baby via a mobile device.



It will retail on-line for US\$250 (€200)

Sproutling. - <http://www.sproutling.com>

A wearable band for your baby, a smart charger and a mobile app work together to not only monitor more effectively but learn and predict your baby's sleep habits and optimal sleep conditions.

Starts shipping March 2015 at a cost of US\$259.00 (€209)



As stated the market for these devices (products) is just developing and much of it is aimed at on-line sales. As previously stated the online baby product market had a total revenue of \$6bn with growth of 14.5% from 2008 - 2013.

The disadvantage any intelligent clothing product may have (especially for infants) over clip on devices is the number of different sizes required as the baby grows and increases in size over the first year of their life. It means that the actual intelligent vest will have to be comparable in price with regular high-street products.

3.4 Market Entry

The inventor suggests that this product, given its mix of textile and electronics, would probably be commercialised initially by an entrepreneur, manufacturing off-shore and selling on-line.

Some possible partners for the design and manufacture of the intelligent clothing vests may include the following:

Arlen UK: - part of a larger family known as the Arlen Textile Group.

<http://www.arlenuk.co.uk>

A leading designer, manufacturer and supplier of high quality protective, corporate and specialised clothing. Currently they specialize in the following clothing types:

Uniform & Work wear, Military, Emergency Services, Specialist Garments

Corporate Clothing, Protective Wear, Anti-electrostatic Clothing, Chemical Protection Clothing, High Visibility Clothing, Police, Fire & Armed Services, Food Industry Clothing, Pharmaceutical & Industry Clothing

Intelligent Clothing - founded ten years ago to pursue an idea that ordinary washable undergarments could provide an intensive care standard of wireless health monitoring. The company's research has produced a manufactural SmartPatch™ with internet connectivity, suitable for Special Care Baby Units and the home. – **This makes them both a competitor and also a potential for a licensing agreement partner.**

The Company is both UK and US based.

<http://www.intelligentclothing.com>

The key challenge for intelligent clothing manufacturers is how to overcome wash and care issues.

3.5 Developing a USP

In terms of competitor product advantages / disadvantages it is difficult to assess what advantages the proposed product may have without actual test data results. It would appear that the proposed product offers a more comprehensive range of monitoring functions than those of its closest competitors.

Some benefits of the system vs competitor products

- It provides more in-depth data on specific parameters
- The alarm wrist band reduces the need to constantly check on the child
- It's portable. Can be used outside the home environment and could be worn constantly for at-risk cases.
- Eliminates the need for charging
- Could provide backup data in the event of an emergency
- Could identify underlying health problems
- The system is also suitable for multiple babies, with each having their own channel and linked to the same wristband.
- Not susceptible to interference either from movement or electrical.
- An adaptable technology for any application.
- Allows detection and tracking of the wearer (in the case of elderly people)

3.6 Pricing

The pricing of this product will have to take account of the current market prices for the closest competitor products:

With this in mind the product market price would need to be in the region of €200

This in turn means that the manufacturing cost of the product will need to be in the region of 50% of that cost starting off with the aim of reducing this over time with volume purchases.

A lot will depend on the route to market. If the product is sold on-line as the inventor proposes then expensive retail costs will be reduced / eliminated. This will allow more scope for the manufacturing cost.

If the route to market is through normal retail or a distributor then mark-up % must be factored in. For the purpose of this initial business case we have focused only on on-line sales.

4. The customers pricing levels

A price elasticity should be assigned to each customer market segment underpinned by product value and cost engineering, for each type of demand response option, using available information about how similar customers have responded to prices afforded by similar demand response options.

There is little market evidence to suggest that the potential market price will differ depending on the market location except that it will need to be in line with other competitor products available in those markets.

However a significant proportion of these products are sold on-line which eliminates retail store price fluctuations.

5. Total Investment requirements / cost to progress (minimum viable)

This will consider where appropriate, the need to establish, plan, licence, further develop, create, manufacture, along with the ability to market, sell, deliver and support. This will again be underpinned by product value and cost engineering considerations.

