

# The value of design in a play-led company, or, exploration of strategy at The LEGO Group



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## A. Introduction

### Our argument

The LEGO Company represents a unique instance of a design company discovering, while at the same time realizing, the impact of its initial product design. In other words, we show that the platform-like qualities of the brick were initially conceived by an approach of *play-by-design* and that vice-versa the company now realizes with the brick the strategy of *design-by-play*.

### Our approach

In the research process, we look at how LEGO has built its strategy over the years, how the key, oftentimes pivotal, moments influenced the direction of the company's development and in which direction the company will move in the coming years. In this foreseeable strategy, we focussed primarily on what a strategy for digital space could look like. The overarching exploration of our research is in the question - *how does LEGO use design in its ecosystem and what is the value in that?*

We understand the course assignment as an opportunity to learn from LEGO's history and its approach. The exploration of the brand's strategy gives us tools and knowledge to reflect upon our design and entrepreneurial practices. To understand that and extract the information needed for future approach building, we looked at the challenges that the company is currently facing (mainly within the design strategy) and analyzed existing products and their strategy.

## B. Company Overview

### What is LEGO?

LEGO (part of The Lego Group) is a toy brand based on plastic modular interlocking bricks that allow the user to build in an infinite number of ways. The LEGO brand, however, grows beyond the realm of toys (while still adhering to the principles of play-by-design). The company's portfolio includes physical products, digital platforms, and **hybrid solutions**<sup>1</sup>. Parallel to the company itself, the LEGO Foundation acts as a non-profit space using its comprehensive know-how focusing on promoting learning by doing, access to education and play, and equality in the play altogether.

### What's LEGO's mission statement?

LEGO is known for creating the System-in-Play (an approach assuming that bricks bought years ago will fit perfectly with bricks bought nowadays and in the future, meaning that the LEGO module not only has instant value but will keep it over time) which led the whole company to be oriented around play by design. At its core, LEGO represents the belief that

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<sup>1</sup> More about this in the chapter on the company's ecosystem (page 4)

children can be learned from - and at the same time, it assumes that children are role models for the company (which is evident, for example, in their research process leading to understanding a child, its way of thinking, playing, learning, as the main user).

***To inspire and develop the builders of tomorrow***

is the mission of LEGO, which is supported by the values declared by the company - imagination, creativity, fun, caring, learning and quality. These features are visible in the products created by the brand through their entire range of ventures, partnerships, commercial collaborations and non-profit activities, creating trust not only in the product but in the company as a leading expert in the industry and beyond. And what they promise, they deliver, through generations of toys.

PLAY PROMISE	PEOPLE PROMISE	PARTNER PROMISE	PLANET PROMISE
joy of building pride of creation	succeed together	mutual value creation	positive impact

## C. LEGO's Historical Strategy Development

Our analysis of LEGO as a design-driven company consists of three historical phases. Each of these phases illustrates multiple lessons for the LEGO company developing towards a design-driven company.

The initial phase (1959 to 2003) dubbed "Initial Brick Success" is characterized by the organic growth of the company from the inception of the brick until near bankruptcy in the early two-thousands. The second phase (2003 to 2016) dubbed "Recentering the LEGO Brick" is characterized by how the company moves from near bankruptcy by recentering its core focus until stagnating growth in sales around 2016. The third phase (2016 until present) dubbed "The Digital Brick" is characterized by LEGO's renewed digital strategy.

### Initial Brick Success

A small carpenter shop in Denmark (1932) was designed in the midst of the "Great Depression" to recenter its focus on producing high-quality children's toys. As numerous fires hampered the production of these wooden toys, Ole Kirk Kristiansen decided to buy a plastic injection molding machine for a newer line of products (1946). Three years later, Kristiansen presented his ideas for a plastic building brick with an idea that "*the more bricks you have, the more you can build*". The bricks are commercially successful. Kristiansen's sons developed them further and patented 1959 the "stud-and-tube coupling system", the LEGO brick as we know it today.



And today, there are an estimated 600 billion bricks produced to date: that's 81 bricks for every person alive today (Matson & Cordon 2022). This figure is testimony to the hugely successful design of the brick, which seems dependent on three key features.

