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# **DIAMONDS CHANGING FOREVER**

The disruptive forces shaping the diamond industry, and four necessary steps to secure its future.





# Preface

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## **“The world waits for no one – those who do not learn and evolve can stumble and often fall.”**

*His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai*

Sitting at the crossroads of the globe, Dubai is the world’s fastest growing diamond trading centre, and the gateway to rapidly growing consumer markets for luxury goods. Tasked by Dubai Government to drive trade through the city, DMCC has been instrumental in creating the infrastructure to, in time, transform Dubai into the world’s largest diamond trading hub. But, as we approach 2020, there is a new phenomenon, that goes beyond the notion of change, and that is disruption. Our future is defined by disruption, not simply change.

The diamond industry has gone through a period of stagnation for nearly a decade, and disruption in its many forms raises further challenges. However, if used positively disruption can transform the industry for the better. It was in this light that the fourth edition of DMCC’s Dubai Diamond Conference (DDC) in Dubai in 2019 had the very appropriate title: “Disruption in Diamonds: Harnessing Innovation and Technology for Positive Change”.

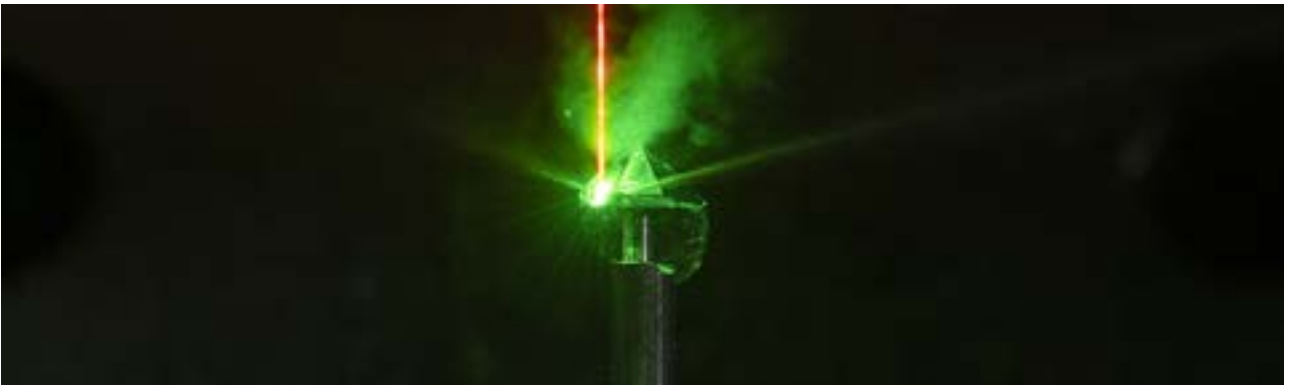
This report examines how disruption is having a decisive impact on the future of the diamond business, and how it can be harnessed to secure the future of the industry. Starting with a brief overview of where the diamond industry stands today, we examine how new technologies (in the form of automated manufacturing and automated grading) are set to transform the supply chain; how diamonds and laboratory grown diamonds (LGDs) need to learn to live together, and finally, how understanding the changing nature of retail and consumer preferences can be turned into a massive opportunity to grow the market.

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## What the experts say

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**Ahmed Bin Sulayem**  
Executive Chairman  
and Chief Executive  
Officer  
DMCC

“Diamonds currently occupy an important place in the economy, but let’s remember, this wasn’t always the case. Twenty years ago, there was practically zero diamond trade in Dubai. Fast forward to today, Dubai is the fastest growing, and one of the most successful diamond trade hubs in existence. With the vision of His Highness, the track record of DMCC, and the city’s connection to the industry will be no time before Dubai becomes the world’s number one diamond trading hub.”



**Bernold Richerzhagen**  
Founder and Chief  
Executive Officer  
Synova

“DaVinci is the first automated laser full faceting solution for round brilliants on the market. It will revolutionise the diamond manufacturing industry because the system covers virtually the complete Rough-to-Polish process. Several cost, skill and labour-intensive steps in the polishing phase such as crown and pavilion blocking, girdle bruting or recurrent quality checks become redundant.”



**Stuart Brown**  
Chief Executive Officer  
Mountain Province

“What we are seeing in the market today is rising interest in lab-grown diamonds. In my personal opinion, both lab-grown diamonds and natural diamonds can co-exist. Both products have a place in the future of the industry, they just need to be differentiated.”





**Sergey Ivanov**  
Chief Executive Officer  
ALROSA

“The current disruptions that we are facing will help guide our industry towards a more efficient way of operating. Increasingly, consumers want to know more about individual diamonds to ensure they are sustainably sourced and that they have had a positive impact on the communities that they came from. In identifying each diamond with a digital passport, we demonstrate how truly unique mined stones are and simultaneously guarantee where they originated from.”



**Faried Sallie**  
Head of Technology  
De Beers Group

“Innovation protects us against disruption and it allows us to better propose a value proposition to our customers. In looking at innovation, we came across various different opportunities. We identified specific technologies that can catalyse the diamond industry. The first revolved around distribution and handling; we looked at how robotics, automated storage and retrieval systems, and digital ecosystems can be used to move our diamond product. The second revolved around speeding up the time between mining the stone and getting it to our customers through an automated system of cutting and shaping the diamonds.”



**Jim Pounds**  
Executive Vice President  
Dominion Diamond Mines

“My dream is, mine a diamond in the morning, polish it by lunch time, set it in Canadian gold and sell it in the evening.”

# Executive Summary

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The diamond industry stands at an inflection point, with many factors holding the ability to shape its future. Diamond producers currently sell rough diamonds on a pre-payment basis, while polished diamonds are sold over extended credit terms. This means that the inefficient and excessively elongated mid-stream is financing large inventories and taking almost all of the price risk - a business model that is only sustainable in a rising diamond price environment.

Since August 2011, polished diamond prices have declined by approximately 37% . The midstream is suffering and profit margins have all but disappeared. A series of bankruptcies in the mid-stream have forced the liquidation of polished stocks into a weak consumer market. Concurrently, banks are withdrawing credit and as a result, less financing is now available.

Today, over 97% of the diamond manufacturing workforce are based in India, a country where 96% of the world's diamonds are cut and polished. With diamond-producing countries located all over the world, the supply chain is fragmented and inefficient.

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<sup>1</sup> Data sourced from [www.polishedprices.com](http://www.polishedprices.com)





### ***Disruptions shaping the industry***

Automated manufacturing is set to revolutionise the diamond supply chain. It is now practically possible to take a mined diamond, cut and polish it, set it in jewellery and sell it to a consumer on the same day. Capitalising on these technological advancements, mining companies may look at moving downstream by cutting and polishing some of their own production; retailers may look at manufacturing polished diamonds themselves with rough diamonds sourced directly from mines.