It is unclear how much additional development is required for this product in terms of functionality. The inventor suggests that the current prototype needs some refinement.

This needs to be clarified and development costs identified under the following headings:

- 1. Functionality Development**
- 2. Aesthetic of the product design**
- 3. Packaging Developments**
- 4. Testing and certification requirements**
- 5. Selection of outsourced manufacturer including sampling and testing of products.**
- 6. Branding requirements**
- 7. Creation of on-line web store**

It is accepted that this is not a medical product – rather a consumer product and in that it will not require complex and expensive testing.

CE marking will be a requirement but this is a low cost exercise.

It should be borne in mind that without a full Business Plan, a full Market/Customer Analysis and a degree of certainty relating to the level of investment available it is not possible to conclude an adequate Commercial Plan at this juncture.

6. Product life cycle considerations

To include life cycle costing estimates that supports a decision maker in making a return on investment decision.

Though not requested in this case it should be noted that:

This product, especially given the emerging intelligent clothes technology will be the subject of on-going development and improvement. The inventor will need to budget for additional development investment and product enhancement over the lifetime of the product.

Any potential partner (clothes manufacturer etc.) will also be required to facilitate these new designs and product improvements. This development work will need to be financed within the same cost structure as it will be unlikely that any significant price increases will be possible. As with most electronic associated equipment the pressure will continue for downward pricing over the years.

For this reason it will be vital that the market entry price is not set too low – even given the temptation of attracting market share.

We have focused our attention on the baby monitoring market on the assumption that this is the starting target. On-line sales of products aimed at the vulnerable elderly person market will require a different focus, different marketing and possibly a different on-line store.

7. Business Model: Establish proposed model of product/service development

1. *Market driven*
2. *Customer driven*
3. *Competitor driven*
4. *Value proposition driven e.g. Total cost of ownership*
5. *Disruptive*

Though not requested to comment on this section our view is that the promoter may wish to consider acquiring a partner at an early stage depending on the level of development costs required and his ability to fund the required development of the product to make it market-ready.

8 Innovation Value Propositions

Why should a customer in the selected target market purchase this innovation? Focus on the key benefits that matter most to buyers in that target market. The propositions must specifically document the worth / superiority of the offering, relative to both competitors and to customer needs and must be written from the customer's perspective.

Potential customers will be attracted to this product based on the potential advantages it can offer over conventional and competitor products.

The expansive features of this product over the current products on the market will make it attractive.

9 Market Positioning

How should the innovation be positioned in the mind of the customer? Vague adjectives that all competitors would use and that don't differentiate offerings should be avoided. For example, "stylish" "innovative" "high-quality" or "friendly customer service"

We were not requested to comment on this section, though we would recommend the company communicate a message of high-tech and innovation while clearly identifying the USP.

10 Any likely and potential blockages (including regulatory)

There are a range of potential blockages that can be overcome through better specification, market analysis, investment, business planning and technical engagement.

We have broken down our assessment of any likely blockages and risk under a number of headings as follows:

Promoter Side

- **General risk associated with developing a new product, including testing and validating** – The product will need to be 100% market-ready and therefore fully tested and verified before any market launch.
- **Lack of commercialisation experience** - The promoter may need to engage with external service providers in this regard, with which there are associated costs and risks.
- **Timing (how long it will take to get product to market and gain traction)** – The promoter must consider what will be involved and what costs must be incurred to create product and brand awareness. This includes how the product will be actually launched.
- **Staffing** – may or may not be an issue depending on existing resources within the promoters Company...
- **Lack of track record** – The promoter does not have any current experience of on-line sales and may need assistance from an “expert” in this field.
- **Ongoing development and enhancement costs** – The costs of generating a range of products. Costs and quantifying same.
- **Clarification of IP and potential for patents** / defending of any patents established.
- **Sourcing of a suitable manufacturing partner** and the clarification of the manufacturing cost.

