

# **Introduction to Innovation Management**

## **Assessment B**

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## **TABLE OF CONTENTS**

|                                                                                                                                                        |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1. Introduction                                                                                                                                        | Page 3  |
| 2. The principal driver/s for the innovation                                                                                                           | Page 4  |
| 3. The barriers and risks faced by the company in developing this innovation                                                                           | Page 5  |
| 4. The key determinants in the process of committing to develop the innovation                                                                         | Page 5  |
| 5. The processes and technologies which the company used to carry this development forward                                                             | Page 6  |
| 6. The extent to which the development relied on resources external to the company and the ways in which the deployment of these resources was managed | Page 7  |
| 7. How management overview of the development was maintained                                                                                           | Page 8  |
| 8. The extent to which you feel this innovation process represents best practice                                                                       | Page 9  |
| 9. Critique of the whole innovation process and an evaluation of the success of your chosen innovation.                                                | Page 12 |
| 10. References                                                                                                                                         | Page 16 |

**Chosen company:**



**1. Introduction**

In 2013, Ring™ formally known as Doorbot, launched the first ever video doorbell that allows you to see, hear and speak to visitors at your front door whilst you are anywhere from your mobile phone/tablet. The device also sends you instant notifications. The devices are available wired or non-wired giving complete flexibility to suit everyone's needs. By installing this device, you can have two-way talk with whomever is at your front door.

Figure 1 – Doorbot Doorbell



Figure 2 – Ring Doorbell



## **2. Principal Driver/s for the innovation:**

### **2.1 Business Driver**

Siminoff the Inventor of Ring™ (Ring, 2023) - the business driver was already known for previous innovations such as the world's first voicemail -to-text company and unsubscribe.com, a service that helped companies add an unsubscribe button to every email. His association with entrepreneurship was a great foundation for his new venture into the world of doorbells. In a statement he says, "if you want to be in the business of having your own company and being able to succeed in this way, welcome to the failure game". "You're going to get hit with a lot of things. You've got to be able to move on and do it". (Eadicicco, 2019). His perseverance and determination were greatly rewarded in the years to come.

### **2.2 Technology Driver**

Going back as far as 1800's and even still to date, the simplest way of announcing your arrival is to knock on the door . Throughout the history of innovations, the world has seen mechanical chimes with a small bell and to activate this the visitor would have to pull on a chain or string. Next came a twist handle design, once the door handle had been turned it struck a bell on the inside of the door. As such these would have been based on loud electric buzzers. However, it was in 1831 when Joseph Henry designed the first electric doorbell (Doorbell, 2022) that the transformation on how we announced our arrival changed. When the button was pushed outside the home it caused an electrical current into a transformer, the current then activates a chime or sound signal to let people know you have arrived.

In 2011, Siminoff was tired of missing visitors whilst working in his garage. He decided to bring a small group of engineers together to create a solution to this problem and one year later, with 3 engineers and 1 intern they launched the Doorbot (Ring, 2014) In turn bringing a range of technologies and opportunities together and at that point the world had its first WIFI video enabled doorbell (Montag, 2017)

### **3. The barriers and risks faced by the company in developing this innovation.**

#### **3.1 Barriers**

The main barrier was when Siminoff presented his doorbell to the Shark Tank TV Programme looking for investors. Shark Tank was a reality programme that allowed aspiring entrepreneurs to present their ideas to investors. At the time of Siminoff presenting his product there were five shark investors present. Siminoff was looking for \$700,000 for 10% stake in the business, but it's reported that the sharks had a problem in investing in the company at such an early stage. (Montag, 2018). Montag also reported that one shark did offer a proposal, but this was rejected by Siminoff.

#### **3.2 Risks**

One of the biggest risks that was taken by the company was Siminoff using his own money from previous business ventures (Montag, 2017) . Given five very influential investors turned down this innovation, this must have been alarming to Siminoff at this point.

