PLAY GROUND

THE DESIGN OF SNEAKERS

Tennis shoes, trainer shoes or sneakers, whatever their name, they define today our way of living and dressing. In a few decades, they have wiped out sartorial rules, while overcoming social barriers and blurring the boundaries between genders, until they have become the most democratic shoes ever, an emblematic object of our globalized culture.
When they appeared in the middle of the 19th century, thanks to the industrialization of rubber, sneakers, with their flexible soles, have been quickly associated with sports. They are transcended by physical performance and a feeling of fulfillment: they are linked to success, to fame, and have an aura that affects everyone. Their modest cost makes them ideal for strolling, playing basketball or breakdancing. As a symbol of the hip-hop culture, they spread in the streets and conquer the world of high-end fashion. The conflict between these opposite worlds gave birth to a new aesthetic, rapidly shared by the greatest number. The sneakers culture was born.
Since then, many economic, technological and cultural factors have converged to turn this trend into a real social phenomenon.
It is recognized that today the feet catch the eye: tell me what sneakers you wear, I'll tell you who you are!

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Constance Rubini
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Mathieu Lehanneur
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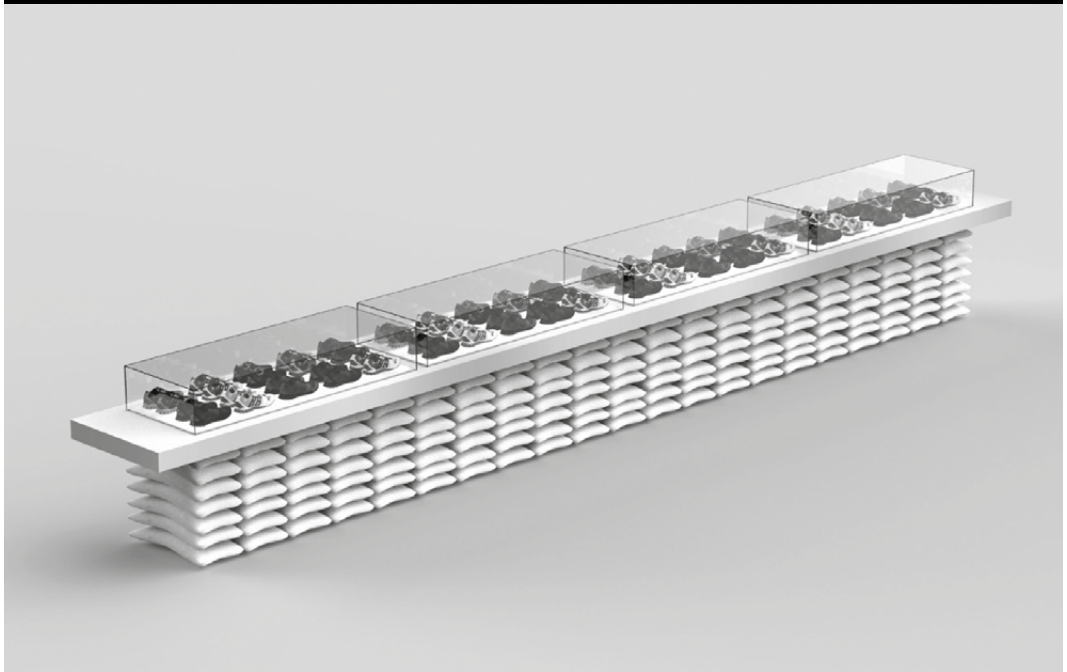
CENTRAL HALL

The icons

CENTRAL HALL - THE ICONS



COURTYARD A

Sneakers for winners

Since the beginning of the 20th century, the first sports shoes manufacturers have worked for the great athletes. The growth of brands like Converse or Dassler is linked to the success of these champions, who make the headlines. From basketball to marathon, from pole vaulting to Formula 1, the aim is to conceive the best tool to satisfy the demands of the athletes and enable them to achieve new records in every major international competition. The Olympic Games or the great NBA championship shape the incredible aura of these athletes, who are models to youth and fans alike.

The latter project themselves in the brand of their idol or even better, choose the eponymous models also known as « signature », like the Converse *Chuck Taylor*, the Puma *Clyde* or the most famous Adidas *Stan Smith*. Like the rock bands of the 1960's, athletes have become idols and have been the subject of a star system with increasing financial stakes, the shoe constituting the emblem, the ultimate fetish object.

COURTYARD A

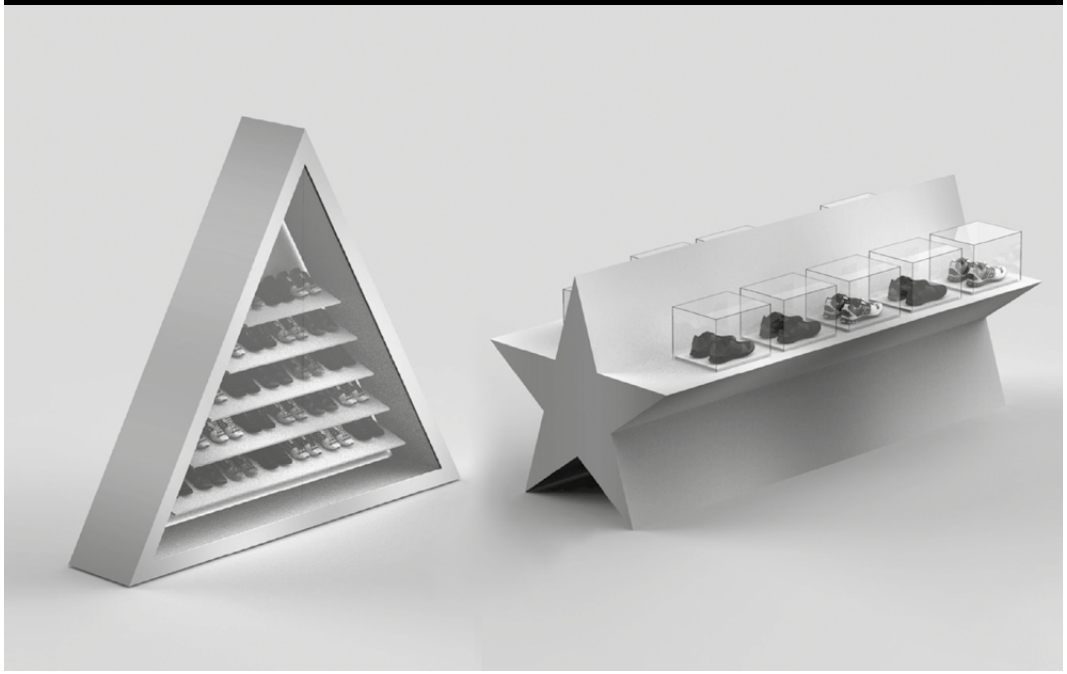
Basketball at the core of sneakers

Out of the basketball courts, the *Chuck Taylors*, the *Clydes*, the *Air Force 1s* have become street icons, as basketball dominates the street culture.
Conceived to be an indoor winter sport in 1891 by the Canadian James W. Naismith, at the University of YMCA in Springfield (MA), basketball is a skill game, avoiding shock contacts. Naismith established 13 rules, most of them are still in effect. The Christian missionaries of the YMCA exported this game « which sent a gift to heaven », all over the world.

In the USA, basketball is one of the most popular games. At the time of its creation, like the rest of the society, it was ruled by racial segregation. Black teams were often called « color quints », « negro cagers », « black five ». In their neighborhoods, the games were followed by parties where the community danced to the sound of the best jazz players. Basketball and music built the American black culture. After World War II, in the Bronx, in Harlem, everyone played basketball. Shorts, tank tops and sneakers were the local uniform. Baskets and hoops were everywhere in New York : basketball was played without resources, on electric poles, at the corner of the streets.

In 1949, two leagues, the BAA and the NBL, merged to become the National Basketball Association (NBA), which became very powerful. The following year, long before the Civil Rights Act (1964), Chuck Cooper was the first black player to be drafted by a NBA team. Since then, basketball has become one of the few vehicles of American cultural identity to be mostly represented by black personalities.
Today, basketball and hip-hop merge into what Todd Boyd, author of *Young, Black, Rich and Famous*, calls the « Hip hop ball », a culture that centers around the idea of success and of a new American dream.

COURTYARD A - THE AURA OF THE OLYMPIC GAMES & THE BASKETBALL



COURTYARD A

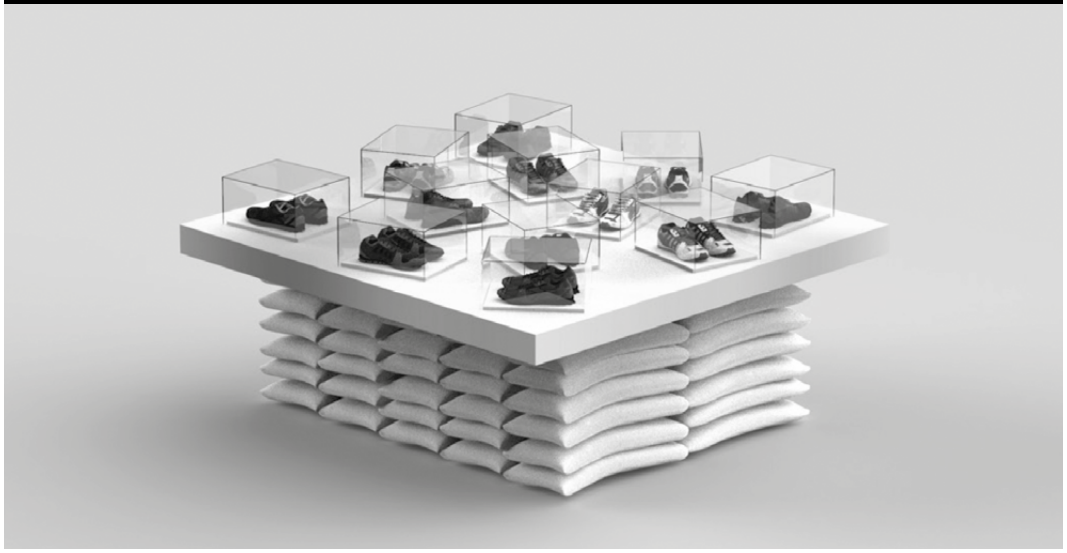
The design of sports

The design of a sport shoe is before all functional. Each sport has its own practice and types of gestures, and therefore needs specific and adapted shapes to achieve the best performance. Adapted to the profile of the player (goalkeeper, defender, striker...), the design of a football shoe should contribute to the velocity of the user and allow precise ball control. Its sole grips on the ground providing stability and reactivity.