Market Side

- **Regulatory** - Not applicable given that this is defined as a consumer and not a medical product – CE Marking will be a requirement.
- **Establishing a pricing plan** – Though we have suggested an initial price point, further research will be required in this regard, once a final product specification is costed, margins etc. are ascertained and USP's are considered.
- **Attaining initial sales of a new unknown product** - We believe the use of an experienced sales partner to roll out the service may afford the opportunity to materially reduce the level of risk in this regard.
- **Product range required to service potential market** – how many variations of vest size will be required? – **For example M&S offer nine different sizes of sleep-suits from new-born to two years old**

11 Market Entry and Channels

A well thought out market entry and channel strategy focusing on understanding the opportunities, drivers and structures of different markets ensuring that value capture is shared equitably across any partners in the chain. The channel strategies should reflect the key characteristics of complex and varied market environments, be they mature or emerging. It should ensure alignment between resources committed to channel activities, e.g. key partner relationships, alliances, account management structures and field support as some of the key components supporting channel activities.

Sales Channel

There are several channels for this type of product including on-line and high-street retail including dedicated mother and baby stores.

The promoter has suggested the on-line route which is the lowest cost option and also opens up the product to a Worldwide market with massive potential.

For the purpose of this business case we have focused only on the on-line route.

The potential downside is that this may be a slow route to gain significant market penetration unless it can be backed by expansive sales and marketing activities and the use of other social media, creation of blogs, use of Facebook etc.

It's estimated that by 2018 there will be more than 6,000 companies looking to sell products on-line in this "niche" baby products market.

The key for the promoter will be to create a market need for a new level of innovation which his product can meet.

A virtual product launch must have a website capable of handling the orders, processing the on-line payments and tracking sales of the item. This means that significant up-front work and testing of the site must be undertaken in advance of any launch. It is crucial that correct codes and currency exchange rates are in place and that monitoring of traffic to the site is also available.

12 Price / Cost Modelling

Establishment of market demand / revenue potential based on proposed value & costed solution – Bringing it all together to inform and enable an implementation decision to be made. This will inform the executive summary.

Though not requested in this instance please refer to Section 3 above for projected figures.

13 Incentivising this Idea

This type of idea can often be supported with different financial incentives depending on the size, nature and geographical location of the project.

The following is an example of some of the supports that could be pursued:

Enterprise Ireland support through:

- HPSU (High Potential Start Up)
- Research & Development support – Innovation Vouchures and R&D programmes
- E-Business support
- Export selling support

This is just a sample of the potential incentives available. It is advisable that you liaise with your local development agency:

- Invest NI Phone: 0800 181442
- Enterprise Ireland e-mail: client.service@enterprise-ireland.com

14 Suggestions Regarding a Detailed Business Case

This is a very good idea, but it still needs to be fully developed, tested and commercialised.

We suggest the following before continuing:

- The promoter considers the key client benefits of using such a product and ensures that all are fully achieved at the end of this development stage.
- The promoter conducts a more detailed assessment of the current competition, paying particular attention to competitors who are either targeting or who may potentially target the market segment identified.
- The promoter moves quickly to source a suitable out-sourced manufacturer and apparel supplier. For cost reasons this may have to be from the Far East. Consideration could also be given to whether garments can be sourced directly from a low cost base and then modified in Ireland or UK.
- The promoter considers the merits of a sales partner, cognisant of their commercial nuance and considers what he would want from such an arrangement.
- The promoter drills into the projected figures (Section 3) in an effort to validate and/or challenge the numbers
- The promoter considers any additional features that could be added (differentiators) as part of the testing phase to ensure that the most relevant up to date product is available at launch.
- The promoter ensures that some potential clients within the chosen market sector are included as part of the testing phase. This will facilitate the generation of real and necessary product endorsements.
- The promoter consider all the potential blockages identified at Section 10 above together with our suggestions re same
- The promoter considers all regulatory and insurance cover issues.
- The promoter considers ancillary products which could be sold in conjunction to this product.

15 Sources of Information

The following are the key areas from which we collated information for the purpose of this engagement:

- Internal client base
- Internal TeamBDS Consultants
- Various Industry commentary
- Various company websites
- Competitor websites
- Information supplied by the inventor.