1. **The obvious modularity** - refers to the obvious way how the LEGO brick is able to be assembled into unique configurations. There are 915,103,765 ways to assemble six 2x4 LEGO bricks together. This modularity was anticipated by Christiansen and was the genesis of the play system idea (Matson & Cordon 2022).
2. **The non-obvious modularity** - refers to the non-anticipated ways by the company in which the LEGO brick is able to be put together. How a LEGO ice-cream cone for Minifigures came to be used as small smoke clouds by the community.
3. **The consistency** - refers to how the standardized LEGO unit has made all LEGO bricks and products since 1959 compatible with each other. By keeping this consistent unit, the two first features above are realized, while similarly keeping the value of the design high. LEGO products rarely show up in thrift stores, as their compatibility is and will remain.

A decade later (1967/68) LEGO reaches 19 million sales yearly worldwide, with the company subsequently expanding and diversifying its portfolio into theme parks and infant toys. Under the direction of Kjeld Kristiansen, the company doubled in size every five years, reaching the status of a top 10 toy manufacturer in the early nineties (Andersen & Ross, 2016). This global push of LEGO products stalled, however, around 1993 with sales slumping for the first time. This phenomenon was accredited to two major challenges:

1. **Strong Signal:** *Expansion into new markets had run out and*
2. **Strong Signal:** *The toy industry had changed shape, with products being more and more digitally focused or made popular by licensing of TV content*

During this time, LEGO had been on a spree of product expansion and had made risky investments into portfolio diversifications. Several of those proved to be extremely successful at that time, but more so for the future (e.g. a partnership with MIT in the form of MINDSTORMS, LEGO Harry Potter and LucasFilm's LEGO Star Wars).

## Recentring the LEGO Brick

Their response to the slumping sales was committing more intensely to the same strategy: introducing new product lines (Andersen & Ross, 2016). During this time new designers from top universities were brought with little to no connection or background with LEGO. Reorganizing the design teams and product expansions resulted in further net losses for LEGO. Products contained more LEGO bricks than ever, the company was unaware of production and development costs for these newer bricks and the big bets had put LEGO on very low cash (2003).



The head of strategic development, Jørgen Vig Knudstorp, was called in to analyze the situation. He dissected the inefficiencies of LEGO's business model, highlighting the inefficiencies of working together with more than 11.000 manufacturers, having several LEGO sets with more than 13.000 pieces as well as the costs of constantly developing new molds for those pieces. Next to this Knudstorp highlighted losing sales on theme parks and stores (Robertson & Breen, 2013).

As a response, he cut the number of pieces in LEGO sets to half, reorganized the supply chain into three core sites and set up a standardized scheme for colors and bricks. He sold several businesses, including theme parks and stores. By recentering the core business to selling bricks, LEGO gradually built back towards becoming profitable again in 2008.

From this renewed focus on selling the brick, Knudstorp provided a next step for the shared vision of the LEGO company - "*inspiring and building the next generation of builders*" by taking (and being inspired) by their own consumer base in the process of designing LEGO's. With the release of their crowdsourced Ideas platform, as well as realizing numerous partnerships with cultural productions like Star Wars and Harry Potter, LEGO has steadily grown until 2016.

## A design strategy for resilience

Taking these two historical phases together, one can see that the company's many failings provided a similar playing ground for providing many teachings - teachings that Knudstorp around 2003 synthesized into a design strategy for resilience. Core to this was the realization that a stable core grounds and makes resources for innovation affordable. Next to this:

- **Profitable strategy:** In order to move beyond the slumping sales during the expansion phase of the early nineties, an even riskier bet was made by intensifying the global push (but without the significant infrastructure to back this move). Knudstorp applied this lesson in his strategy after 2003 and built for the succeeding years a strong supply chain and distribution model that brought in a steady supply of cash from selling bricks. This allowed for freedom of movement to innovate and invest in licensing, partnership and technology.

- **Licensing and Partnerships:** Although costly, and with great risk implemented during those frantic years of expansion in the nineties, it was the LEGO Star Wars themes and LEGO Bionicle themes that were the best-selling and that helped the company remain afloat (Robertson & Breen, 2013). With a solid and proper foundation to afford innovation and partnerships in place (e.g. supply chain), LEGO had

### Challenges as a result of the business strategy until 2004

Too many product lines to manage, with too many bricks, and no understanding of the costs of manufacturing, supply chain and distribution.

Newly appointed designers with no familiarity with the LEGO brand. Limited collaboration between departments (sales, marketing, design, production)

Licensing and partnerships that bring in a lot of cultural capital. Are expensive and resource intensive in nature, require close collaboration.

### Knudstorp's formulated design strategy from 2004 onwards

Efficient supply chain and distribution

Advanced internal collaboration between departments

Capital to innovate

opportunities abound to lend its brick platform for other cultural collaborations.