Technology for the automated grading of polished diamonds is in the final stages of development, which will reduce the time it takes to make accurate and consistent assessments. It will also make the grading of smaller diamonds economically viable. Eventually, automated grading machines could be integrated into the polishing factory, allowing for grading reports to be generated as soon as the diamond polishing process is complete thus, significantly reducing time and cost.

As a result, sharply reduced production times and a much shorter pipeline would translate into lower inventory, lower bank financing and lower interest costs. Lower inventory levels would remove polished price distortions caused by stocking and destocking in the mid-stream, which would be transformative for the industry.

Another major disruptor facing the industry is the rise in popularity of laboratory-grown diamonds (LGDs). How diamonds and LGDs will live together is the subject of much debate. Many believe that in order for the two categories to successfully coexist, they have to be positioned differently. Doing so could grow the entire diamond sector. However, if the LGD industry continues to compete with diamonds as opposed to complementing them, LGDs will not be able to find their niche, which will be to the detriment of the whole industry.

### ***Steps to secure the future for diamonds***

A growing number of new consumers, namely, Millennials and Generation Z, value honesty and integrity in today's sustainability-conscious environment. They are increasingly wanting to understand where their products come from, and how they have positively impacted the local communities from which they were sourced. This presents an opportunity for the entire diamond

industry to develop a new narrative that shows how inherently unique each natural diamond is whilst demonstrating the long-lasting benefits to the local communities. Luxury brands often sell at a premium, however this is contradicted by the 13% decrease in the value of polished diamonds sold in jewellery since 2011. Many of the diamond-related brands launched over the past few decades are in fact simply logos. Having a brand represents a promise that is both exclusive and desirable. The industry needs to further establish brands that do not just sell jewellery, but sell emotional connections.

Many of today's jewellery retailers are simply selling an increasingly commoditised version of crystallised carbon. In doing so, they end up fighting a pricing war to survive and causing consumer confusion. To overcome this, retailers need to identify a unique niche that differentiates their products.

The diamond jewellery retail industry has been slow to adapt to the wider retail environment, particularly given the rise of e-commerce. Retailers need to offer more than a place to purchase jewellery, they need to provide a community and a unique purchasing experience – something that e-commerce cannot deliver.



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Analysis of  
the disruptive  
forces shaping  
the diamond  
industry



## i. The market as it stands

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The diamond supply chain is long, complex, inefficient and capital intensive. Historically, the industry was dominated by De Beers, who managed 80% of all rough diamonds sold and controlled the supply to ensure a stable market. Whilst this resulted in price stability, it created and supported an inefficient market.

# 70%

**increase in  
polished diamond  
prices between  
the beginning of  
2004 and late 2011**

At the turn of the century, De Beers surrendered its position as buyer of last resort and price setter for rough diamonds. As part of that transformation, De Beers sold its strategic rough diamond stockpile into the mid-stream, which was able to absorb that stockpile for three reasons: attractively priced rough diamonds, the increased availability of cheap bank credit, and rising polished prices.

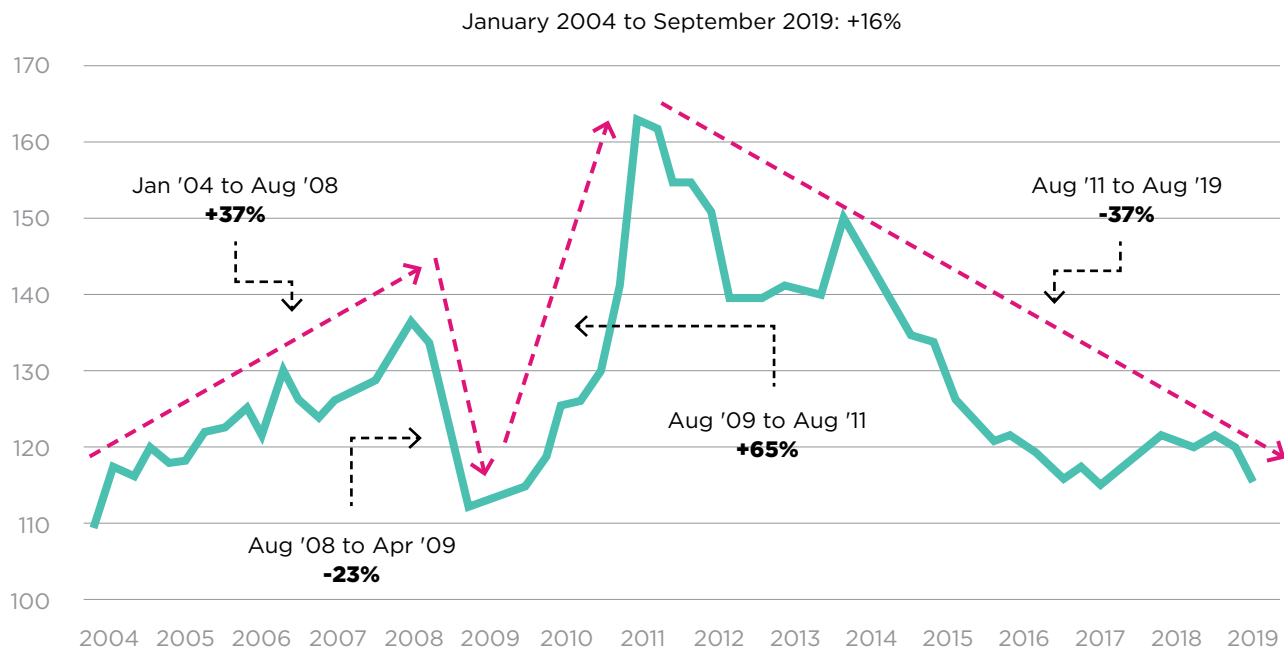
Between the beginning of 2004 and late 2011, polished diamond prices increased by over 70% supported by good underlying consumer demand. But almost unnoticed at the time, prices were also being pushed higher by diamond manufacturers buying and holding excessive diamond inventory simply to cash in on those rising prices.

Increasingly, producers started selling rough diamonds at auctions to achieve

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<sup>2</sup> [www.bain.com/insights/luxury-goods-worldwide-market-study-fall-winter-2018](http://www.bain.com/insights/luxury-goods-worldwide-market-study-fall-winter-2018)

## Polished Prices Index (2004 = 100)



a competitive market price. This led to more traders and manufacturers buying directly from producers. The result was increased competition, higher rough diamond prices and greater price volatility. The elongated and inefficient supply chain has been ill-equipped to deal with price volatility.