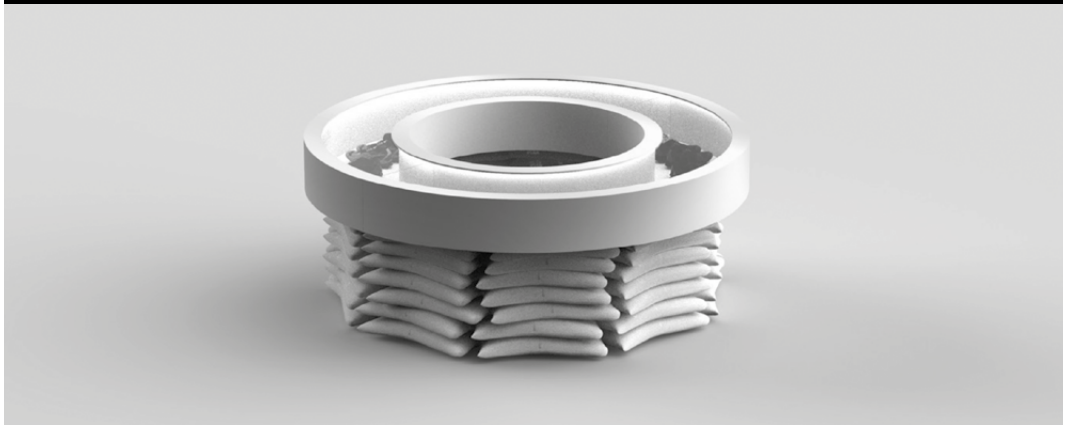
The narrowness of the Formula 1 shoe avoids any potential discomfort with the pedals and offers a freedom of ankle movement. The thin sole allows a better contact feeling of the pedal. The climb shoe is also equipped with a thin sole, which goes up on each side for a better grip, becoming one with the foot.

COURTYARD A - LE DESIGN DES SPORTS

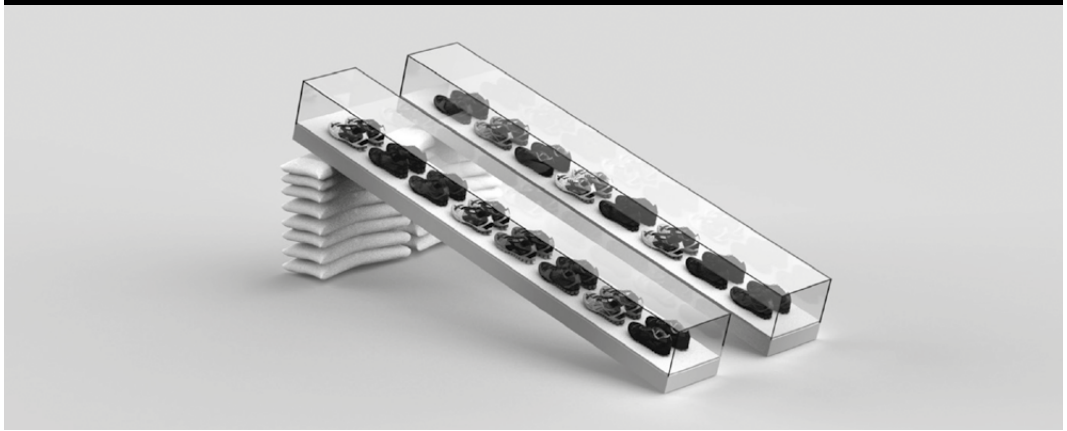
COURTYARD A - THE RUNNING



COURTYARD A - THE TENNIS



COURTYARD A - THE CULTURE OF SKATE



COURTYARD A

The skate culture

Skateboarders talk about « skating » their shoes, but no one « basketballs » Air Jordans or « tennises » a pair of *Stan Smiths*. No playing field, no rules, no outfits, all shots are allowed! Worn and torn from sole to shoelace, the skate shoe suffers rough treatment. Contemplating the condition of certain pairs, it is hard to imagine that the first skateboarders, in the mid-1950's, went barefoot. In the pools' concrete curves, the tricks went aerial, and there arose a need for ankle protection. Skateboarders started wearing high-top sneakers like the Nike *Blazer, Ponys*, and the first-ever pro model skate shoe, released in 1988 for Natas Kaupas by the French brand Etnies, is inspired by the Jordan 1 and the Ellesse *High Top*.
If the shoes got holes or the laces tore through, they could be repaired with Shoe Goo. To make their shoes look puffier, skateboarders doubled the tongues, inserting a second one under the first, with a piece of griptape on top to keep it in place. It was uncomfortable, but that was beside the point! DC took the hint and started using thicker tongues.
Over a period of forty years, more than fifty brands were launched on the market. Nike and Adidas got into position, offering an increasingly athletic skate scene the benefit of their technologies (Lunarlon, Hyperfeel, Flyknit, Climacool...), éS incorporated the first air pad and mesh in the *Koston 1*. Although Converse was already sponsoring Christian Hosoi in the early 1980s, in 1998 the three-stripe brand became the first major sports manufacturer to offer a pro model to a skateboarder, Mark Gonzales - the most influential figure in the discipline's history according to *Transworld Magazine*.

Many thanks to Arnaud Dedieu, author of "A Short History of the Skate Shoe" to read in the exhibition catalogue.

CELL 1

CELL 1

At dancers' feet

In the 60s and 70s, wearing sneakers out of the sport courts was considered as an act of rebellion. Artists, musicians, dancers adopted these rubber-soled shoes, that gave a casual and nonconformist look, breaking up with the rigid rules of the society.

CELL 1

Bebop, 1949

In 1949, in the cellars of the bars of Saint-Germain-des-Près, the « Rats de Cave » company founded by Jano Merry danced the bebop. With their rubber-soled high shoes, they could follow the frantic rhythm of the musicians and perform the riskiest figures without fearing a sprain.
Mixing swing, boogie and traditional jazz, bebop appeared across the Atlantic in the 1940s as a jazz movement, played by African-American musicians, who intended to free themselves from the big bands, giving more freedom to interpretation and offering more room to improvisation

CELL 1

West Side Story, 1961

In the heart of the disadvantaged Upper West Side, the action takes place on a sports field, a place of power where two gangs fight to conquer their territory. The director put sneakers on their feet.
The plot reveals a conflict between two gangs: the Jets, white youth from the working class originally from Poland and Ireland, and the Sharks, coming from Puerto Rico. Adapted and transposed from Shakespeare's *Romeo and Juliet*, *West Side Story* is a musical written by Arthur Laurents, Stephen Sondheim and Leonard Bernstein, performed for the first time in 1957 on Broadway, and adapted for the screen in 1961 by Jerome Robbins and Robert Wise.

CELL 1

Maurice Béjart, *Mass for present time,* 1967

T-shirts, jeans and sneakers: on the eve of May 1968, it is a both rebellious and liberated youth that the choreographer Maurice Béjart highlights in his *Mass for The Present Time*. Created for the Avignon Festival and performed in the main courtyard of the Palais des Papes, this ballet conceived with a music by Michel Colombier and Pierre Henry, an eminent representative of concrete music, was a great success.

CELL 1

H.I.P.H.O.P, 1984

In 1984, the first television program dedicated to hip-hop culture in France was broadcasted every Sunday on the first TV channel (TF1), just after mass. The initiator of the famous show H.I.P.H.O.P., Sidney was one of the first French media figures in hip-hop culture. Rapper, dancer, musician and DJ, he invited stars of the international hip-hop scene such as Afrika Bambaataa, Kurtis Blow or Sugarhill Gang for a year. Young and old people alike wear sneakers, rap and breakdance.

CELL 1

Dance at the core of New York's counterculture

In New York, in the context of a rise of social and political protest, several young dancers and choreographers radically detached themselves from modern and classical dance. Trained in Robert Dunn's Cunningham studio in New York and Anna Halprin's Dancers' Workshop in San Francisco, they rejected virtuosity, dramatic expression, aesthetic and technical codes and wished to abolish the distance between life and dance. Choreographers asked amateurs to join, borrowed movements from the daily life and gave sneakers to their dancers. Trisha Brown, Lucinda Childs, Simone Forti, David Gordon, Meredith Monk, Steve Paxton, Yvonne Rainer, were the major figures of this counterculture.

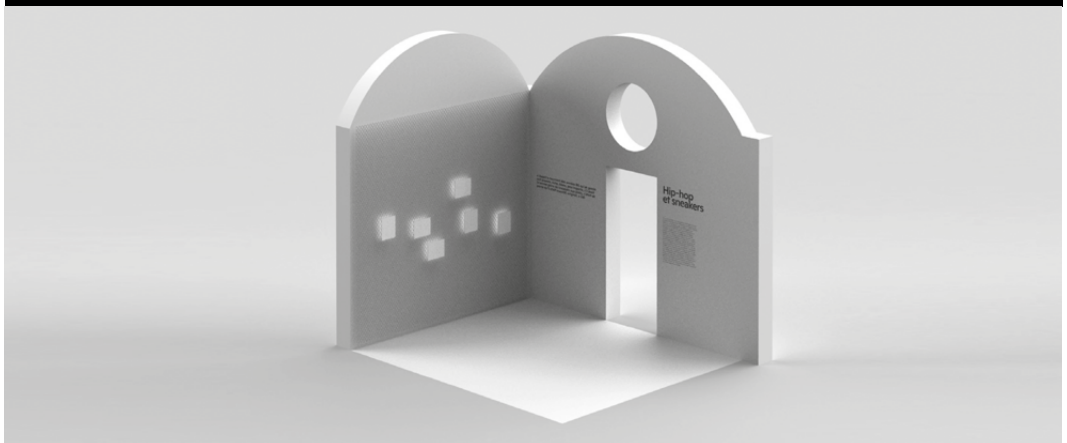
CELL 2

At the beginning, the Hip-hop culture

"In the '80s it didn't matter if a kid was poor, rich, white, whatever – if he had on the right sneaker he was the man, because he was innovative"
Udi Avshalom

The hip-hop culture and its various practices (MCing, or rap, DJing and breakdancing, or b-boying) were born in the 1970s New York. They emerged as identity reactions towards the hostile context against ethnic minorities.
With their flexible grippy soles, sneakers become essential for the b-boys and b-girls. Wearing Puma or Adidas, they invented new series of figures, gestures and postures, borrowed from different cultures - like capoeira or Kung fu movies - performed on mixed music. They also played basketball in those flexible shoes. For these young people who did not have access to mainstream culture, cheap sneakers became the first accessory of an identity style.
They were worn loosely, with laces of all kinds, regularly cleaned to give the impression that they were still new; everyone seized them and made them their own in order to stand out. This culture rapidly had a major impact in the USA and in Europe.

