



SureLight

SureLight Company Report
Interim Finances – July 2018

Richmond & Kingston
United Kingdom
St Paul's School
2017/18

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Mission Statement

Following 18,477 cycling accidents in the UK in 2016, a quarter of which occurred when the front of a car hit the rear wheel of a bicycle, we believe there is a problem that needs solving. Cyclists need to indicate braking. Our mission is to give confidence and safety to cyclists and to encourage more people to cycle on safer roads.



Financial Summary

Total revenue	£4490.28
Gross profit	£2012.06
Net profit	£1588.53



Executive Summary

SureLight is a smart brake light for bicycles. Using integrated smart sensors, SureLight is able to detect when you are slowing down and uses this to turn on 16 ultra-bright red LEDs. This mimics a car's brake light and is, thus, immediately understood by motorists to indicate braking. SureLight is an effective, all-in-one, wireless solution to the problem of cyclists not being seen as they slow down.

Our journey has been quite a ride: from drawing-up original designs, through 32 different iterations of SureLight, to our successes at national level, our experience of the YE Company Programme has been tremendous and we have grown from 4 to 12 team members along the way. To date, we have made £4,490 revenue from sales, having had exciting discussions with a range of independent bike shops, some of the UK's leading cycling retailers and Deliveroo. Furthermore, our advertising reach has now exceeded 150,000 people, following our partnerships with Cyclefox and Cycling UK. Yet still, SureLight continues to evolve as customers recommend new ways of improving the product. The joy of the process has been that no company meeting, fundraiser, trade fair or customer has been the same, allowing us to constantly challenge ourselves as we adapt to each situation that we face.



Starting Up

Choosing SureLight

As a team of cyclists, we were shocked by the tragic death of a pedestrian – Kim Briggs at the hands of a cyclist in September 2017. Following the publicity that the case received, there were calls for more comprehensive safety legislation to be brought in for cyclists on the roads. We asked the simple question of: if cars have brake lights, why don't bikes? And this inspired us to create SureLight. Following our research into data collected by Cycling UK and our discovery of the size of the cycling-product market, we committed to SureLight.



Our organisational skills quickly became important in making efficient decisions as we faced the challenge of running a company on the side of a full-on school timetable. But with a detailed company strategy, clear critical path, and very detailed action plans, we have been able to deal with this challenge successfully.

Fundraising



Team Formation & Management

Our roles have been designed to suit every team member's individual strengths. For example, Thomas' work as Finance Director focuses on managing our budget and cashflow as he talks to manufacturers about outsourcing production, given his strength in engineering. Meanwhile, Rohan, our Company Secretary, has taken on the finance-related bookkeeping and sales admin due to his great organisational skills. This ensures that we have all our data, from sales receipts to unit costs, fully recorded when we set our forecasts, develop pricing strategies or quote figures to clients and partners.

We had extravagant plans for SureLight, knowing we required substantial funds to design and manufacture our product. After generating £490 of share capital, we began by selling St Paul's School-branded scarves at rugby matches. The scarves were designed by us and manufactured by Global Scarves in the UK, for £4.85 a-piece. At a price of £20, we sold 80 scarves at 3 rugby matches and 2 rowing races. With a further fundraising event at our School Xmas Fayre, where we ran our homemade games stall, we raised a total of £2370.