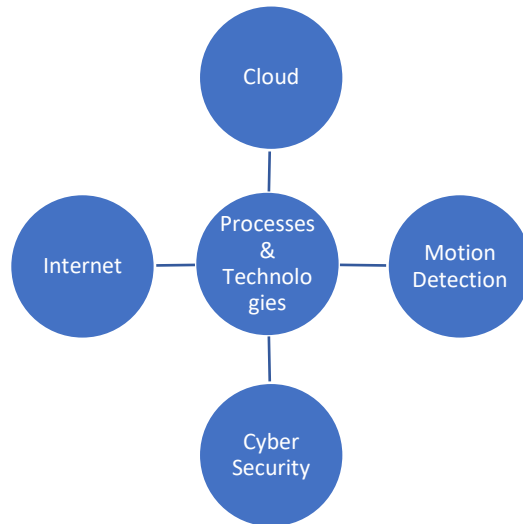
Both individual characteristics and organisational climate influence perceptions of risk (Bessant, 2017) . Siminoff risked his own reputation whilst coming into the world of innovation and entrepreneurship at such a young age, this could have completely turned into a complete failure, as Bessant also mentions about organisational climate, Ring™ didn't have an organisation as such at the beginning, just a team of 5 working from a garage, again not a structure you would envisage for the size of the project that was developing in front of them.

### **4. The key determinants in the process of committing to develop the innovation**

Whilst its mentioned above that Siminoff took this innovation to Shark Tank and no deals were made. It eventually turned out that he didn't need an investment from the sharks, he just needed the publicity and whilst the recording was made in May 2013, the programme itself didn't actually air until November 2013, by this point the company had been without cash for 2 months and creditors were pounding on the doors (Peretz, 2018). However, In the first month following the show being televised sales racked up more than \$1 million leading to \$3 million in the first year. The Doorbot was re-engineered and Doorbot became Ring™. Offers flooded in from the likes of Richard Branson, its reported his investment alone was to the value of \$28m (Crouse, 2014)

Even though Siminoff knew he had to keep pushing on with this innovation otherwise he would have lost his house, it was the investors that took Ring™ to the next level, making the true breakthrough for the company.

## **5. The processes and technologies which the company used to carry this development forward**



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Prior to the launch of Ring <sup>™</sup> the standard doorbell's only function was to sound when a visitor pressed an outside button. However, the following points detail the processes and technologies shown in the diagram above that have been included to make the device more modern:

1. Motion Detection - including 3 motion sensors, allowing this device to have multiple zones, enabling the customer to include / exclude areas where motion exists.
2. Cloud – The video's captured on the doorbell are stored in the cloud for 180 days. If the user requires these for longer, then they can be downloaded to a PC or Mobile Device
3. Internet – in order for the doorbell to function it requires access to the internet and also be connect to WIFI
4. Cyber Security – each device has end to end encryption given the user the protection it requires from being hacked.

**6.The extent to which the development relied on resources external to the company and the ways in which the deployment of these resources was managed.**

After the first year of trading Ring™ found themselves looking for an outsourced Workforce Management software solution. They introduced a system called Alvaria™ A cloud workforce company offering real-time capabilities, scalability, and visibility.

The senior manager at the time, Joey Provencio wrote “after implementing Alvaria™, for the first time Ring™ was operating like a true WFM team and contact center. We could see things in real time, programme schedules, keep track of how agents were spending their time and gain visibility into metrics that were previously unavailable like shrinkage” (Ring - A global home security company, 2023)

This system allowed agents to work from home but gave the company the visibility to monitor/ manage what they were doing, even with the impact of growing from 100 agents to over 1000 agents as mentioned in Alvaria’s case study on Ring™. Within the same case study, it was also mentioned that Ring is using data from this solution to measure performance.

## **7. How managements overview of the development was maintained.**

Siminoff himself as the inventor and CEO of Ring™ has remained the focal point of management for Ring™.

In an interview with Jefferson Graham (Graham, 2021) Siminoff states "First, empower your team to take ownership and make decisions," he then went on to say "This helps to narrow down the millions of things that you might otherwise have to focus on by decentralizing the decision making process."

By allowing employees to take ownership of their departments the overview of the development would have become an easier task. Siminoff knew his strengths were driving the company forward and solving problems. By issuing all customers his own business email address he was immediately to hand if any customers had issues, allowing him to be the first point of contact. By having this first-hand knowledge Siminoff was able to direct his teams but remain completely focused on the overview of the development of his innovation

## **8. The extent to which you feel this innovation represents best practice**

Typologies of Innovations can be measured in a variety of ways depending on which author you review against

The first example shown used by Greg Satell shows 4 different typologies -

**Figure 3 – Satells Matrix**

|                                                                                                                                                                                                                          |                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Breakthrough Innovation</u></b> <ul style="list-style-type: none"><li>- Rather than a breakthrough in innovation as seen in 1831 with the first electric doorbell, this was a ground breaking innovation</li></ul> | <b><u>Sustaining Innovation</u></b> <ul style="list-style-type: none"><li>• Engineering Teams</li><li>• Online Quiz</li></ul> |
| <b><u>Basic Research</u></b> <ul style="list-style-type: none"><li>• Previous versions of doorbells</li></ul>                                                                                                            | <b><u>Disruptive Innovation</u></b> <ul style="list-style-type: none"><li>• New technology in the process</li></ul>           |