CELL 2



COURTYARD B

COURTYARD B

From the podium to the runway When luxury teams up with sportswear

Sneakers with oversized crampons and bright colors, shaped like 4x4s, parade with pride, even some arrogance, on the runways of the greatest fashion houses. It was not until the end of the 1990s that fashion designers partnered with sports brands. These early collaborations foresaw a mode of creation that became frequent in the following decades. In 1998, Puma and fashion designer Jil Sander were pioneers when they launched an entire shoe and clothing collection. Since 2000, the collaboration between Japanese fashion designer Yohji Yamamoto and Adidas, has been a milestone and has made an impact, giving birth to a separate brand, Y-3. These now-called « collabs » have multiplied at an increasingly quick pace : Hussein Chalayan and Alexander McQueen with Puma, Raf Simons with Adidas, and more recently, Dior with Nike. No luxury brand has dodged this trend. Streetwear has brought out real celebrities in the recent years, such as rapper Kanye West or Virgil Abloh, artistic director for men's wear at Louis Vuitton.

COURTYARD B

Sneakers Sculptures

Shun Hirose
Shun Hirose lives in Tokyo where he has founded his own label Recouture. Inspired by the term "haute-couture" evoking highly skilled know-how, Recouture also refers to the specific approach of its founder who disassembles, fixes and reconstructs. Mastering the techniques of the shoemaker, he reinvents the art of customization. On iconic models like the Nike *Cortez*, he applies new soles, larger or thicker, which transform the silhouette of the shoe. He also completely deconstructs the shoe upper in order to faithfully reproduce each of the components in the finest type of leather and then reassemble them identically. The Nike *Air Force 1*, the Converse *Chuck Taylor All Star* and the Adidas *Superstar* are among his favorite models.

Helen Kirkum
The work of Helen Kirkum is a creative exercise which consists in twisting shoes about to be thrown away. Using recycled materials and mixing the wear and the production processes, she questions our vision of materiality and novelty. This results in the creation of sneakers that we feel able to identify, and yet they amaze us.

COURTYARD B

Looks from the outside

For about twenty years, many designers and architects have gotten interested in the sneakers phenomena and have collaborated with the largest brands. They bring to this industrial object a fresh look, outside of the fashion and sport worlds. They renew the shapes, materials and construction of the shoe itself.

CELL 3

The fashion pioneers

In 1980, the *New York Times* wrote: “When Karl Lagerfeld showed tennis shoes with his 1976 couture collection, everyone laughed… What seemed absurd four years ago now appears to have been avant-garde.”

They are a handful of couturiers, who, before the sneakers craze of the 1980s, seized the rise of sportswear and saw in those shoes a sign of time changing, embodied by the figures of the counterculture, from hip-hop to rock bands. The Japanese designer Issey Miyake, certainly influenced by his trip to America, put sneakers on the feet of his models in 1973. He was followed by Courrèges, Daniel Hechter, Yves Saint Laurent and Claude Montana, who switched high heels for flats and casual outfits, presenting a new image of women, now independent because they were free to move. The *ELLE* magazine spread this new trend.

CELL 4

The craze for sneakers

« Yo, money, where’d you get those? »
Bobito Garcia

Everything converged in the 80s to turn sneakers into a strong identity sign, which went beyond the field of the different groups and countercultures that had appropriated them since the 60s and 70s. The rise of television advertising and new dynamic marketing practices took fashion to another level. In New York, Foot Locker opened its first store in Manhattan in 1974, with a concept combining sport, hip-hop and street culture. The sneakers came out of a rather confidential field to win public space. Their trade generates a growing economy.

The biggest trigger came from the hip-hop culture. In 1986, Run-DMC released My Adidas: « My Adidas cuts the sand of a foreign land / With mic in hand I cold took command / My Adidas are seen on the movie screen / Hollywood knows we’re good if you know what I mean / We started in the alley, now we chill in Cali ». The success was so great that the street identified with them and began to wear, just like them, Superstars without laces and with their tongues up. During their concert at Madison Square Garden, the band said to the crowd: « If you wear Adidas, raise them high ». The moment was incredible: 20,000 hands waved *Superstars*. Adidas immediately saw the scale of the phenomenon and signed a one-million-dollar advertising contract with them, an extremely high sum at the time.
For the first time, the brand did not reach out for an athlete to promote its image, but to a music band. This represented a turning point in the history of sneakers.

Many thanks to Thibaut de Longeville, co-producer with Lisa Leone of the documentary movie “Sneakers, le culte des baskets”, for the loan of the rare documents shown in this room.

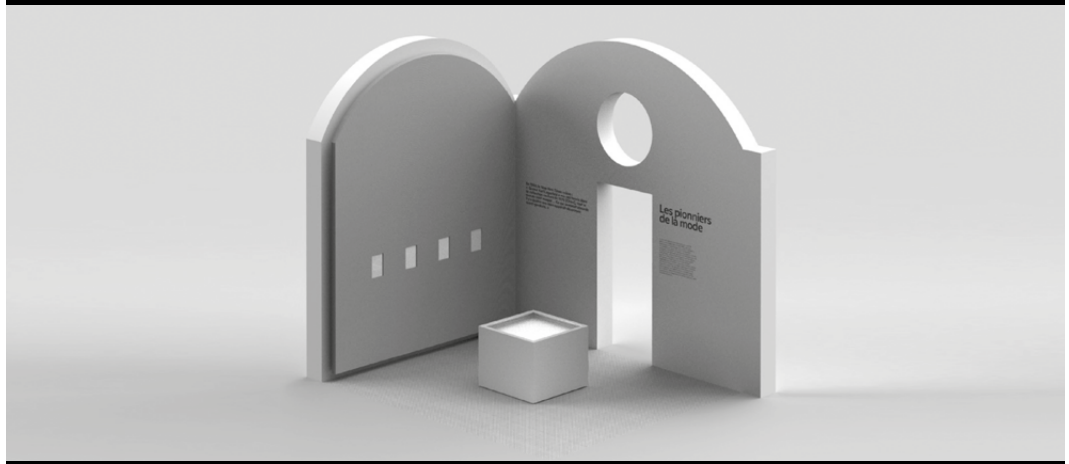
CELL 5

StockX, the stock exchange for sneakers

Collectors born before 1980s remember that they could stride across towns or even take a flight to find a rare model, a size or a colorway nobody (ever) had. With internet, everything changed: the creation of Ebay, specialized forums and resale websites disrupted the approach to collecting and gave birth to a new sneaker culture, with its own codes and vocabulary.

Released in 2005 for 200 dollars, the quote of the *Nike Dunk NYC Pigeon* is today about 25,000 euros on StockX, the main online platform dedicated to sneakers resale. By guaranteeing the authenticity of the products to the buyers and offering a system similar to the stock market, StockX revolutionized the resale market. Prices may vary depending on the rarity and the size of a model. Nearly 30,000 models are available. Three years after its creation in 2016, the Detroit-based company is valued at a billion dollars and counts among its shareholders the rapper Eminem or the actor Mark Wahlberg.

CELL 3



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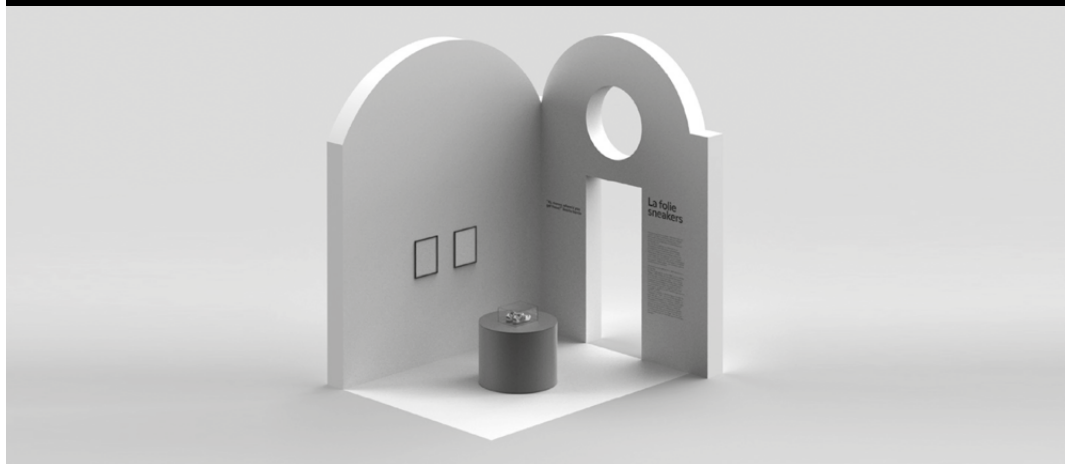

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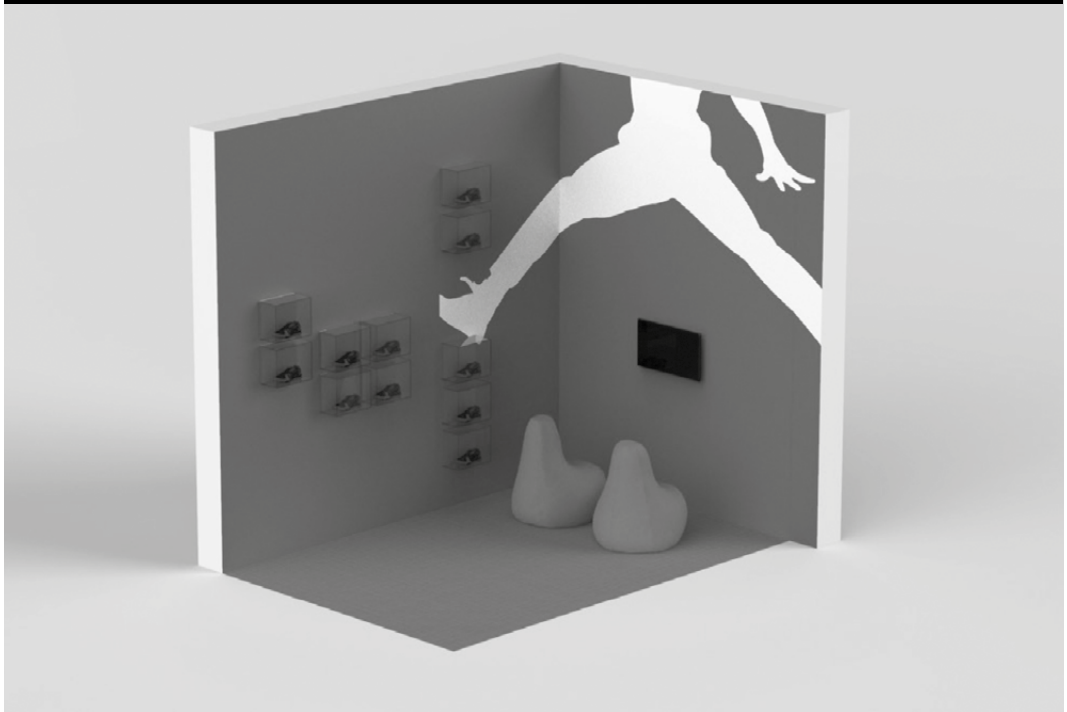


CELL 6BIS

CELL 6

Air Jordan

Even though his favorite shoes were Adidas, Michael Jordan first wore Converse, like the entire team from the University of North Carolina. In the fall 1984, he went looking for a sponsor, before joining the NBA. Disappointed by Converse's offer, he turned to Adidas. But the German brand already equipped the legendary Kareem Abdul-Jabbar for 100,000 dollars a season. Nike, well-known brand in the running world, and in the tennis world since they had signed up McEnroe, was then trying to win the basketball market. Convinced by Sonny Vaccaro, sports marketing specialist, Rob Strasser, Nike marketing director, approached Michael Jordan and placed all his budget on this extraordinary young talent, who still had to prove his worth. It is a historic bet, which gave birth to the very first brand wearing the name of an athlete. The amount of the contract remains undisclosed, but the sum is probably as high as 2.5 million dollars per year for five years. The logo of the brand, the Jumpman, designed by Peter Moore, who conceived the whole Nike identity, has become an iconic image.