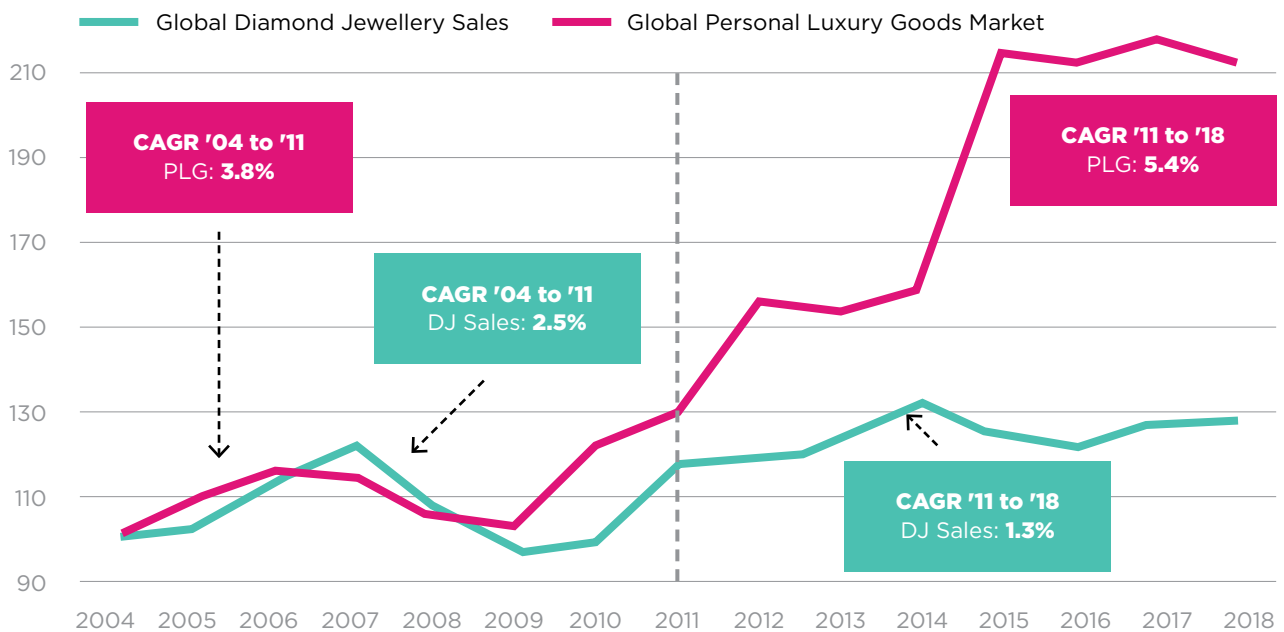
When, in late 2011, economic growth (and diamond jewellery sales) in the major diamond consuming markets slowed, the credit bubble burst. In the eight years since then, polished diamond prices have steadily declined and profit margins in the mid-stream have all but disappeared.

India, which is the 'cutting centre' for diamonds, is now in crisis. A series of

bank defaults, ongoing bankruptcies and shrinking bank credit have resulted in the forced liquidation of excessive polished diamond stocks, which in turn push prices lower in a weak consumer environment. The chart above shows how polished diamond prices have performed since 2004 (the year De Beers completed the sale of its strategic stockpile).

For diamond producers, falling rough diamond prices have recently stabilised simply because the only two largest producers (De Beers and Alrosa) have held back sales of substantial supplies into the market.

## Diamond Jewellery (DJ) versus Personal Luxury Goods (PLG) (2004 = 100)<sup>3</sup>



But problems in the mid-stream segment are not just a result of over-stocking and inefficiencies. Ultimately, the price of any commodity is a function of end-demand and the diamond industry has significantly underperformed other luxury products, which compete for share of wallet.

Yet the chart above does not show the full extent of the industry's underperformance. While diamond jewellery sales grew from 2011 to 2018, albeit only slightly, the value of polished diamonds in jewellery actually fell.

<sup>3</sup> Diamond figures taken from Tacy's (IDEX Online) Annual Diamond Pipeline for 2004, 2011 and 2018. Luxury Goods figures taken from "The Future of Luxury: A Look into Tomorrow to Understand Today: Our Fall-Winter 2018 Luxury Goods Worldwide Market Study highlights seven trends that will shape the industry through 2025". By Claudia D'Arpizio, Federica Levato, Filippo Prete, Elisa Del Fabbro and Joëlle de Montgolfier. January 10, 2019



## USD Value of Diamonds sold in Jewellery versus Diamond Content in Jewellery (2004 = 100)<sup>4</sup>



Historically, De Beers would spend up to USD180 million a year promoting diamonds in the major consumer markets. But in 2009, De Beers stopped its generic marketing programme. Diamond Producers Association (PDA), which was created in 2015 to “protect and promote the integrity and reputation of diamonds”, had a generic marketing budget of USD70 million in 2018 – many hope that it is not a case of too little too late. Currently that promotional spending is focused only on the largest diamond consuming markets (USA, China and India); it also needs to be focused on emerging markets such as the Middle East, helping grow diamond consumption in these geographies.

<sup>4</sup> Polished Diamond and Diamond Jewellery figures all taken from Tacy's (I dexOnline) Annual Diamond Pipeline figures.