Our Journey

Sep-17	<p>We grow from a team of 4 to 9 passionate cyclists, uniting around a brake light for bicycles and one vision: to help keep cyclists safe on the roads.</p> <p>Using the enterprising and engineering skills of our team, and against the advice of our business advisors, we take a risk – inventing and designing our own product.</p>
Oct-17	<p>First product prototype is produced, yet we do not have any available funds for larger-scale manufacture. A fundraising campaign is developed – selling St. Paul’s School-branded scarves at rugby matches, raising £2370 to kick-start the business.</p>
Nov-17	<p>First major challenge occurs in Operations due to the complexity of moulding our own casing for the light and we question the viability of making our own product. But, Luke (Operations Director) solves the problem, becoming the first student at St Paul’s to use the technique of resin casting, to mould silicon cases.</p>
Dec-17	<p>We are one of very few YE teams who have products to sell. We sell SureLight for the first time, winning awards for Best Product at Euroclear and the Wembley London Designers’ Outlet.</p> <p>80 bike shops contacted and a dialogue begins with a chain in Putney. However, due to school exams, our contact with clients becomes haphazard and the deal falls through. Ariff (Sales Director) learns the importance of building and maintaining communications with customers.</p>
Jan-18	<p>We try to up-scale manufacturing yet realise that resin casting is unsustainable for larger volumes. Luke works through 32 iterations to find a new technique to manufacture SureLight.</p> <p>To improve communication and efficiency, Ben (Managing Director) introduces a new reporting structure with 3 sub-teams and a weekly meeting of the Board of Directors.</p>
Feb-18	<p>Luke introduces a new, more efficient, production line. The whole team is involved and we produce 75 SureLights.</p> <p>We try to simplify and streamline our message to customers, with the release of a new video. These efforts are rewarded with wins at the Pan-London Trade Fair and in the National Social Media Impact competition.</p>
Mar-18	<p>Very poor day at the Uxbridge Trade Fair, selling just 1 unit. The whole team works together to re-design our sales pitch to express our vision and goal more clearly; re-focusing our branding to communicate the professionalism of our business model and introducing an innovative sliding rail to show-case how SureLight works. The result: we won Best Overall Company and Best Product at the National and Kingston Trade Fairs respectively.</p>
Apr-18	<p>Communication is far better over the Easter period, during which time SureLight is released in white and we receive verbal confirmation of a deal with Deliveroo.</p>
May-18	<p>Having sold only 1 unit in April, we re-vamp our website and refine our message further so that it is consistent across all company platforms. 14 units sold this month.</p> <p>Despite being busy with our end-of-year exams, the whole team comes together yet again to contribute to the YE company report and presentations. The result: we are through to the YE London Regional Finals!</p>
Jun-18	<p>SureLight meets Prince William at the International Business Festival, where four of the team run workshops for high school students. Great to inspire the next year group of entrepreneurs.</p> <p>We are absolutely honoured to represent London at the UK COTY Finals, following our 3 awards at the London Final. We have a lot of work to do on our trade stand though as it begins to look scrappy.</p> <p>Success for our Sales team as 2 bike shops trial our product and Deliveroo agree buy 50 SureLights.</p>
Jul-18	<p>Despite several team members being away, Ale (Marketing Director) leads an effort to rejuvenate our trade stand, with a continued focus on clarity and simplicity, following our past mistakes. With this, we take on the UK Final and win the Disney Creativity Award for outstanding promotion of our brand.</p> <p>11 months and 5000 man-hours later, we are overjoyed to win the UK COTY Final. Next stop: Belgrade!</p>



The Product

Product Design

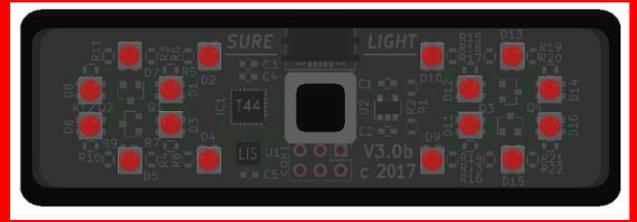
SureLight has been designed, developed and produced by us from scratch. The functionality of the brake light is achieved using our own proprietary algorithms which perform real-time digital signal processing on acceleration data. This change in acceleration is detected by an accelerometer – similar to those contained in your smartphone, and is translated into an increase in brightness of 16 ultra-bright LEDs when decelerating.

Manufacturing Process

SureLights are currently made in batches of 80 by 4 members of our team. With an extra two pairs of hands to help with the manufacture of electronics, a unit takes on average 10 minutes to make, test and package.