CELL 6

The design of Air Jordans

The first Air Jordan was designed by Peter Moore: « My idea was to use Michael's charisma to break the NBA rules which then imposed white or black shoes… because we were Nike, and because Michael was about to break all records. »
The player openly admitted that he was fined 5,000 dollars wearing them for each game, but Nike took care of paying. The legend was then created; his irreverence fitted perfectly the identity of the brand. Sales exploded and reached the huge amount of 150 million in revenue within only three years.
As a genius designer, Tinker Hatfield conceived the Air Jordan III, and many following flagship models from the Air Jordan brand. He worked as closely as possible to fit Michael's needs, in order to technically improve the performances of each pair. He associated a functional design with an emotional and provocative narration, which conveyed the athlete's personality: « there must always be a story at the heart of the design process ».
Each new pair of Air Jordans helps creating the legend of an empire, whose turnover is today estimated at 3.14 billion dollars.

« The XI: Michael, who has a powerful fashion sense, predicted that people would wear them with a suit. »
Tinker Hatfield

« For the XII, I took the design of a high heeled shoe and turned it into a basketball shoe. »
Tinker Hatfield

« The XIV revisits Michael's passion for cars, especially a Ferrari he owned back then. »
Tinker Hatfield

« The XV is the idea of the X-15, NASA's suborbital experimental aircraft, which smashed all speed records in the 1960s. »
Tinker Hatfield

CELL 6BIS

Yeezy!

« YEEZY is the Lamborghini of shoes » declared rapper and shoe designer Kanye West. Since the launch of his line in 2009, collaborating with Nike first, then with Adidas in 2013, Yeezys - short for « Kanyeezy », nickname given to Kanye by Jay-Z – has met with an international success, comparable to the aura of the singer. Kanye West produces models to the rhythm of buyers' fever, whether they are fans or sneakers addicts. The mystical singer, who has just released an album entitled « Jesus is King », presents himself as the « greatest artist that God has ever created » and wants to be called Yeezus (contraction of Yeezy and Jesus) during the Kanye Sunday Services, masses he organizes every Sunday in front of several thousand people. Married to the very media-friendly and wealthy Kim Kardashian since 2014, Kanye West has built a financial empire that is not limited to sneakers design, representing nearly 1.5 billion euros in 2019. Yet, it is still far beyond the Air Jordan line, launched thirty years ago, which is around 3 billion per year…

COURTYARD C

Innovations in the production

Design, innovation and production are at the heart of the commercial competition that has fueled the sport shoe market since the beginning of the rubber adventure. Generating colossal incomes, the larger sneaker manufacturers invest massively in research. The Air system conceived by Nike at the end of the 1970s or more recently the Boost cushioning system, created in collaboration with chemical giant BASF, constitute technological responses to anticipate the needs of customers, combining physics of materials and advanced engineering. Innovation in the sneaker field is also visible through many prospective research projects, led by brands or independent researchers, stretching the limits of sneakers and constantly questioning materials and manufacturing processes. The future of sneakers is also studied in design schools: several research works make it a subject at the crossroads of disciplines and contemporary issues.

TABLE 1

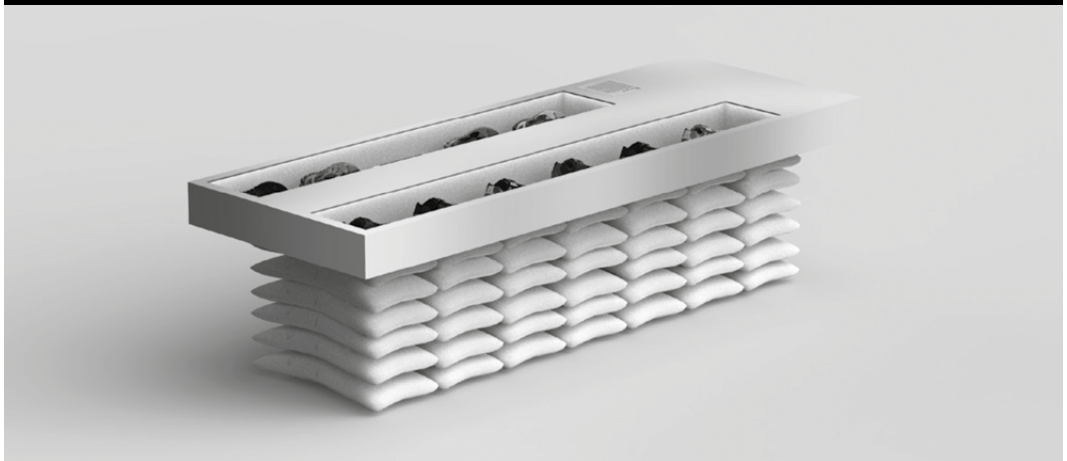
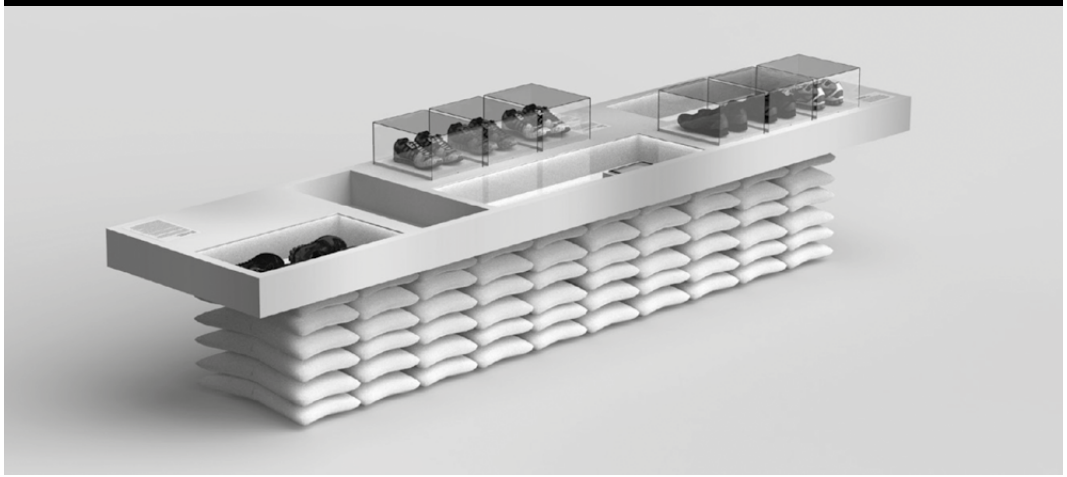


TABLE 2



COURTYARD C
TABLE 1

Nike
The *Air* technology, since 1978

The *Air* technology was conceived in the mid-1970s by aeronautical engineer Marion Franklin Rudy. Initially developed to improve the protective layer of astronaut's helmets, it was suggested as a cushioning system to several brands before being selected by Nike in 1977. When the engineer explained his idea of air-injected soles to Phil Knight (co-founder of Nike), the latter could hardly believe it. Air bubble shoes, he said, « would be similar to jet engines and flying cars, in shorts, cartoon stuff ». The Nike *Tailwind* (1978) conceived for running and the Air Force 1 (1982) designed for basketball, are the first models equipped with the *Air* technology.
Designed by Tinker Hatfield, the *Air Max*, released in 1987, was a turning point in the history of the *Air* technology. After a trip to Paris, the designer was inspired by the apparent structure of the Centre Pompidou and he chose to make the *Air* system visible.
Supported by Peter Moore, Rob Strasser and Mark Parker from Nike, and despite opposition from the marketing department, Tinker managed to develop a prototype. The air cushion was widened and many tests were carried out to ensure its resistance. The *Air Max* release was the subject of a major advertising campaign, including television ad, with the Beatles' popular song *Revolution*. The success was stunning. *Air* models came one after another, giving more visibility and space to the cushioning. In 1991, the air bubble of the Air Max 180 hit the ground. Two years later, it took the entire heel and is fully visible on the *Air Max 270*. The same cushioning was used in the *Air Max 1994*, *Air Max Burst 1994* and *Air Max Ltd 2002*. Later models increased the surface of the air system, getting to the entire sole, with the *Air Max 360*.

COURTYARD C
TABLE 2

The master of the rubber...

Founded in 1851, Bally became a major shoe manufacturerin a few decades. Specializing in leather work, the company followed the trend of canvas and rubber-soled shoes, releasing a first range in the 1930s and creating its own rubber factory in 1942. These rare images allow us to appreciate the different manufacturing steps and the nature of the machine that were used.
The birth of sneakers is closely related to the mastery of rubber and its industrialization. The rubber comes from the latex of the rubber tree, from Brasil. Native Americans used it to waterproof their shoes and clothing. In the 1830s, the Liverpool Rubber Company (England) was considered as one of the first factories to make rubber-soled shoes, designed for the beach and seaside walks.
Depending on the temperature, rubber softens or hardens. The American Charles Goodyear was the first to stabilize the material, thanks to the development of vulcanization. This chemical process consists in incorporating a vulcanizing agent, generally sulfur, in a raw elastomer, rubber, to form, after baking, bridges between the molecular chains, which makes the material more elastic and limits its deformation over time and temperature changes.
Discovered by Goodyear in 1839, the technique was patented four years later by Thomas Hancock. Cheaper than leather, vulcanized rubber considerably lowered the cost of manufacturing shoes and soles and facilitated their industrialization, first in England and the USA in the 1840s, then in France at the end of the century, when outdoor sports became progressively fashionable.
Through rubber, the fates of tire and shoe manufacturers were linked. Founded in 1892, the United States Rubber Company (soon to be Uniroyal) manufactured tires but also every product containing rubber, including shoes. Between 1892 and 1913, the company sold shoes under nearly 30 different brand names, before merging into one named Keds. In 1937, in Italy, it was with the support of Leopoldo Pirelli (from Pirelli tires) that Vitale Bramani applied for a patented rubber sole with studs and founded Vibram. In France, the industrialist Michelin regularly collaborates with sport shoe manufacturers to design soles adapted to different practices.