## ii. The disruptive impact of automated manufacturing

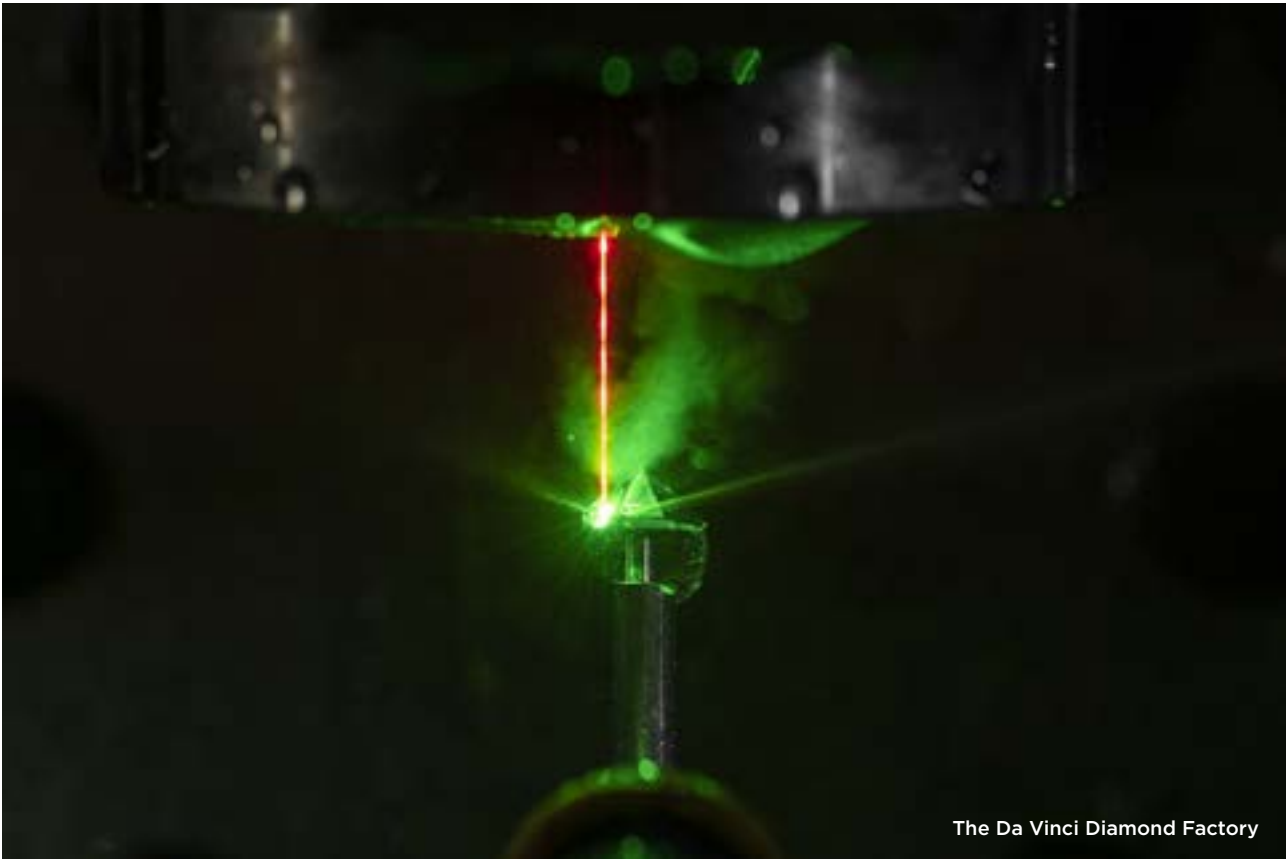
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Approximately 96 out of every 100 diamonds are cut and polished in India. An estimated 350,000 people (versus approximately 10,000 in the rest of the world) are employed in India's diamond manufacturing sector, with other cutting centres unable to compete with its low wage structure and access to cheap finance.

**It will soon be possible to mine a rough diamond and deliver the polished outcome to the customer in a single day.**

Additionally, Indian diamond manufacturers have also been quick to embrace new technologies such as automated planning and laser cutting.

However, the supply chain from producers to consumers is also fragmented, extremely complicated, and inefficient. Somewhere between 12 and 24 months of polished inventory sits in the mid-stream, which distorts the market, impacts pricing and has to be financed. For all the technology that has improved the manufacturing process to date, it still takes over 120 different stages to manufacture a finished polished diamond, most of which involve some form of human interaction.



New technology is about to revolutionise that supply chain. In September 2019, the Swiss technology firm Synova launched the 'Da Vinci Diamond Factory' (Da Vinci), which uses a precision water jet laser technology that almost completely removes human involvement in diamond manufacturing.

Whether Da Vinci (or another technology) ends up dominating the automated cutting and polishing industry, the implications of this new technology are far-reaching.

- Traditional cutting technologies wear away the surface of the rough diamond and grind excess rough material into dust, whereas Da Vinci's laser cuts off all the

excess material, every bit of which can in turn also be manufactured into a small polished diamond. This increases both the polished yield and revenue out of the rough diamond, which should translate into increased rough diamond prices for those diamonds

- This technology will lower the cost of manufacturing and improve traceability. It also has the potential to expand the production of smaller stones, which will come from the new off-cuts from Da Vinci

- For the first time, the geographical location of where a diamond is polished and the associated labour costs may become irrelevant

<sup>5</sup> Source: [www.synova.ch/component/k2/item/123-synova-announces-groundbreaking-automatic-cutting-and-shaping-solution-for-diamond-manufacturers.html](http://www.synova.ch/component/k2/item/123-synova-announces-groundbreaking-automatic-cutting-and-shaping-solution-for-diamond-manufacturers.html)



- Mining companies may look at moving downstream and polishing some of their own production; retailers may look at manufacturing polished diamonds themselves with rough diamonds sourced directly from mines
- Today, any given retailer sells a diamond that may have been polished one or two years ago; the ability to mine and polish a diamond in a single day could allow manufacturers and wholesalers to sell polished diamonds before they have even been mined
- Sharply reduced production times and a much shorter pipeline translate into lower inventory, lower bank financing and lower interest costs. Lower inventory levels would remove polished price distortions caused by stocking and destocking in the mid-stream, which would be transformative for the industry
- This would lead to a much-reduced environmental footprint, with virtually an entire diamond factory in one system
- This technology will change the industry and could also be used with LGDs

Industries evolve, and this is simply an evolution in diamond manufacturing. It is not about replacing manual processing with automation, it is about adding value and creating different skills.

## Case Study: **Adidas**

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A few years ago, Adidas launched robot run “Speedfactories”, which have been instrumental in furthering the company’s manufacturing innovation. Using advanced digital technology powered by sports data, the facilities create precise performance footwear in a matter of days. In the future, Adidas will concentrate its resources and capacities even more on modernising its other suppliers and using 4D technology in footwear production.



Adidas robots manufacturing shoes in their new 'Speedfactory'

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<sup>6</sup> Picture copied from “Adidas Launches Smart Factory Run by 3D Printers & Robots in Germany” by Joseph Young. The article was published on the [www.3dprint.com](http://www.3dprint.com) website on 19th January 2017

### iii. The assurances offered by automated grading

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Could automated grading provide the guarantee that consumers desperately need?

**The ability to prove that a polished diamond is what it claims to be is the key to retaining consumer confidence in the product. Automated grading technology is currently being developed by a number of companies. Objective grading reports will help resolve the inconsistencies between different certificates. The technology will bring down the cost and time for certification. Automation will also enable grading of very small diamonds, which will provide reassurance to the consumer that the diamonds are both untreated and natural.**

Currently most polished diamonds of 30 points+ are sent to the Gemological Institute of America (GIA), De Beers' The International Institute of Diamond Grading & Research (IIDGR), HRD in Antwerp (Hoge Raad voor Diamant which translates as High Diamond Council), China's National Gem Testing Centre (NGTC) or The International Gemological Institute (IGI) for a third-party grading to appraise the characteristics of each stone (the so-called 4 'C's'). Every stone that goes through these laboratories is also screened to prove origin (natural or LGD) but it is currently a manual process which can take up to three weeks. The whole grading process is complicated and certainly confusing to the consumer. Different laboratories adhere to different standards (especially over time), and the

grading classifications are reliant on the subjective nature of human judgement. Approximately 90% of all polished diamonds are smaller than 10 points (0.1 carats), and it is currently unprofitable to grade them.