**Sustaining Innovation** - Engineers have most certainly played a vital part in the advancement and sustainment of the ring doorbell. Following the first year of profits and several millions of pounds of investment Ring™ began to recruit some of the best engineers to build further devices and lay the foundations for the company. It's reported on Ring's website that by 2014 the team was made up of 42 members, 30 of which were engineers (Ring, 2014) .

Also, as the company grew it became harder for Siminoff to personally reply to every customer, so he came up with a quiz on his website, allowing customers to gamify their shopping experience resulting in product suggestions (Graham, 2021)

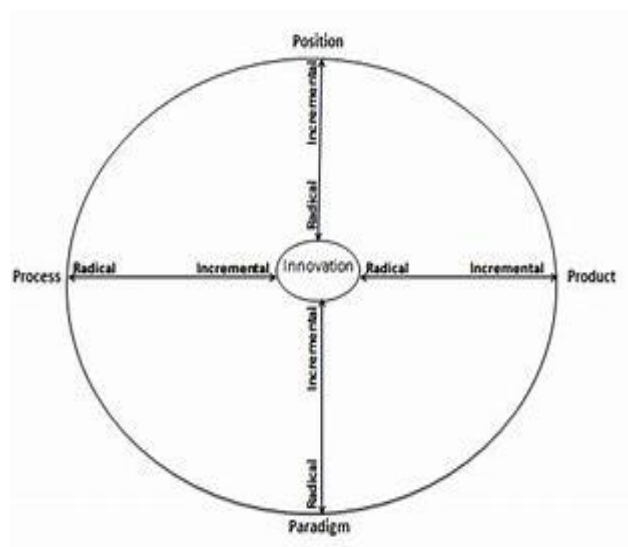
**Disruptive Innovation** -Satell states, disruptive innovation differs from the other three quadrants. Rather than the deliberative and thoughtful process by which you would run a traditional business or research operation, a disruptive strategy is fundamentally iterative. That's why it is an innovation strategy often employed by start-ups financed by venture capital rather than established firms. (Satell, 2017) Siminoff most definitely applied this method of innovation at the start by disrupting the market with the new technology he added to the doorbell.

## Basic Research

Siminoff went to the local general DIY store and purchased the most up to date doorbell that he could find and “tinkered” with it in his garage until he came up with the Doorbot idea, which was further progressed with the aid of his engineers.

## Comparing this to Tidd & Bessant’s typologies:Gp

Figure 4 – Tidd & Bessant 4P’s Typologies



At product launch Ring™ would have been a radical product innovation, covering all 4 quadrants of the typologies, Ring™ were able to position themselves into a completely new market with the technology advances it held. Having seen no real improvements since 1831 when the first electric doorbell was launched it could have been classed as having revolutionised the market. The technologies installed created additional benefits to the end user, a much-needed change to the market. The product redefined the industry bringing the service to the customers online.

To conclude and going back to where it all started, Joseph Schumpeter noted as possibly the first writer on innovation (Yariv Taran, 2015) gives the following typologies:

1. The introduction of a new good
2. The introduction of a new method of production
3. The opening of a new market
4. The conquest of a new source of supply
5. The carrying out of a new organisation

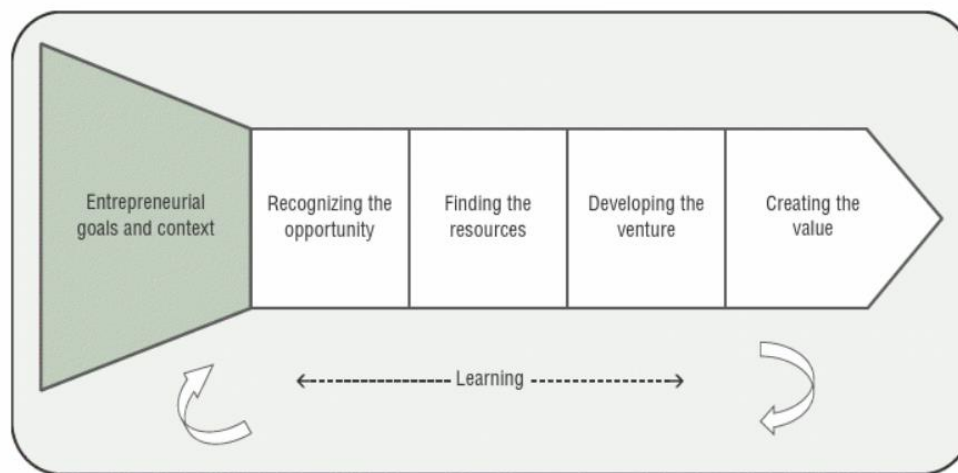
It's believed that most researchers have essentially used Schumpeter's method to build upon (Yariv Taran, 2015).