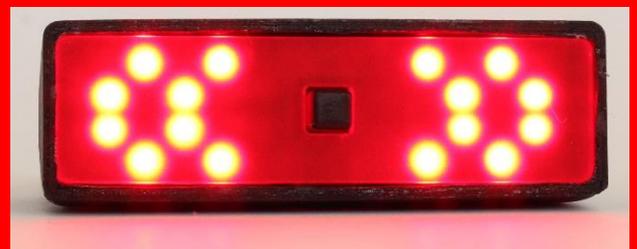
The light is made of 5 parts which need to be prepared before putting together:

- 1) PCBs – components placed individually with tweezers before finishing in a re-flow oven;
- 2) Batteries – tested at different voltage levels before being soldered to wires;
- 3) Acrylic filters – cut using a custom template on our industrial laser cutter;
- 4) Buttons – moulded with silicon in our homemade resin-casting mould;
- 5) Outer casing – 3D printed with PLA plastic.

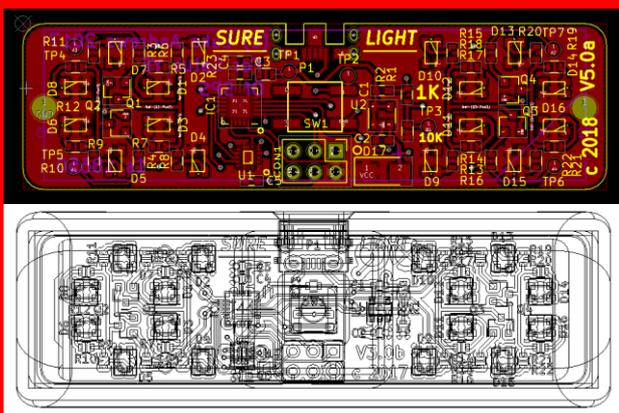


Overcoming Operational Issues

Customer feedback has been key to the development of SureLight. In one of our first batches, we used resin casting for the outer casing of the light. When one of our SureLight users found that the light's mounting joint was weak relative to the rest of the casing, we decided to try something new. We conducted stress tests and concluded that resin casting was poor in terms of quality and yield. And so, we looked to strengthen the casing with 3D printing – using different internal structures and densities, making the mounting point one of the strongest parts of the light.



Aside from development of our product, we have also looked to make manufacturing more efficient. SureLight has been through 32 prototypes. In January, we took action to increase productivity, hiring two more people for our Operations team and also halving the number of components on our PCBs by using more efficient internal wiring. We also found a way to increase yields on our 3D printed cases by reducing the number of cases we printed at once but carrying out more prints. By the start of February, production times had fallen by 15 minutes.



Ecofriendly

With our aims to promote ecofriendly forms of transport, we wanted to support this by ensuring our production was 100% environmentally friendly. We have taken several steps to achieve this. The first is to ensure that SureLight is as durable as possible, and so, we have spent more on corrosion resistant electronics which will take years to degrade in even the harshest environments. We have also looked to ensure the recyclability of SureLight: the PLA we use for the outer casing is fully biodegradable and our battery is fully recyclable. On top of this, we sell SureLight in recyclable cardboard boxes, avoiding the unnecessary use of harmful plastic packaging.

By increasing the efficiency of our manufacturing process, we have also decreased our carbon footprint.



Market Research

For our initial market research, we visited Richmond Park and two schools with our initial prototype, where we spoke to 370 people. With an increasing number of accidents year-on-year, people have become more and more cautious about cycling on the roads and that translated into our results: 81% of people did not think that cars noticed them braking.



The first ever SureLight sold

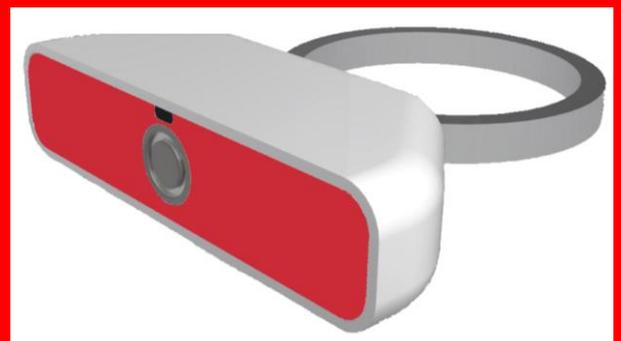
From the comments we received we added a USB rechargeable battery, ultra-bright LEDs and waterproofing to our second generation of SureLights.