Technology for the automated grading of polished diamonds is in the final stages of development to make accurate and consistent assessments a reality. Eventually, automated grading machines could be integrated into the polishing factory allowing for grading reports to be generated as soon as the diamond polishing process is complete. This could significantly reduce costs, accelerate the certification process and improve the accuracy and precision of the appraisal process – all providing additional confidence to the end consumer.

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<sup>7</sup> Tom Moses, CEO of the GIA at the DMCC Diamond Conference, 26th September 2019

## New Technology

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### IBM's Crypto Anchor Verifier

Two years ago, the Gemological Institute of America (GIA) entered into a partnership with IBM Research. IBM has been developing their 'Crypto Anchor Verifier', which uses Artificial Intelligence and Optical Imaging, to help prove the identity and authenticity of diamonds (and other objects). Using a powerful, 'portable optical analyser', which is small enough to use with a smart phone, the technology is able to scan a diamond's optical properties.

The software is still being tested but the intention is that it will be able to create 3D model images of polished diamonds, analyse their characteristics and predict their clarity grade. IBM and GIA are jointly working on building an imaging system that will embed the optical lens into GIA's grading process.

If successful, this will potentially enable the GIA to possibly grade hundreds of millions of smaller polished stones that are currently

ungraded. This will go a long way towards reassuring the consumer that what they are buying is both natural and untreated.

They are also exploring the possibility of licensing the technology to retailers - the retailer would scan the diamond and the data would be cross referenced with data in the GIA 'cloud' providing visual proof to the consumer that the diamond matches the accompanying certificate. The possible benefits of being able to verify inventory to banks, which lend into the diamond sector, are obvious.

It is possible that over time, this technology may well be sufficiently developed to allow a diamond manufacturer to use it to collect the images of a polished diamond in their factory, upload the data via the 'cloud' and grade the diamonds in the factory.

### Sarine's Fully Automated Grading

Sarine Galaxy started by scanning rough diamonds larger than 2 carats. Today, Sarine scans approximately 70 million diamonds a year down to a size of only 1 point (0.01 carat) recording thousands of data points for each diamond. Now the company is combining this data bank, their expertise in all aspects of rough and polished diamonds, and the 'self-teaching algorithms' used in Sarine

Profile, to develop a fully automated grading machine.

Their objective is to create a machine with +99% clarity and colour grading accuracy - levels of accuracy (and consistency) not achievable with manual grading. This could bring a completely new level of confidence to the industry, something so crucial for consumers.

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<sup>8</sup> Source: [www.ibm.com/blogs/research/2018/05/ai-authentication-verifier/](http://www.ibm.com/blogs/research/2018/05/ai-authentication-verifier/)

## iv. The perennial diamond and LGD debate

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Technology now allows gem-quality diamonds to be produced in laboratory/factory conditions, such that they are considered physically equivalent to their mined counterparts. The method of creation is the core differentiator between the two.

**The technologies used to create LGDs, namely Chemical Vapor Deposition (CVD) and High-Pressure High-Temperature (HPHT), are continuing to improve and become highly cost-effective, at a time when the cost of mining diamonds is increasing.**

**At the moment, the diamond industry is struggling to accept LGDs as a legitimate category, in part because LGDs are being positioned as a discounted alternative to a diamond. Arguments over which is less environmentally damaging, provenance and the respective value proposition are simply causing more consumer confusion.**

How diamonds and LGDs will live together is the subject of much debate. At the 2019 Dubai Diamond Conference, the moderator Anish Aggarwal proposed four scenarios which are a “Prisoner’s Dilemma” as used in classic ‘Game Theory’:

- “Win Natural: Win LGD”. LGDs stimulate overall diamond sector growth
- “Win Natural: Lose LGD”. Natural defends its space and LGDs become a “race-to the bottom”
- “Lose Natural: Win LGD”. Substitution from natural to LGDs
- “Lose Natural: Lose LGD”. Consumer confusion causes shrinkage in overall diamond category

If the industry does not work together, everyone will lose.

Many believe that in order for the two categories to successfully coexist, which

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<sup>7</sup> “Prisoner’s Dilemma” is a paradox in decision analysis in which two individuals acting in their own self-interest do not produce the optimal outcome. In “Game Theory” A typical “Prisoner’s Dilemma”, is set up in way that both parties choose to protect themselves at the expense of the other participant.



is the better way to grow the overall market, they have to be positioned differently.

Diamonds and LGDs have almost identical chemical and optical properties and yet machines can easily detect the difference between the two because of the molecular growth formation. The growth formation of a diamond created billions of years ago deep within the earth's mantle (150 - 250km below the surface) is very different to a LGD that grew in a machine in a couple of weeks. This is nature's way of giving its natural creations a unique fingerprint. Diamonds are natural, precious, and inherently valuable because they are rare. They are expensive to mine and getting harder to find. LGDs are cheap to grow in relative terms and their size and volumes are simply a function of time and the number of machines operating. As the LGD growing technology improves and supplies become unlimited, the cost of production will continue to fall, and prices will probably follow the same way they did for flat screen televisions.

If a consumer buys a diamond because it 'sparkles' and is 'pretty', they are the same. But if a consumer buys a diamond to celebrate the most important events in a person's life, it has to be something that is inherently precious, so it has to be natural — a product of infinite supply

grown cheaply in a machine cannot convey an emotional message.

If the LGD industry continues to compete with diamonds as opposed to complementing them by finding their own niche, it may end up with no niche, competing with diamond simulants in the low value fashion market. The opportunity here is to work together, promote themselves as complementary by offering a different value propositions. If diamonds and LGDs work to live together and complement each other, can they create a bigger overall market? The question the whole industry should be asking is how they can reclaim the 'diamond share of wallet' from other luxury goods and services, and how together with the LGD industry, they can grow from an USD80 billion industry to over USD150 billion.