Even with taking this typology into account and comparing it against the other two it would be deemed as an overall disruptive /radical innovation at the beginning of the process. And a sustaining/incremental innovation going forward as new models were launched and the business structure changed.

**9. Own Critique of the whole process, and an evaluation ( to the extent to which one is possible in the case of recent innovations) of the success of your chosen innovation.**

**Critique of the whole process**

**Figure 5 – Tidd & Bessant, Innovation and Entrepreneurship – 2015**



The innovation process model shown above which is used by Tidd and Bessant (Bessant, 2015) aided with the understanding of the whole process . Siminoff firstly “tinkered” with ideas in his garage to find an opportunity in the market of doorbells when realising he couldn’t hear the front doorbell whilst working in his garage. (Aldridge, 2020) – his first step to recognising the opportunity ahead of him. With his entrepreneurial experience to hand he then moved onto possible resources to fund this project. Using money from his previous business ventures (Montag, 2017) alongside other funds he was then able to develop the product which in turn created the value , the value that saw Amazon purchase this business for more than \$1bn reported by the BBC (BBC, 2018).

**Pro’s/ Con’s and Uncertainties about the innovation:**

**Pros:**

1. Its User Friendly
2. Allows two-way communication
3. It has double purpose (Video and Motion)
4. Quality of the product

## 5. Durability

### **Cons:**

1. Requires strong wifi
  2. Poor Battery Life
- (Design, 2021)

### **Uncertainties**

- **Would the devices be hacked?**

Researchers of Dojo, an internet of things security company found that bad actors can intercept the ring doorbell by accessing the network it uses. This is possible because the data travelling between the Ring Device and its application is not encrypted. (Llevvicius, 2021) Ring™ suggests using a strong password to combat this on their website help page.

- **People's Privacy being invaded**

It was also reported in 2021, along with many other counts that owners with a ring doorbell could face being sued if in breach of a neighbour's privacy. In the court case Woodard v's Fairhurst it became apparent that Fairhurst was forced out of her home because of four doorbells being fitted around the neighbour's house which meant Fairhurst felt she was under constant surveillance. (Shaw, 2021)

Whilst Ring™ ask their customers to respect their neighbour's privacy it seems they cannot enforce this. Even with added features in place to customise privacy zones and 'off-limit' areas, these products will still be open to privacy issues if the end user chooses not to adhere the privacy/ GDPR laws. Especially as some videos are reaching social media platforms.

- **The devices being stolen**

Unfortunately, one of the risks of installing any device outside your property is the threat of theft. Whilst this is not ideal for any user, Ring offers to replace any stolen devices free of charge (assuming you meet the criteria for a replacement). To further combat this risk, Ring™ has recently launched a theft protection case.

- **The customer losing internet connection**

It is possible for the doorbell to lose connection with the internet and go offline, within Ring's support pages it discloses this can happen for several reasons, such as, A power surge, loss of power, wire came loose from router, change of Wi-Fi password, low power. It's important that the user is fully made aware of the troubleshooting routine which is openly disclosed on the webpages of Ring™. The risk would be for the doorbell to be offline for a period and not capture any visitors to your home.

**To Conclude:**

Even with the above listed details the author believes it's the brand that Siminoff created that has given the strength to the device to remain top of the market. Siminoff has personally remained a key figure throughout this process, and not only was this a personal venture for him to create a successful product but financially his personal life depended on this income .

**Success of the chosen innovation**

The ability to create a product and remain competitive is crucial for all businesses. Especially given the recent extraordinary times all businesses have had to face during the pandemic with most companies seeing catastrophic increases across the board or to the extent a complete downturn in sales as the footfall dropped in shops.