Research and Development

SureLight's technology is proven by scientific research from the National Transport Board to attract other motorists' attention through varying the conspicuity of the light. In other words, through changing the brightness of LEDs, we are able to alert other road-users to a change in a cyclist's motion.

Using this research as our start point, we have continuously been trialling and developing new technology to add SureLight. Currently, we are testing a flashing hazard light on top of the two different levels of brightness (when at constant speed and when braking). This will allow us to utilise an amber light to indicate a hazard, in line with the UK's Highway Code, meaning SureLight will be even more capable of attracting motorists' attention. This will be achievable by using a state-of-the-art proximity sensor released in 2018. Our new concept will still have its original functionality as a brake light but will also turn on flashing amber hazard lights when a car is within 4 metres of a bike and the risk of a collision is at its highest.

This proximity-detection technology will be the first in the world to be found in a bike light and is something we will look to patent in the future.



Marketing

The Key Message

Our marketing strategy has evolved as we have learnt more about our target market, what they want and what information might convince them to buy SureLight. We aim to convince our target market that brake lights should be a necessity for all cyclists.



With the basis of our brand set up, we turned to developing a company slogan and a basic way of explaining what SureLight is. Our slogan is now “Safe. Smart. Bright.” – the three key features that SureLight, “a smart brake light for bicycles” , provides.

Target Market

SureLight’s total available market in the U.K. is growing at a rate of 4.2% and includes anybody in the UK who owns a bike even if they are not regular cyclists – 42% or 27 million of the population. Of these people, we estimate our serviceable addressable market to be around 3 million people in the short-run, including 1 million regular commuters, 2 million leisure cyclists and also family members who are looking out for their loved ones to be safe on the road. Using figures released from Cycling UK, we estimated our ratio of male to female buyers to be roughly 3:1



We prioritise consistency throughout our marketing and sales platforms. Therefore, we use our signature SureLight colours and clear company message on our trade stall, website, packaging and business cards. At trade fairs we have distributed over 1000 of these cards which have been key to linking our brand to our online platforms.

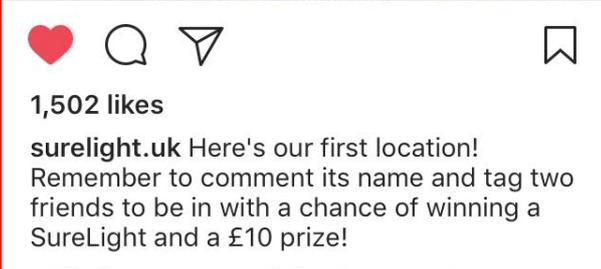
Branding

“SureLight” was chosen very early on, after we had ensured that we were not infringing upon any other trademarks – the idea being that our bike light would give cyclists certain safety. In our logo, we have prioritised clarity and bold colours, integrating the image of the cyclist with bright red stripes to indicate both light and movement.

Social Media

Our use of social media has dramatically strengthened our marketing. With our 3 social media accounts of Facebook, Twitter and Instagram, we have accumulated over 10,000 interactions with our posts. We believe that this has been greatly responsible for our strong online sales.