## Case Study:

1.6B  
1.4B  
1.2B  
1B  
800M  
600M  
400M  
200M  
0



2011

2012

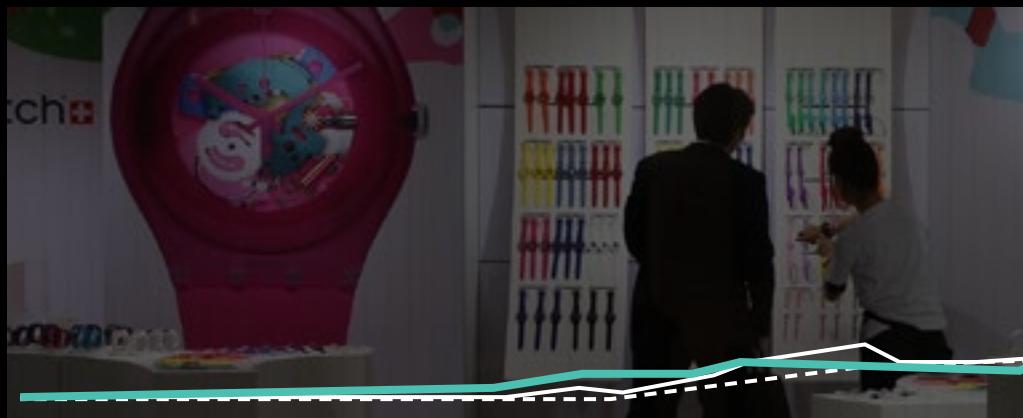
2013

2018

## Uber

The year before Uber launched, the taxi market in San Francisco was worth USD200 million. In 2018, primarily because of Uber, that market had grown to USD1.5 billion. This will only work in the diamond industry if diamonds and LGDs can complement each other, be clearly differentiated and not confuse the customer

18,000  
16,000  
14,000  
12,000  
10,000  
8,000  
6,000  
4,000  
2,000  
0



1960

1965

1970

1975

1980

1988

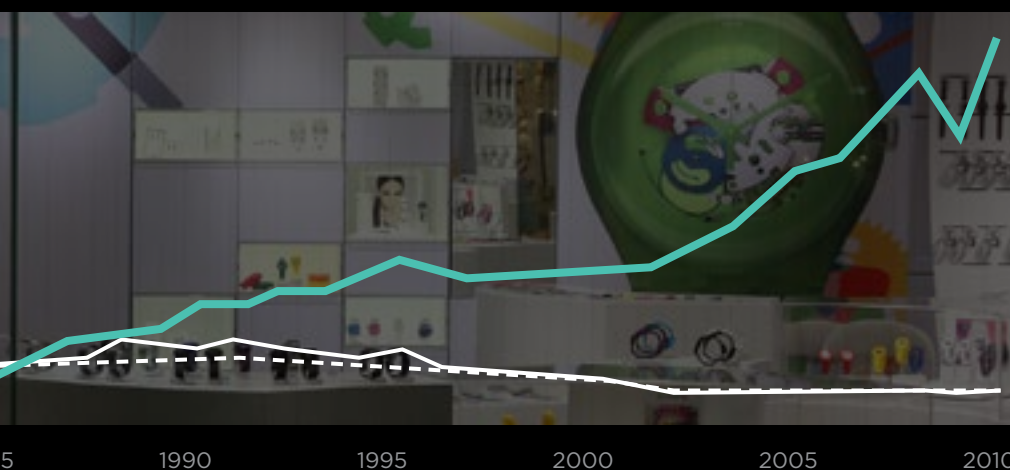
## The Swiss Watch Industry

In the early 1970s, the Japanese introduced the battery powered quartz watch into the market. Falling costs and cheaper watches created a first new 'mass' market and Swiss watch makers, which had dominated the global watch market, nearly disappeared altogether. In the 10 years from 1973 onwards, Swiss watch exports fell by over 90%. The industry was then forced to work together and in 1983, a Swiss consortium came up with a new concept - a plastic disposable automated watch named the 'swatch'. Swatch saved the Swiss industry. But it was also transformative in that everything was driven and decided by the branding

<sup>10</sup> In 1973, Swiss watch exports were 40 million. In 1983 they were 3 million, 1,000 watch companies went under (out of 1,600). Between 1970 and 1988, employment in the watch industry fell from 90,000 to 28,000. Source: "The History of Swiss watches". [www.firstclasswatches.co.uk](http://www.firstclasswatches.co.uk).



San Francisco taxi market



Switzerland (exports)

Japan (exports)

Japan (production)


and marketing departments rather than the production teams.

The likes of Rolex, Vacheron Constantin, Audemars Piguet and Patek Philippe were also forced into selling very expensive watches, which over time evolved into exclusive luxury purchases, known for their elaborate craftsmanship. More than timepieces, these have become status symbols.

Once again, the Swiss dominated the industry.

Buying a diamond is already a complicated enough process for the consumer so when LGDs are positioned as being as rare and valuable as diamonds it adds confusion. A confused consumer will simply go elsewhere. This is why it is so important that LGDs and natural diamonds are clearly defined as different, and look for opportunities where the two can complement each other. All too often, the diamond industry is its own worst enemy.

Ultimately, the diamond industry must also grow consumer demand. For nearly a decade, consumer demand has been flat and growth has lagged behind other luxuries, primarily because the industry has failed to understand the changing nature of retail and consumer preferences. But many examples of how to easily remedy this are available in almost every other sector. Diamonds need to develop a new narrative around sustainability, the industry needs to refocus on branding and should prioritize the differentiation of products. Do these things and the next decade will be one of rising consumer demand and profitability for all.



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# Necessary steps to secure a future for diamonds

The real challenge facing the diamond market is the failure of the industry to truly understand the changing nature of retail and sifting consumer preference. Growing the overall consumer jewellery market will require a change in the way diamond jewellery is sold.



# 1. Develop a new narrative

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A growing number of 'believe-driven buyers' will embrace or reject a brand for what it stands for. This consumer group is more likely to take the opportunity to vote with their wallet. It is becoming a way of living, of thinking and of engaging with the world. They want to engage with products that stand for something.

**The 'new consumers' (Millennials and Generation Z) value honesty, integrity and authenticity.**

They trust brands that they believe in and associate themselves with. They want to know that their luxury purchase did no harm and more so, that it had a positive impact. They need to feel comfortable that in today's sustainably conscious environment, their friends think that it is a good thing that they have purchased a product.