However, even with the factors mentioned above affecting retail sales, Ring™ have remained at the top of the market for sales over the last 2 years. This data is shown in Figures 6+7, where Strategy Analytics (ANALYTICS, 2021) highlight the sales of video doorbells have increased from 7.9m units in 2020 to 11.9m units in 2021. As you see below Ring™ itself saw sales increase from 1.4m units in 2020 to 1.7m units in 2021 a 21% increase overall. (Editors, 2022)

Figure 6 – Global sales 2020

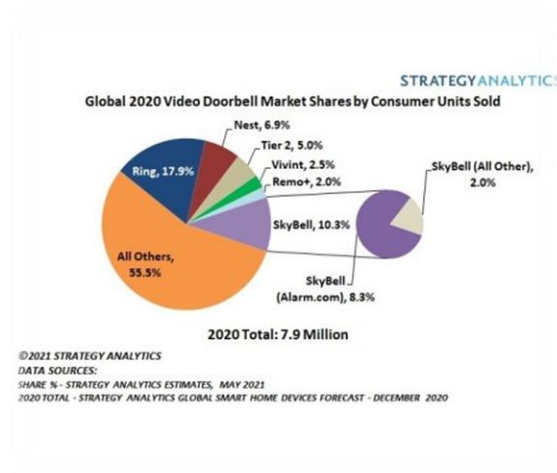
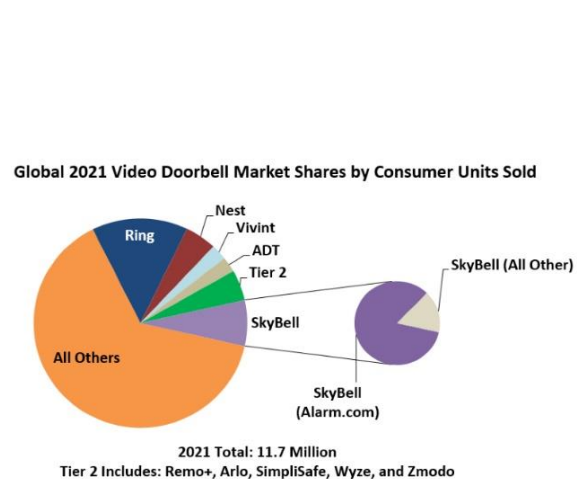


Figure 7 - Global sales 2021



Dallas-based Strategy Analytics estimates the top five video doorbell brands globally as of the end of 2021 are, in order: Ring, SkyBell, Google’s Nest, smart home provider Vivint and ADT. These five companies combined to sell more than 3.5 million doorbell cameras, or about 30 percent, of the nearly 12 million video doorbells that Strategy Analytics estimates were sold to consumers globally in 2021. (Editors, 2022)

Even though Ring was acquired by Amazon in 2018, Siminoff is still employed by the company as CEO and following an interview after the sale by CNBC he stated that “he liked inventing and building product more than running a business” (Berger, 2018) .

With Siminoff now being able to concentrate more on innovation, the company has diversified into different areas, such as security cameras/ systems and access control panels and the author believes the company will continue to be successful whilst remaining focused on having the right people in the right departments.

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### **Figures:**

Figure 1 – Image of Doorbot Doorbell - [DoorBot - Search Images \(bing.com\)](#) – Accessed 2<sup>nd</sup> January 2023

Figure 2 – Image of Ring™ Doorbell - [image of ring doorbell - Search Images \(bing.com\)](#) Accessed 2<sup>nd</sup> January 2023

Figure 3- Greg Satell Matrix - [Mapping-Innovation-Playbook.pdf \(gregsatell.com\)](#) Accessed December 18<sup>th</sup> 2022

Figure 4 - Tidd & Bessant 4P's Typology - [Mapping Innovation Model 4Ps \(Tidd & Bessant, 2009\) | Download Scientific Diagram \(researchgate.net\)](#) Accessed December 29<sup>th</sup> 2022

Figure 5 – Tidd & Bessant Model of Innovation and Entrepreneurship [Innovation and Entrepreneurship - J. R. Bessant, John Bessant, Joe Tidd - Google Books](#) – Accessed January 2<sup>nd</sup> 2023

Figure 6 – Global sales of Video Doorbells 2020- [Strategy Analytics: Amazon's Ring Remained atop the Video Doorbell Market in 2020 | Business Wire](#) Accessed January 4<sup>th</sup> 2023

Figure 7 – Global sales of Video Doorbell 2021 - [Strategy Analytics: Amazon's Ring Remained atop the Video Doorbell Market in 2021 \(yahoo.com\)](#) Accessed January 4<sup>th</sup> 2023