COURTYARD C
TABLE 2

Adidas in collaboration with BASF *Energy Boost*, 2013

Collaborating with BASF, Adidas developed a new Boost sole, made up of thousands of expanded thermoplastic polyurethane particles. Commercialized by BASF as « Infinergy », it is the first material of this type. These particles are submitted to pressure, to form alveoli enclosing tiny air pockets. The pressure depends on the shape of the mold and the desired density. Three times more resistant to extreme temperatures than EVA foam, this light and elastic material guarantees a powerful return of energy in each step. Energy boost is the first model to use this technique, now adopted by several sportswear brands.

COURTYARD C
TABLE 2

BASF in collaboration with Gu Guoyi and Longterm Concept *X-Swift,* 2019

BASF partnered with Chinese designer Gu Guoyi and Taiwanese shoe manufacturer Longterm Concept, to create a versatile shoe, suitable for all practices, with four innovative materials developed by the researchers of the German company. The outsole is made of Elastollan®, a flexible and resistant thermoplastic polyurethane. The midsole has a powerful energy return thanks to Elastopan®, an elastic polymer which helps the runner with good cushioning. BASF is also innovating with the upper materials: Haptex® synthetic leather and Freeflex™ woven fibers for the vamp, two materials produced without solvent and which contribute to conceive a shoe as close as possible to the foot.

COURTYARD C
TABLE 2

New Balance, *Fresh Foam*, 2013

This technology focuses on the use of EVA (ethylene vinyl acetate) foam, whose chemical formula is adapted to obtain an elastic and stable material. The Fresh Foam sole offers the perfect combination of cushioning and responsiveness. The material is injection molded in a hot press; this type of baking makes the material lighter and more elastic. Then the midsole is designed using a modeling software, an advanced intelligence based on technology, driven by data of speed, force and pressure measurements taken during the race. New Balance uses its knowledge in pressure mapping to add microscopic details. This results in convex and concave shapes to create different impact zones, changing the levels of compression and resistance during the stride.

COURTYARD C
TABLE 3

Adidas in collaboration with Alexander Taylor et Joachim de Callatay *Futurecraft Leather*, 2015

The upper of the shoe is made by CNC milling, an industrial process generally used in the work of metal, resin or polymers. The technique is adapted for leather so that it can be abraded to remove very thin layers and give flexibility or rigidity to the right places. The digital layout of the cutter is designed according to the exact shape of a foot and the specific needs of users. Only one piece of leather is used, no adhesive substance is necessary, the integrity of the raw material is respected. This digital creation process offers such a level of precision that it could be used for manufacturing custom-made shoes, intended for great athletes. The Superstar Futurecraft Leather was produced in 45 pairs only.

COURTYARD C
TABLE 3

Adidas in collaboration with Alexander Taylor *Primeknit*, 2012

Inspired by the weaving process used for the *Slowchair* designed by the Bouroullec brothers and produced by Vitra, designer Alexander Taylor developed the *Primeknit* technology with Adidas. It is a digital control of 3D knitting, allowing to produce the upper of a shoe in one piece, whereas a sneaker normally requires the assembly of 15 to 20 elements.
This technique helps to adjust the necessary flexibility and support for each area of the upper, in order to offer the user a perfect fit, that follows the curves and movements of the foot, as well as maximum comfort and support.
A few months after the launch of *Primeknit*, Nike sued Adidas, claiming to have patented the same technology that they named *Flyknit*. Adidas stated that this weaving technique dated back to the 1940s and the court agreed with them. The two brands were authorized to sell their products made with the knit technique.
Released for the London Olympic Games in 2012, *Primeknit* has been used for different models since, such as running, football, tennis or basketball shoes.

COURTYARD C
TABLE 3

Jen Keane, *This is Grown*, 2018

Jen Keane graduated from Cornell University (New York), majoring in fiber science and clothing design, and got a master's degree in « Material Futures » from Central Saint Martins in London. She tends towards a closer dialogue between science, design and industry, in order to bring real changes to our production means. She uses the latest technologies to conceive a new generation of hybrid textile materials, offering an alternative to plastic. With her project *This is Grown*, she modifies the growth process of the bacteria k.rhaeticus to weave the upper of a shoe. The cellulose produced by these bacteria becomes a material that is both resistant and light, which offers a potential for designing textile objects. The upper is produced in one piece, no sewing necessary and no waste of material. With this project, Jen Keane won the Techstyle Award in 2018 and obtained a residency at Mills Fabrica in Hong-Kong.

COURTYARD C
TABLE 3

Julien Chaintreau, *Update Ltd*, 2017

Each year, thousands of sneakers are thrown away. They can be worn but cannot repaired. The overproduction issues and sneakers obsolescence led Julien Chaintreau to develop a sustainable project: a model with a modern look, equipped with the technology of sneakers combined with the durability of traditional leather shoes. The construction of these shoes, based on sewing, allies the advantages of craftsmanship with a new process, integrating 3D printing and innovative textiles. All this results in *Update Ltd*, sneakers whose wear is anticipated, and which can be therefore repaired by a shoemaker. This diploma project, presented at ECAL (Lausanne) in 2017, proposes a better control of the obsolescence of a product while allowing some crafts to resist to mass industrialization.

COURTYARD C
TABLE 4

Martin Sallières, *Shoe Lab*, 2017 - 2018

For his graduation project at the Design Academy of Eindhoven, Martin Sallières explores new manufacturing processes. Using a 3D pen, he creates shoes from one material only: polyurethane thread. Inspired by nature and its forms, the designer imagines a type of weaving close to the one created by spiders. The chemical properties of polyurethane give density, flexibility and thickness to the thread. The final shoes, flexible and light, are equipped with 3D printed soles, that mimic the weaving aesthetics.

COURTYARD C
TABLE 5

Christophe Guberan in collaboration with Carlo Clopath and Self-Assembly Lab (MIT, Boston) *Active Shoes*, 2015

The technique developed by Christophe Guberan uses FDM (Fused Deposition Modeling), a printing technology developed by the company Stratasys. A 3D printer lays a thin layer of thermoplastic on an elastic synthetic fabric. The thickness of the layer forms the desired shape. On the fabric, the model shapes itself after the passage of the printer. Therefore, the technique could be adapted to design tailor-made shoes. The active fabric can keep on with its transformation to fit the exact form of the foot. Not only does this process considerably reduce the production steps, but it allows to appreciate the textile properties such as translucency, lightness and flexibility. FDM offers the possibility to use different thermoplastics and therefore benefit from other properties.

COURTYARD C
TABLE 5

Zuzanna Gronowicz and Barbara Motylińska *Shoetopia*, 2017

After graduating from the Warsaw Academy of Fine Arts in industrial design, the two designers offer a sustainable production chain with a 3D printed sneaker model. They developed an application which makes possible to design a shoe according to anyone's size and taste. The personalized design is then turned into a digital file. Printing can be done at home with a 3D printer or the file can be sent to a printing center. The different parts of the shoe can be assembled by the user, without using glue. This process puts the customer in charge. The shoes are made from flexible and biodegradable materials, and from natural textiles, so they are easily recyclable.

TABLE 3

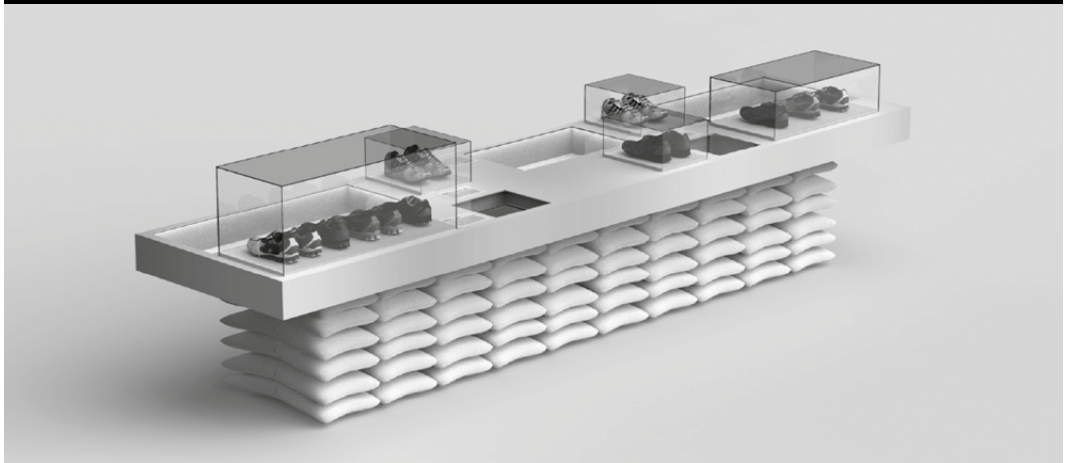
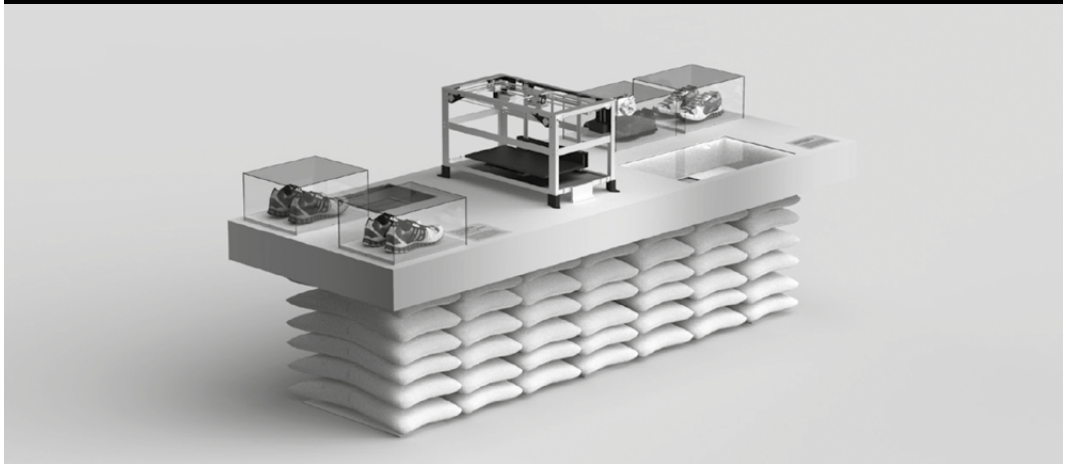