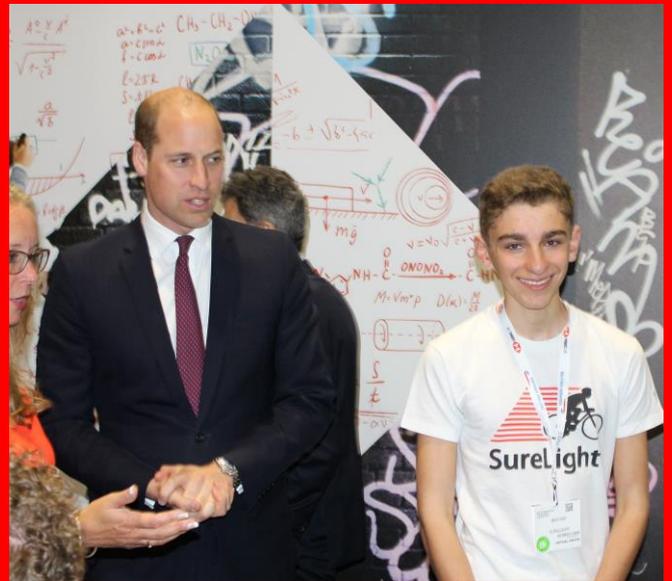


Our social media campaign, #cantmiss, has arguably been our greatest success. Following the release of our second of two promo videos, which features a zebra at a zebra crossing, we launched a customer competition across our social media. In this, we have posted pictures of SureLight at landmarks in and around London and our followers are asked to name the location and tag two friends to be in with a chance to win a SureLight at the end of July. With one of our photographs in front of City Hall, London accumulating over 1,500 likes, we have seen our online reach increase by 400% since the start of the competition.



Alternative Marketing

SureLight is very happy to be working with 3 of the UK's most prestigious cycling hubs. In April, we began a partnership with Cyclefox, London's largest cycling community, whereby their members can receive a £6 discount on our online store and in return, SureLight has been advertised to their 60,000 subscribers. This was soon followed by an advert put out by Cycling UK, which saw SureLight advertised on their website to a further 100,000 cycling enthusiasts. Now, we are also having SureLight reviewed by cycletechreview.com, the UK's leading cycling review website.



Our team was also invited to the UK's biannual International Business Festival. Here, we were delighted to run our own entrepreneurship workshop at HSBC's Next Gen Fest zone, ask the Commercial Director of Cycling UK about his views on the necessity of brake lights for bicycles in front of a filled auditorium and meet with the CEO of a cycle tech startup which successfully received an investment on Dragon's Den. However, the day was topped off with an official meeting with HRH Duke of Cambridge, Prince William, who expressed his sincere support of our mission and wished us success.



Sales

Pricing

We have strived to make SureLight as price-accessible as possible, as we strongly believe in its necessity for all cyclists in Britain. SureLight has been sold at £36 RRP to customers, with £6 discounts given at some trade fairs and to our partners; this gives us a unit profit of circa £26.

We have a comprehensive strategy for selling at wholesale price:

- For minimum order 5 units: £30/unit
- From 5-10 units: £25/unit
- From 10-30 units: £22/unit
- 30+ units: £20/unit

This pricing strategy was developed in order to give us a minimum of 70% profit mark-up. And with a purchase price of £20, and RRP of £36, retailers make a 70% mark-up themselves.

Trade Fairs

We identified trade fairs early on as our strongest sales channel. One of the key contributions to SureLight's success at trade fairs has been the immense wealth of knowledge that all our team members have about the product and the way they can pitch it so passionately to the public. Our sales pitch and trade stand have been refined to maximise our ability to use this strength of the team. We engage every potential customer with our enormous SureLight logo banner and our bright red tablecloth. We isolate our target market by identifying customers, asking: "do you own a bike?" The tablecloth with the description of the product and the large banners ensure all potential customers arrive at the stall with an idea of what SureLight is. We are then able to guide them through SureLight at our trade stand, which is split into three parts: a demo to show how it works, a bicycle saddle

demonstrating the key features and a section dedicated to our journey. This layout has been hugely advantageous to us as it allows us to have conversations with three different customers or groups of customers at once.

We have now sold 57 units at the 8 different trade fairs that we have been to, winning 6 awards along the way, including the prestigious Best Overall Company Award at the UK National Trade Fair.