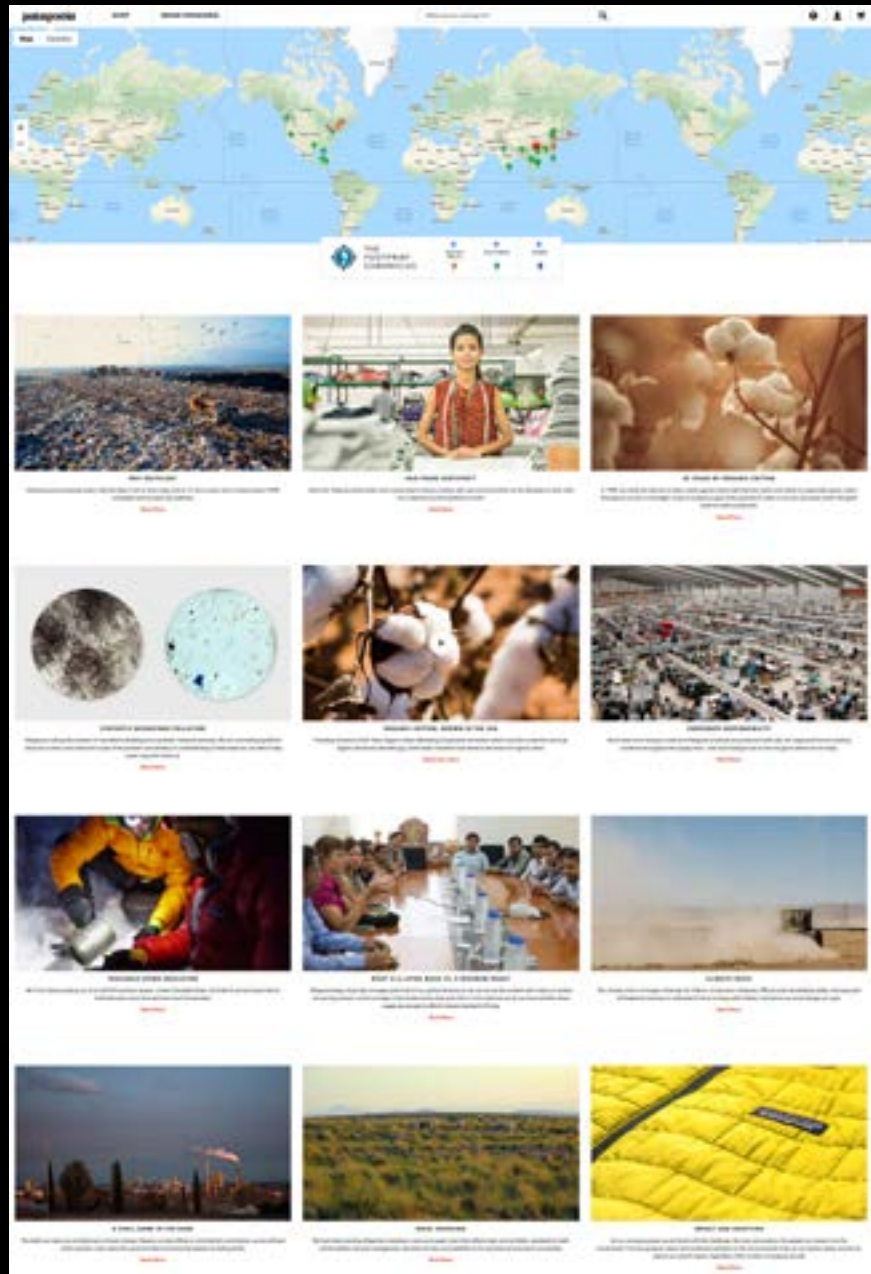
This is a huge opportunity for the diamond industry because it has such a good story to tell. Countries like Botswana have developed in large part due to the diamond industry. For every hectare De Beers utilises in its mining business, there are six hectares given over to preserving natural habitats and protecting wildlife for future generations. An estimated 1.5 million artisanal miners in West and Central Africa rely on alluvial diamonds for their livelihoods, in turn supporting a further 10 million people.

**1.5M**

**artisanal miners in West and Central Africa rely on alluvial diamonds for their livelihoods**

# Case Study: Patagonia

Patagonia is an American outdoor outfitter with a mission is *to save our home planet*. Their 'Footprint Chronicles' documents the journey of every product that they sell - how it was developed from the raw materials, the details of everybody involved in creating the product, all the way down the supply chain, and whether it can be recycled. It provides the consumer a window into the business, making sure that Patagonia is living up to its mission. The company only want to do business with other companies that operate with authenticity and transparency. They is also engaged in supporting environmental activism around the world. What Patagonia is doing is not CSR (Corporate and Social Responsibility), it is what they refer to as 'CSV' — Creating Shared Value; they are creating value for everyone who is involved inside and outside the organisation.



Patagonia's 'Footprint Chronicles' allows the consumer to see every step and whether the product can be recycled.

## 2. Refocus on branding

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If a brand does not sell at a premium to its substitutes then it is not a brand; “technology doesn’t commoditise a product; selling it as a commodity does”.<sup>11</sup>

The last twenty years have witnessed an explosion in diamond-related brands focused around special occasions, provenance, origin, the number of facets, the excellence of the cut, the design, the retail brand and so on.

Some brands combine all of the above. This begs the question that if diamonds are increasingly branded, why has the annual value of polished diamonds sold in jewellery fallen by 13% since 2011? The answer is because so many of the so-called ‘brands’ are not ‘brands’; they are in fact ‘logos’.

A ‘brand’ is a ‘promise’, not a product. A ‘promise’ that is both exclusive and desirable; exclusive, in that it is unlike anything else, and desirable, in that it is created in a way that anyone can receive the message and react by thinking “I want it, I desire it”. Nike does not sell ‘shoes’; it sells a ‘promise’, a promise of ‘winning’ and it does so by honouring athletics and great athletes. That promise sets a benchmark. Consumers expect to experience something distinct when engaging and embracing the brand. If they do not, then the product is a commodity and only the price matters.

# 13%

**decrease in the annual value of polished diamonds sold in jewellery since 2011**

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<sup>11</sup> Amish Shah, CEO of ALTR Created Diamonds’ answer when challenged as to whether LGDs have commoditised natural diamonds.

<sup>12</sup> Figures from IDEX Online’s annually published “Diamond Pipeline”. In 2011, IDEX’s estimate of the value of diamonds (at Polished Wholesale Prices) sold in jewellery was USD23.6 billion. In 2018, that figure had fallen to USD20.7 billion.

## Case Study: What is a brand?

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Nike's 2017 advertising campaign celebrating 30 years of 'Just Do It' featuring sacked 49ers quarterback Colin Kaepernick. No mention is made of the product.

Nike doesn't sell shoes. That is because the brand isn't about selling shoes; it's about values. 'Nike' is about honouring athletics and honouring athletes and their promise is 'winning'. Apple started as a technology company producing computer hardware, but they are a global brand not because they sell computers, but because they became a luxury brand. Apple's core value is to give power to the people through technology, and it does so by constantly '*challenging the status quo*'.

Starbucks' mission is '*To inspire and nurture the human spirit - one person, one cup and one neighbourhood at a time*'. But Starbucks isn't about selling coffee, but about providing a place where people can share a moment with friends - a place where the people meet.

Harley Davidson was transformed as a business when they stopped thinking of themselves as a manufacturer of motorbikes, and started thinking

of themselves as a lifestyle company working with their customers to '*have more exciting lives*'. What all these brands are selling is community, significance and life enhancement, things that are far more meaningful, valuable and differentiating than the products themselves. They are selling emotional connections through an emotional appeal.