TABLE 4

TABLE 5



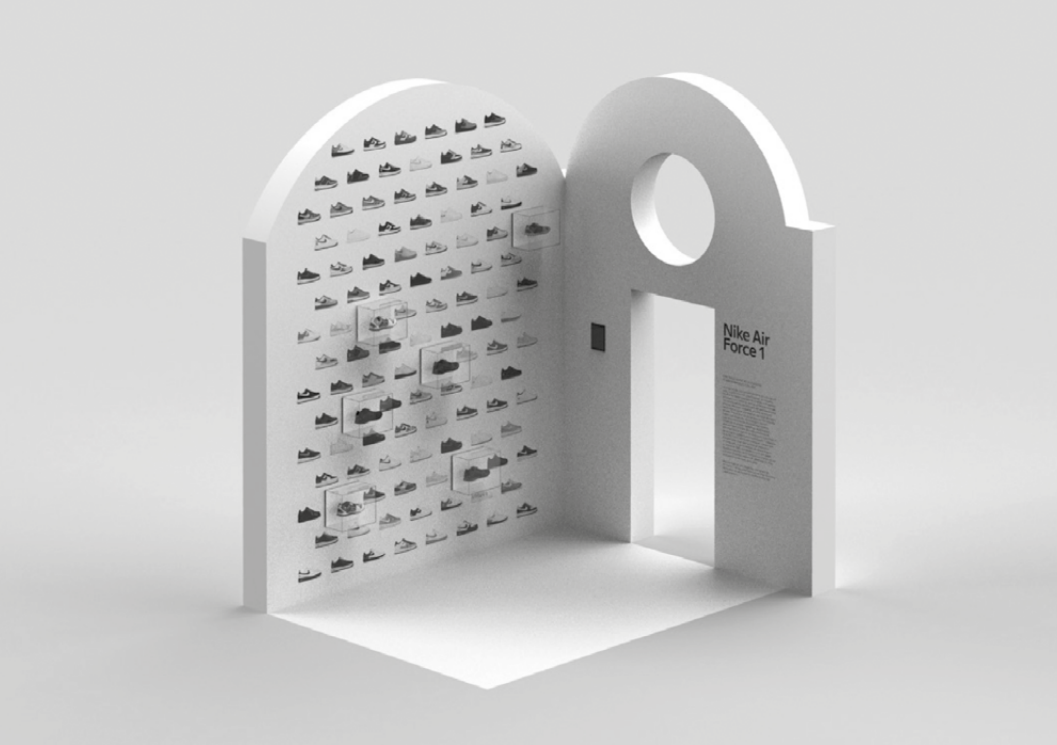
CELL 7

The irrational success of collabs. The Nike *Air Force 1*, the perfect white canvas

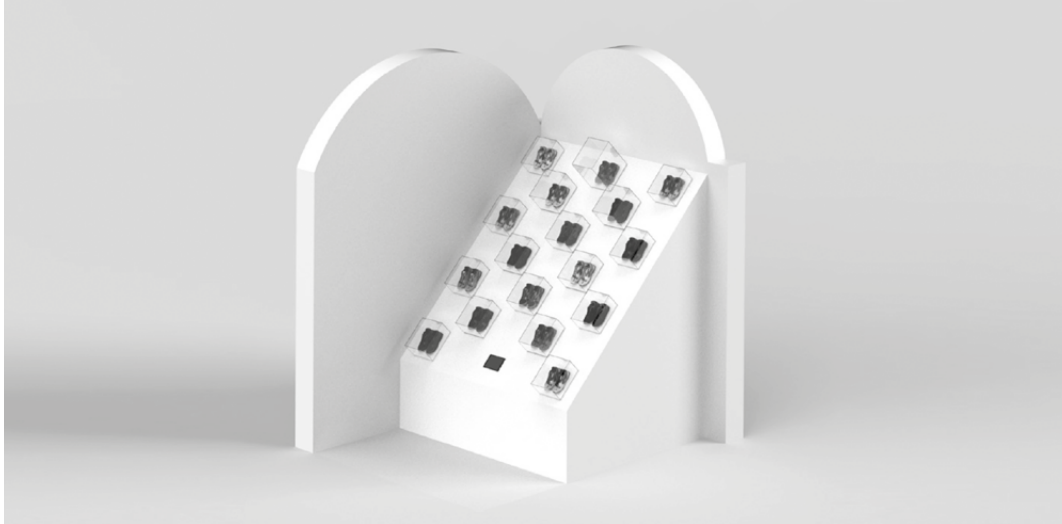
An embroidered logo, a two-colored sole or a canvas upper, that is all you need to consecrate a new model with the magical term « collab » and write the famous « x » between the brand and the associated entity. Collaborations between sportswear brands and other brands, stores, artists or even popular tv shows have exploded in the last twenty years. Not a day goes by without a new collaboration being announced, to the point it becomes almost impossible to assess their number. As subjects of sophisticated marketing strategies, they arouse the fever of collectors and fuel the resale market. But, are they real artistic collaborations? The example of the *Air Force 1s* is symptomatic. Initially designed in white with only a Swoosh and a gray strap, the pair imagined by Bruce Kilgore and released in 1982, has become one of the brand's favorite blank page, and has been produced in several thousands of different versions. They cover the walls of this room.

Many thanks to Thibaut de Longeville, director of *Air Force 1*: the documentary, which relates the incredible adventure of this model and illustrates all these collaborations.

CELL 7



CELL 8



CELL 8

As close as possible to the body

Sneakers have always been at the forefront of technical and digital innovations. Very flexible, this object from industrial design generates colossal investments, and has quickly integrated the multiple inventions which have marked the last decades. As the first computers hit the home, Adidas in 1984 and Puma in 1986 created connected models, generating data such as the number of kilometers covered, calories burnt and average speed. The support of the foot kept all the attention of the sportswear brands, which competed inventively to offer alternatives to lacing. With the playful *Pump* system, imagined by Reebok in 1989, a few pressures are necessary to inflate the air pockets located in the intermediate layers of the upper and to offer a support that can be personalized, according to your needs. In 2016, the famous *Air Mag*, worn by Marty McFly, with their futuristic auto-lacing system, was released: what was fiction in the sequel of *Back to the Future* (1987), became reality. Only a few pairs were produced, quickly followed by a model for the public, equipped with the *EARL* system (Electro Adaptive Reactive Lacing) developed by designer Tinker Hatfield.

CELL 8

Adidas_1, Adidas, 2005, Archives Adidas

This is the first model of sneakers equipped with microprocessor-controlled soles. The *adidas_1* was the result of four years of studied and was «the first sports shoe whose technical properties can be altered in real time". This was the German brand's third attempt to use electronics in its shoes. Here the system is designed to adjust the rigidity and flexibility of the shoe constantly throughout the race. A sensor and a magnet placed in the heel measure the compression of the sole 1000 times per second with an accuracy of 0.1 millimeter. The information gathered is then passed on to a microprocessor clocked at 8 MHz and housed under the arch of the foot. It is then exploited by software which decides whether the shoe is too flexible or too rigid. Orders are then sent to the shoe's «muscle»: a cable driven by a motor running at 6000 rpm. A screw extends or shortens this cable, changing the shoe's flexibility and the rigidity in order to obtain a perfect compromise given the runner's weight and speed and the hardness of the ground. There are two buttons and five leds on the sides of the shoe which also allow the runner to adjust the strength of the shock absorption according to his own preferences.

CELL 9

How to lace your sneakers?

CELL 9

CELL 10

A case study: the design of running shoes

The sport world is experiencing a golden age of innovation. It is about finding the right formula for each sport, the one that allows you to go faster, further and higher. Every brand develops their own running shoes, constantly offering new solutions for better comfort, cushioning, weight and propulsion. The runner is the main subject of these researches: manufacturers study the runner's stride (universal, pronator or supinator), morphology, and weight, to create the most suitable shoes.

Clear trends emerge from this race for innovation. From its inception, Nike stood out with the success of the *Oregon Waffle*, released in 1973, equipped with its famous sole, originally made in a waffle iron, hence its name. Adapting this technique to various models, Nike sold more than 270 million waffles shoes in ten years. At the end of the 1970s, New Balance was the very first brand to propose different shoe widths, to suit every type of body. In 1984, for the Los Angeles Olympic Games, Adidas innovated by developing the *LA Trainers*, whose cushioning was adjusted by a system integrated in the sole. Asics with the *GEL* technology, Reebok with *DMX* or Saucony with the *Grid* system, all brands compete with their technologies, promoted by sensational advertising campaigns.
While lightness has always been at the heart of technological research, the early 2000s were marked by the trend of « barefoot running », which promoted running without any cushioning. Following this trend, in 2002, Nike launched the *Free 3.0* and Vibram released the *Five Fingers* which fitted like a glove and allowed you to be in direct contact with the ground, to find a « natural » stride again. With new brands like ON popping up recently and the use of new technologies such as 3D printing, the running shoe is keeping up with its metamorphosis, breaking each year new records on the tarmac: *there is no finish line*.

CELL 10

ON, since 2010

The passion for running brought together Olivier Bernhard, biathlon double world champion, and his friends David Allemann and Caspar Coppetti. After many successes in the world of high-performance sport, Olivier Bernhard sought to conceive a running shoe that would bring him the perfect balance. He met a Swiss engineer pursuing the same goal and who already had some ideas for a new model of shoes that would change the feeling of running. Dozens of prototypes were developed but the base idea – a soft cushioning and a dynamic rebound – is the common thread of the concept.
In 2014, the brand introduced *Cloud*, the first model equipped with patented *Cloudtec* technology, designed to offer a soft landing and a dynamic rebound, while guaranteeing light weight. The outsole is made of hollow rubber pads, shaped like clouds (hence the name), strategically placed under the foot. This model won several excellence awards and the brand rapidly became successful in the sport world, thanks to the silver medal won by Nicola Spirig during the women's triathlon at the Rio Olympic Games in 2016. In 2018, Matt Hanson, sponsored by ON, broke Ironman's world record with a time of 7:39:25 at the North American Championships.
ON has extended their offer with shoes for other sports and several innovations: ultralight foam called «Zero-Gravity», very resistant «Rebound Rubber» which contributes to energy return, all-terrain «MissionGrip» sole designed for the trail...

CELL 10

New Balance, since 1906

« A different shoe for every runner »: here is the promise of New Balance, who distinguishes from its competitors by offering models which, by their shapes and colors, almost look alike. The numbering is there to guide the buyer. The first two figures refer to the overall performance level. The higher the number, the higher the quality, the technical level and the price. The last two numbers indicate the specific features of the shoe:

- 40 *Optimal control*: control, stability, cushioning and support adapted to pronation.
- 50 *Athletic running*: for road or indoor training.
- 60 *Stability*: stability to reduce pronation, while proving cushioning and comfort.
- 70 *Light Stability*: stability and speed, for fast runners.
- 80 *Neutral*: for long distances, light shoes with powerful cushioning.
- 90 *Speed*: light shoes for fast runners.
- 00 *Competition*: shoes offering performance and speed.

RUNNING TECHNOLOGY

New Balance
The *ENCAP* technology, since 1985
Patented by Kenneth W. Graham, Edward J. Norton and Shuhei Kurata

ENCAP technology is a cushioning system located at the rear of the foot, in the midsole. It is made of a resistant polyurethane structure, which follows the shape of the heel and includes, in its center, an EVA foam sole. The combination of these two elements ensures shock absorption and dispersion with each stride. This technology was introduced for the first time on the New Balance *1300*. Used for many models since, it is still used today.