Website

Our website (www.surelight.bike) has been built from scratch and has allowed us to accumulate a third of our total sales. By implementing modern digital marketing tools, including GoogleAdwords, Facebooks Ads and search engine optimisation, we have been able to drive more traffic to our site. We have seen great results – increasing monthly views by 400%. We have not only been able to convert these views into sales, but we have also improved our brand awareness and digital presence. And through analysing the data we have collected, we have been able to optimise customer experience, making changes to content and layout to emphasise our branding and core message, as well as reducing the number of clicks from entering the site to purchasing a SureLight.



Alternative Sales Locations

We identified small, independent cycling stores as our primary B2B contacts. We contacted a hundred of them throughout London, and we have been very well received: Richmond Cycles are currently trialling the product, whilst Velosport and Cloud9Cycles have shown interest in being our sole distributors in particular regions. We have also approached larger companies, such as Halfords and Cycle Surgery. Meanwhile, Deliveroo are trialling our product in London and have committed to purchasing 50 units for their delivery bikes.



SureLight has also been in contact with Transport for London (TfL). In October 2017, we consulted in Sadiq Khan's Transport Strategy for 2018, and were in contact with an influencer in the Blaze & Santander Bike deal from 2016. Our work with TfL will look to continue over the rest of 2018 and we hope that many of the synergies that exist between them and SureLight will help us achieve our goal of keeping cyclists safer on Britain's roads.

Customer Service

We have decided to give all our products a lifetime warranty, due to our confidence in our rigorous testing procedures. As a result, we have had very few customer complaints. However, customers are always able to contact us through our website, social media or custom email address (surelight@stpaulsschool.org.uk).

Receiving customer feedback has been a crucial way of improving our product, so we have tried to ensure that being able to contact us is as easy as possible.

Professional Business Model

Despite being a student company, we have developed an ethos of striving beyond this status, conducting ourselves as a professional business, both within Young Enterprise and to other companies. We have looked to achieve this across our operations: from manufacturing, to our online presence, through to our interactions with potential customers. Our Board of Directors have become very familiar with and ensure stringent following of Young Enterprise's Operating Framework and are consistently learning about running a business through various interactions with business professionals – for example, lawyers on patent-acquisition and legally-binding contracts. By aiming to operate in a professional manner, we have looked to become a trusted brand, which is well respected when we look to form partnerships with important sales contracts.

Awards

Best Overall Company & Disney Creativity Award at UK COTY Final
Best Overall Company, Best Interview & Best Trade Stand at COTY London Final
Best Overall Company & Best Product at COTY South London Final
Best Overall Company & Best Report at COTY Richmond & Kingston Final
Best Product at Kingston COTY Trade Fair
Best Overall Company at UK National Trade Fair
Winners of National Social Media Impact Competition
Best Sales Team at Spitalfields Market Trade Fair
Winners of the London Online Winter Market Competition
Most Innovative Product and Best Presentation at Wembley LDO
Best Product at Euroclear Trade Fair



Finances

SureLight Financial Report 09-Jul-18

Profit & Loss Account

Sales

SureLights & CatEye mounts	£2,699.38
Scarves & Xmas Fayre	£1,703.40
Spare Parts	£87.50
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	£4,490.28

Cost of Sales

SureLights & CatEye mounts	£1,238.72
Closing stock	£806.00
	<hr/>
	£2,044.72
Scarves & Xmas Fayre	£433.50
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	£2,478.22

Gross profit £2,012.06

Miscellaneous expenses

Registration fee	£80.00
Trade stand	£883.85
Trade fair fees	£254.50
Marketing	£311.63
Other	£208.50
	<hr/>
	£1,738.48

Operating profit £273.58

Miscellaneous income

Prize money	£1,305.00
Refund	£407.08
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	£1,712.08

Net profit £1,985.66
Corporation tax £397.13

Net profit after tax £1,588.53

Balance Sheet

Assets

Stock	
SureLights	£637.00
Spare batteries	£169.00
Cash	£229.76
Bank	£1,439.90
	<hr/>
	£2,475.66

Liabilities

Tax due £397.13

Net assets £2,078.53

Equity

Shares £490.00
Profit £1,588.53

Shareholders' funds £2,078.53

K. Khan

KESTER KHAN – 09/07/18