In the 1980's and 1990's, the diamond industry grew on the back of marketing the product. But that was a time when global luxury brands didn't exist and the internet hadn't commoditised product pricing. But while other sectors radically changed, the vast majority of the diamond jewellery retail industry doesn't make a 'brand promise' to the consumer - it continues to sell diamond jewellery as a product, which is increasingly commoditised.

### 3. Differentiate the product

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Selling diamonds based purely on their size, quality, shape and colour leads to price discounting and erosion of profit for all in the industry. This increasingly commoditised approach to diamonds sales leads to unbranded retailers fighting a price war to survive. In the world of internet pricing, with infinite choice, branding is the only differentiator. Differentiation is the enemy of commoditisation.

Differentiating the product requires a mind-set change in the way diamond jewellery is experienced and sold. Looking at how other companies and brands give consumers a genuine experience can open up exciting and profitable new opportunities.

#### Case Study: **Watches**

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HYT Watches stunned the world in 2012 with a watch that uses liquids to tell the time.

In 2012, Geneva based HYT Watches designed a watch that used liquids to tell the time and it stunned the industry. This was a completely new innovation in a predominantly traditional world. They created

something that no one else had considered and made the competition irrelevant. They are not remembered for creating a watch, but a watch based on liquid systems; a simple, but powerful idea that could be explained in seconds.



## 4. Surpass the competition in retail

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The diamond jewellery retail industry has been too slow to adapt to today's fast-evolving retail environment.

E-commerce continues to take market share from physical stores, and the media is filled with stories about the so-called "retail apocalypse". But it is wrong to see e-commerce growing and physical stores closing as a simple binary choice. It is not.

What physical stores need to do is evolve to provide something that e-commerce cannot deliver — a community and unique experiences.

### Case Study: **Gucci**

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At the beginning of 2018, Gucci took experiential retail to the next level, opening a new store in a 14th Century Palazzo in Florence – a museum which serves as a shrine to Gucci's history. On the ground floor, customers can eat at the 'Gucci Osteria', a Michelin star restaurant.

But, to visit the other floors, visitors have to buy an entry ticket which costs €8, half of which goes towards renovating old buildings in the city. The products on sale in the museum are all locally sourced, but the concept is brilliant.

# Glossary of term

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<b>Alrosa</b>	Largest diamond mining company by carats (29% of global diamond production) and 95% of Russia's overall diamond output. Second largest diamond mining company by value - part owned by the Russian Government and Government of Sakha (Yakutia) with a minority listing on the Moscow Stock Exchange. The bulk of its production comes from Sakha with some from Angola.
<b>Artisanal Miner</b>	A subsistence miner who is not officially employed by a mining company.
<b>Carat</b>	The carat is a measurement of weight equal to 0.2 grammes.
<b>Da Vinci Diamond Factory</b>	Revolutionary technology created by Synova. Uses an advanced laser cutting system which links with existing planning software to automatically cut and shape a rough diamond into a 57 facet polished stone. Human interaction is limited to 'finishing' - polishing off the laser marks and microscopic roughness.
<b>Diamond Producers</b>	Refers to diamond mining companies and producer nations, but also includes alluvial mined diamond production. In 2018, according to the Kimberley Process statistics, global production was 148 million carats with a value of USD14.6 billion.
<b>Diamond Producers Association (DPA)</b>	The DPA was formed in May 2015 by seven of the world's leading diamond companies in order to maintain and enhance consumer demand for, and confidence in diamonds.
<b>De Beers</b>	The De Beers Group of Companies are the world's largest rough diamond miner and are owned by London listed Anglo American and the Botswana Government. Has production from Botswana, Namibia, South Africa and Canada. Also owns the ForeverMark brand and De Beers Jewellers.
<b>Gemological Institute of America (GIA)</b>	The GIA is a non-profit institute dedicated to research and education in the field of gemology and the jewellery arts. It's grading business accounts for an estimated 60%+ of annual polished diamond certification.
<b>Generation Z</b>	Generation Z refers to the generation that was born between 1996-2010, following millennials.
<b>Grading</b>	Every polished diamond over a certain size will be examined and certificated by a recognised grading laboratory according to its unique characteristics - primarily relating to the 4 'C's'.
<b>HRD</b>	The Antwerp HRD (Hoge Raad voor Diamant which translates as the "High Diamond Council") provides a number of services to the diamond industry, one of which is diamond grading.

<b>International Gemological Institute (IGI)</b>	IGI has 18 laboratories certifying a wide range of gemstones and jewellery, including diamonds, and also operates 14 gemological schools.
<b>International Institute of Diamond Grading (IIDGR)</b>	De Beers owned International Institute of Diamond Grading is the world's second largest grading laboratory with laboratories in Antwerp, Surat and Maidenhead.
<b>Laboratory Grown Diamonds (LGDs)</b>	Diamonds grown in a laboratory using Chemical Vapor Deposition (CVD) or High-Pressure High-Temperature (HPHT).
<b>Manufacturing</b>	The process of cutting and polishing a rough diamond into a polished gem.
<b>Mid-stream</b>	Rough diamond dealers, manufacturers (cutting and polishing), polished dealers, polished diamond and jewellery wholesalers.
<b>Millennials</b>	There is no agreed definition for a Millennial other than they were born between the 1980's and the end of the 1990's; people born between 1981 to 1996 seem to a reasonably widely accepted definition.
<b>National Gem Testing Centre (NGTC)</b>	The NGTC is the leading authority in the testing and inspection of gems and jewellery in China.
<b>Rough Diamond</b>	Diamond in its natural form before it undergoes any manufacturing process.
<b>Point</b>	Polished diamonds smaller than a carat are often referred to by their weight: One point is 1/100 of a Carat.
<b>Polished Diamond Prices</b>	The figures referred to relate to <a href="http://www.polishedprices.com">www.polishedprices.com</a> polished pricing Indices.
<b>Sarine</b>	Singapore listed, Sarine Technologies is an industry leading company which has developed technology for the planning, analysis and grading of rough and polished diamonds – entire diamond pipeline.
<b>Synova</b>	Swiss based technology company which pioneered a revolutionary water jet guided laser technology used for cutting, drilling and edge grinding in the energy, aerospace, tool, diamond, semiconductor, watchmaking, electronic, automotive and medical industries. De Beers has a minority shareholding.
<b>Yield</b>	The total carat weight obtained after polishing from the original rough.
<b>The 4 'C's</b>	The four characteristics which are considered the most important in determining a diamond's value - Colour, Cut, Clarity and Carat Weight.