RUNNING TECHNOLOGY

Asics
The *GEL* technology, 1986

The *GEL* technology consists of two silicone patches, inserted in the midsole, one located under the heel, the other under the forefoot. Their position, volume and density vary according to the technical nature of the model and the requirements of the sport. The silicone gel reduces the impact when the heel hits the ground and improves shock absorption during forward movements, allowing a smooth transition. Still used today by the Japanese brand, the *GEL* technology has been used for numerous models.

RUNNING TECHNOLOGY

Adidas
The *Equipment* (EQT) line, since 1991

Adidas asked Peter Moore and Rob Strasser, two former Nike employees, to create a new line of footwear, centered on the athlete and his needs, following Adi Dassler's legacy. They conceived a multisport model, whose design only includes the essential. It offers support for the foot with its three flexible bands on either side of the shoe and with the new *Torsion* system developed in 1988. In 1993, the brand released other versions of this model, including *EQT Guidance* and *EQT* Support, which met a great success. In 2004, Adidas decided to relaunch the *EQT* line and Nic Galway, who designed the *Yeezy Boost* and the *NMD*, presented a new range made for the city. The simplicity of the original model has been preserved in the latest versions, which have come one after another since 2012, equipped with Adidas cutting-edge technologies such as *Boost* and *Primeknit*.

RUNNING TECHNOLOGY

Adidas
The *Torsion* technology, 1988

A piece of flexible thermoplastic, placed in the sole, articulates the front and back of the shoe, to get the most natural move. The shoe adapts perfectly to different surfaces and is suitable for several sports: it supports the foot of the runners, provides lateral support to tennis players and offers an ideal stability to basketball players.

RUNNING TECHNOLOGY

Reebok
The *DMX* technology, since 1997
Patented by Paul E. Litchfield, Matthew J. Montross, Steven F. Smith, J. Spencer White, Alexander W. Jessiman

The *DMX* (Dynamic Motion X) technology consists of a sole made of several air capsules: five under the forefoot and five under the heel, all connected by a central pipe. When the runner is in action, air flows from front to back, depending on the pressure. Unlike Nike's Air system made of independent capsules, the *DMX* technology uses air circulation to provide better balance, stability, cushioning and energy return.

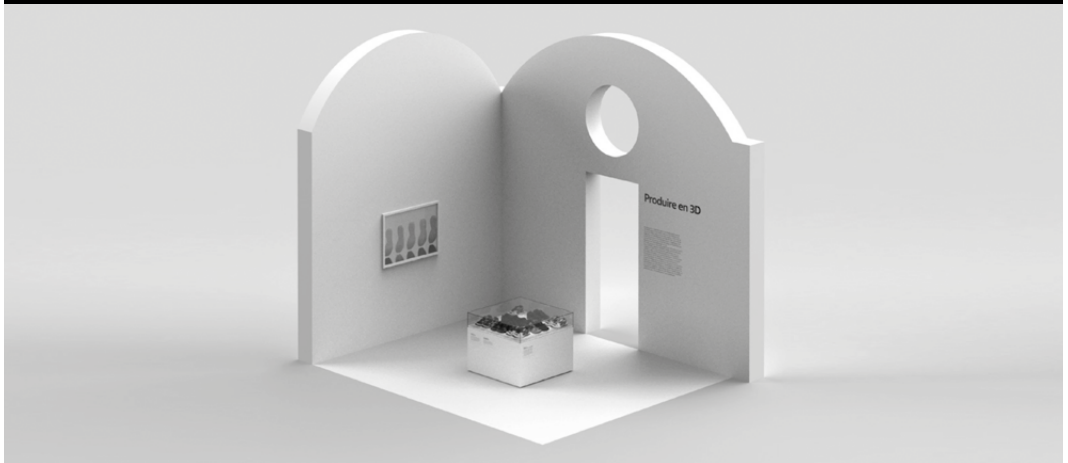
RUNNING TECHNOLOGY

ZoomX Vaporfly 4%, Nike, 2019

Worn by the greatest runners like Kenyan Eliud Kipchoge, the Nike *ZoomX Vapofly 4%* smashed all records, to the point it created a scandal: seventeen athletes filed a complaint to the IAAF about « technological doping », noting that the athletes who wore them ran 4 to 5% faster. The secret of the Nike *ZoomX Vaporfly 4%* is in its midsole, composed of a flexible and reactive foam called ZoomX, made of a material used in the aerospace field, and of a carbon fiber plate which is the matter of all the questionings. Taking the whole length of the shoe, it assures stability, according to Nike, and avoids « loss of energy when the tip of the shoe flexes ». The combination of the two materials provides optimal cushioning and powerful energy return.

CELL 10

CELL 11



CELL 11

Producing in 3D

The constant improvement of digital robotics and 3D printing techniques opens the way to a revolution in the manufacturing process of sneakers. Whereas making molded soles is expensive and requires several months of manufacturing, 3D printing simplifies the processes, reduces manufacturing time and stimulates experimentations.
In order to conceive specific tools and suitable materials, Reebok, Adidas and New Balance collaborate with companies specialized in chemistry or robotics, such as BASF, Formlabs or Carbon. The most efficient 3D printing machines still do not stand the comparison with assembly lines and cannot perform certain stages of production. These new machines however help to quickly respond to the requirements of top-level athletes, by conceiving custom shoes, adapted to their needs and morphology, and also encourage us to think about a new production chain, perhaps better for the environment.

CELL 11

New Balance in collaboration with Nervous System *Generate*, 2016

New Balances uses traditional materials for the upper, like mesh, but innovate by making the outsole using laser sintering. This requires a highly resistant thermoplastic elastomer called Dura Form TPU, which was developed by 3D Systems. The honeycomb structure of the sole brings comfort and support to the athlete. With data collected from runners and athletes, Nervous System and New Balance have been able to perfect a program allowing to generate different unique soles, adapted to every profile. The different soles here on display show the application of generative design to the sport shoe, allowed by this 3D printing technology.

CELL 11

New Balance in collaboration with Formlabs *TripleCell*, 2017

New Balance and Formlabs, leader in the development of 3D printing, have collaborated to develop a new 3D printing material, offering performances way superior than with traditional foams, called Rebound resin, a highly elastic photopolymer. Designed to create soles with a lattice structure that is both flexible and resistant, the Rebound resin has an energetic rebound. This resin is made from a digital model, then the object is printed by a stereolithography (SLA) process and fixed by photopolymerization to ensure high resistance.

CELL 11

Adidas in collaboration with Carbon *Futurecraft 4D*, 2018

After *Futurecraft 3D* (2015), developed in collaboration with Materialize, Adidas partnered with Carbon to design *Futurecraft 4D*. The sole has been produced using CLIP (Continuous Liquid Interface Production) technology, also called DLS (Digital Light Synthesis), a light-curing process developed by EiPi Systems in 2014, and then used by Carbon. UV images, generated by a digital light projector, are projected under a tank containing liquid resin. The light hardens the resin, one layer after another. An oxygen permeable membrane, about ten microns thick, placed at the bottom of the tank, prevents the resin from hardening and sticking to the window, in contact with the UV rays. In a few minutes, the object made is out of the tank, way faster than other processes of this type. The result is smooth and requires no further action, unlike other 3D printing modes. The sole is durable, flexible, resistant and has a dynamic cushioning.

CELL 11

Nike, *Flyprint*, 2018

The *Flyprint* technology allows to create a 3D printed textile upper. This new material is made out of a woven thin but resistant polyurethane mesh, the shoes are thus very light (only 169 grams). This material is flexible and offers less resistance to friction than a traditional fabric: the shoe is comfortable, breathable and waterproof. The model was designed based on data collected from athletes, the way they run and use their feet. Drawing its process from generative design, this technique allows to create a shoe perfectly adapted to the foot and the practice of the athlete. Developed in collaboration with the marathon runner Eliud Kipchoge, the Nike *Zoom VaporIfy Flyprint*, first shoe made with this technology, was produced in a very limited quantity.

CELL 11

Reebok in collaboration with BASF *Liquid Factory*, 2016

Developed in collaboration with BASF, the *Liquid Factory* technique allows Reebok to imagine news links between the different parts of a shoe, lessen its weight, improve its comfort, support and cushioning. Following a digital drawing, a robotic arm equipped with a printing head developed with German company Rampf, overlays polyurethane-based materials on a plaque. Kept at a rather high temperature, the material hardens once laid. The technology was used for the first time for the *Liquid Speed* model, forming a kind of web around the shoe (both the upper and the midsole). The laces and the sole make one and improve the sensations during the race. Three years after its release, the technique is adapted for the use of a new material: gas bubbles form in the liquid when it is laid and transform it into foam, which gives lightness and a powerful cushioning to the sole. Equipped with a sole made of small cushions produced with this technique, the *Liquid Zig* is expected to be released next year.

COURTYARD D

COURTYARD D

Ethical and ecological choices

The scandals of the 1990s unveil the many disasters of an industry considered as one of the most polluting in the world. Big brands are forced to act and invest into research. New production modes are conceived to better respect the environment. Large sums are invested to reduce the carbon footprint, but there is still a long way to go.
What is an eco-friendly sneaker? One that's made with recycled plastic or locally produced? Sustainable, environmentally responsible, ethical, zero-waste, vegan, all of the above? Different brands have different answers, but they all share the same goal: to take advantage of the collective fervor surrounding sneakers while striving to minimize their ecological impact. At the risk of creating a few paradoxes…

Many thanks to Annabelle Laurent, author of «Can sneakers be truly eco-friendly?», an article to read in the exhibition catalogue.

COURTYARD D

Ecoalf

Founded in 2009, the Spanish brand with the slogan "Because there is no planet B" developed a system for producing shoes and clothing from recycled materials, including marine debris obtained in cooperation with the fishing industry. Ecoalf works with more thousands of volunteer fishermen in Spain and Thailand. More than a ton of waste is recovered from the oceans every day, 10% of which is recycled. Plastic bottles and fishing nets are shredded into fine flakes that are converted into fibers. Much of Ecoalf's downstream production is carried out in China. The company has been certified by a number of nonprofit associations, including B Lab, whose "B Corp" label is granted to businesses with the "highest standards of verified social and environmental performance."

COURTYARD D

Faguo

Launched in 2008, the French brand Faguo produces 65% of its sneakers from recycled materials. To compensate for the high carbon footprint of its production in China (Faguo is a transliteration of the Chinese word for "France") and Vietnam, Faguo plants a tree for every pair of sneakers sold. This initiative has resulted in the planting of more than 1.5 million trees in some 270 forests in France.

COURTYARD D

Jules Mas, *All PET Shoe*, 2017

While most of football shoes are made out of plastic, leather, resin and glue, All Pet Shoe is composed of different types of PET that can be recycled following the same process as plastic bottles.

COURTYARD D

Adidas x Parley for the Oceans

Adidas has collaborated with Parley for the Oceans since 2015. The environmental non-profit organization calls to stop the use of plastic which pollutes the oceans: the equivalent of a truck of plastic is thrown in the water every minute, with devastating effects on the biodiversity and the marine wildlife. With Adidas they developed a recycled material from plastic trash and illegal fishing nets. The first model of sneaker designed with the collaboration of Alexander Taylor was shown at the United Nations in New York in 2015 and released the following year. Since then, almost 3000 tons of plastic trash have been recycled and transformed, allowing the production of several millions of pairs of sneakers.

COURTYARD D

Igwe

Launched in 2018, Igwe combines a high-end craft production with strong ecological and ethical values. The French brand produces small series in sustainable materials from Spain and Italy, assembled by hand in a family workshop in Portugal. Igwe collaborates with PimPamPost, a company which uses free spaces in public transports, reducing their carbon emission up to 90%.

COURTYARD D

Adidas *Futurecraft Loop*, 2021

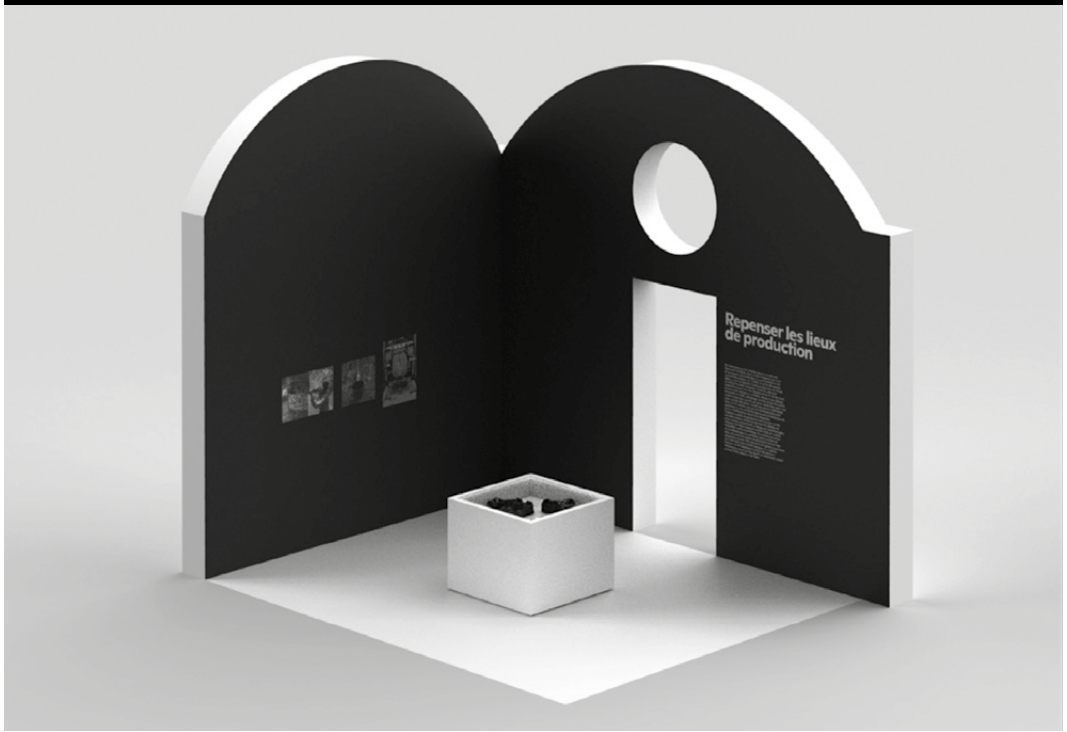
Adidas announced for 2021 the launch of the first 100% recyclable shoe, fully made of TPU. Once worn, the shoe is sent back by the user, then grinded and recreated. The new shoe will eliminate the use of virgin plastic and will be indefinitely recyclable (hence its name, Loop).

COURTYARD D

Natural and biobased materials

The French brand VEJA has developed several biobased materials. The C.W.L (Corn Worked as Leather, for example, is a cotton fabric coated with PU and resin from the corn waste industry, a vegan alternative to leather. The *Condor* combines innovative materials such as Alveomesh made from recycled plastic bottles with biobased materials like Amazonian rubber, banana oil, rice waste and castor oil. The organic cotton used by the brand is produced by farmers associations in Brazil and Peru in respect to the environment and acquired following the principles of fair trade.

CELLULE 12



CELL 12

Rethinking the production chain

Six pairs of shoes sold worldwide out of ten are made in China. With its low-cost workforce and its production means, the superpower country was nicknamed « workshop of the world » from the 1980s, when big western firms chose to relocate their industries. Today however, the country experiences relocations and the subcontractors of the sneaker brands, turning into multinationals, are moving to Southeast Asia, where the average workers' wages are lower. The major brands also rely on numerous suppliers in South America, particularly in Brazil and Argentina.
Other production models have emerged over the past ten years, as shown by the creation of automated micro-factories, like Adidas Speedfactories. Some brands, like VEJA, have managed to gather raw materials, suppliers and assembly factories in a reduced area in Brasil and thus conceive a production chain that limits their carbon footprint. Nearly 30 years after the closure of the last French Adidas factory, the « made in France » label is back (in the game), thanks to historic brands like Le Coq Sportif, or newly born like Ector in Romans-sur-Isère.

CELL 12

New Balance, a unique example

New Balance is one of the rare major sportswear brands that have kept its shoes assembly factories in the West, five in the United States (in Maine and Massachusetts) and one in England (in Flimby, in the north of the country). There, the American brand produces dozens of models, labeled with the mention « Made in UK » or « Made in USA », guaranteeing that 70% of the components used come from these countries. However, New Balance still relies on many subcontractors, especially in China, Indonesia and Vietnam.

CELL 12

Adidas Speedfactory

In 2017, Adidas opened two small automated factories, production and research sites, one situated near the brand's headquarters in Bavaria and the second one in Atlanta in the United States. These Speedfactories were to supply 500,000 pairs a year (the total annual production of Adidas represents 410 million pairs) and were supposed to quickly produce small series, according to demand: this constitutes a real alternative to classic production chain, which spread over several months and relies on the help of many subcontractors. However, in November 2019, the brand announced the closure of these factories and sent the high-tech machines to its subcontractors in Asia.

CELL 12

VEJA
A production chain in Brasil

Veja (« look » in Portuguese) was created in 2004 by François-Ghislain Morillion and Sébastien Kopp. The fair-trade model defended by the brand Alter Eco catches the attention of the future partners, who intended to contribute to a fairer economy and to encourage a production more respectful to people and the environment. They chose to locate their production chain in Brazil in order to gather all the elements necessary to shoe manufacturing in a limited area. They ensure that all their partner companies guarantee workers' rights, in accordance with ILO regulations. Cotton is grown in the Brazilian Northeast and natural rubber comes from the Amazon rainforest. The professional integration association, ASF, receives the shoes in France, organizes storage, prepares orders and ships to stores. The company remains fully transparent on every step of its production, the nature and the provenance of the material that are used.

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Etablissement Public d'Aménagement Bordeaux-Euratlantique
Hôtel Cardinal
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Les Amis et le Cercle du madd-bordeaux
Château Nairac
Farrow & Ball
Les Crus Bourgeois du Médoc
La société de négoce DIVA
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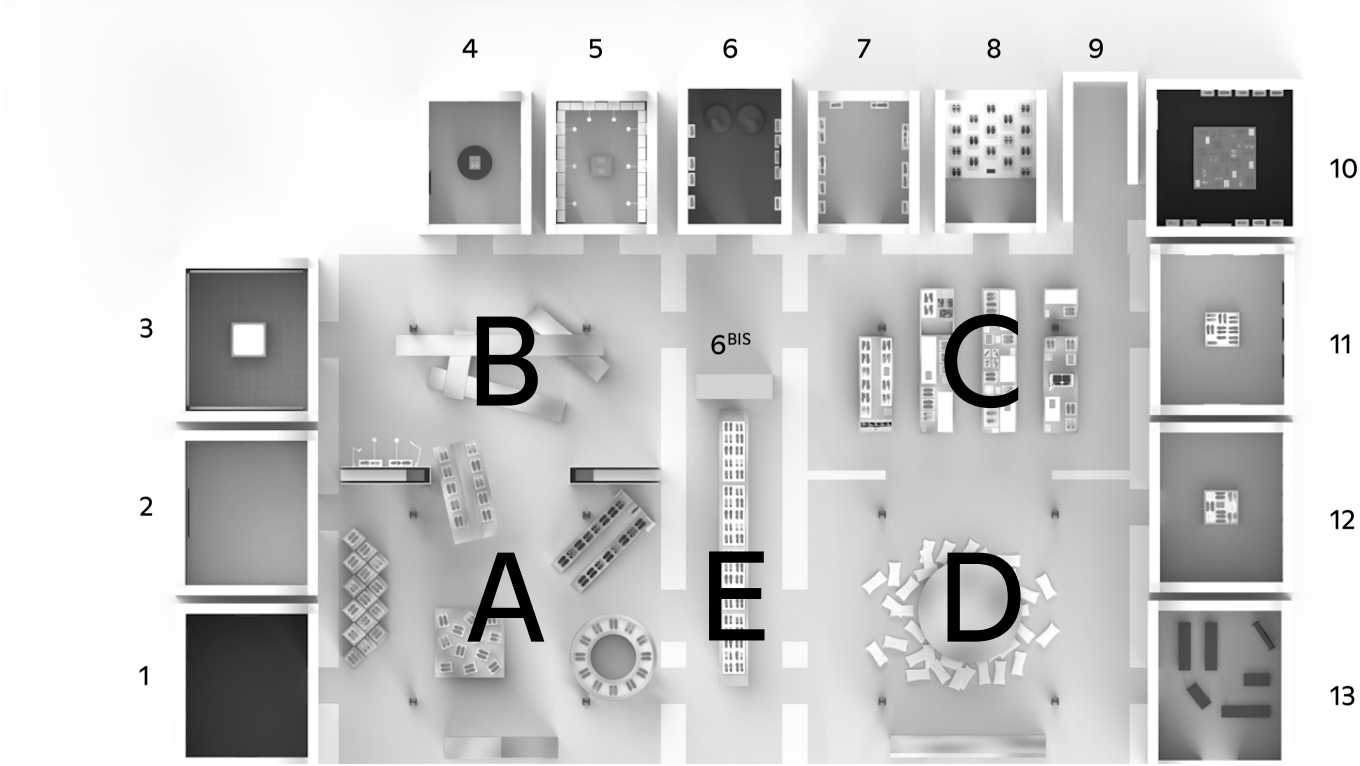
PLAN OF THE EXHIBITION



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