- **Internal collaboration:** The expansion phase demanded for many new product lines and products. New designers were recruited that were unfamiliar with the LEGO brand. Limited collaboration between new departments, as well as inexperienced designers, led to products that didn't fit the brick platform like it used to and to bricks in abundance. New bricks and pieces were manufactured with little to no knowledge of their production costs. Knudstorp created an effective enterprise platform to promote internal collaboration between all departments.

## D. Challenges ahead: a new strategy

### The Digital Brick

It is difficult to define LEGO's relationship with the difficult sphere. Whereas the company had quite late adopted a strategy for e-commerce (e.g. LEGO.com launched in 1996), at other points in its history it was 'digitally' visionary (e.g. the LEGO MINDSTORMS collaboration with MIT). What is, however, clear is that LEGO initially understood electronic games and tools to challenge its market position in the field of 'play'. Especially after the Playstation and Xbox emerged in the early nineties and two-thousands, LEGO sought active partnerships to develop games of their own (Kapustina et al, 2021).

Since the early nineties (during the time of near bankruptcy) LEGO has launched numerous 'digital products' such as video games, e-commerce sites, crowdsourcing platforms, and products that merge physical play and the digital media. An example that comes to mind is "Life of George". In 2011, LEGO launched its first game in this physical/digital space: the game allows users to construct physical LEGO designs, which are then scanned into the game. These digital products are components - they are part of the experience of the LEGO brick rather than full-fledged experiences of their own (Kapustina et al, 2021).

This is an important point to note since the management of the company has often expressed regret about not being able to recreate the LEGO brick digitally, i.e. a regret of not being able to replicate the platform-like qualities of the brick digitally (Andersen & Ross, 2016). It seems that, however, this might still be a road that the company will pursue within their 10 year vision.

"The entire Lego ecosystem is actually, I think, only at the beginning. So, it's less about just creating an e-commerce store or an online store. It is really about this entire digital ecosystem and creating that future. And that's a long-term journey, that's a 10-year journey... And we're just a couple of years into this" (CNBC, 2020)

## E. Emerging challenges

We have looked at multiple assets of the company's historical trajectory and identified several challenges for the future of the business that its strategy will need to address. Of these different challenges, there is one category that we find especially pertinent to be addressed in LEGO's design strategy - *LEGO's digital strategy*. This section will be elaborated upon - we analyze the challenge and synthesize some suggestions that LEGO can use to formulate its design strategy.

### E1. Environmental impact and Sustainability

LEGO uses a lot of different oil-based plastics, with some current attempts to use recycled plastic substrate. Organic-based plastics have until now proved to be unsuccessful, as they do not produce the quality bricks that the company is renowned for. We are curious how the company can realize sustainable growth and whether it would survive in the face of sustainable scrutiny?

### E2. Social impact and Responsibility

B. How would LEGO go about addressing current weak signals (i.e. gender bias, attention protection, emerging jobs)?

C. Who can LEGO partner up with to realize an even more powerful impact (on kids / on environment / on multigenerational play)? Are there other partners that invest as much into Play Foundations as the LEGO company does?



### E3. Digital Transformation

D. How can the LEGO company stay relevant in the face of emerging digital evolution? Does it need to replicate its platform-like qualities that the brick system has in their digital play?

E. How can LEGO still keep sight of its core values in the digital era? An example here that comes to mind is how LEGO would still uphold its child-friendly image in a digital sphere (that is often uncensored).

F. How would LEGO address the challenge of 'emotional play' in the digital realm? Is emotional play achieved through cooperative play? Is the digital sphere of LEGO not too solitary focussed?

G. Can LEGO, as a money-making space, address digital poverty? If so, why would they do that? Is it a "job" for LEGO or rather a non-profit wing of it?



## E4. Digital Design Strategy

H. Can LEGO address the digital market without having a strong digital product? LEGO has some experience with building games, online platforms, but a large part of this has been through collaboration with different digital design studios (e.g. game studios). In order to achieve more standing in the digital realm, should LEGO realize a greater "in-house" digital play team?

I. Does LEGO have a chance of surviving, without having a strongly pronounced online design strategy? Does LEGO require a separate design strategy for the digital sphere apart from its physical products? Is there a way for LEGO to create regional partnerships in order to address the online strategy in smaller, more focused bits?

J. How can LEGO utilize the successes it has had with the open-source and community-led designing of physical products for its digital portfolio? How can LEGO involve the community and strong fan base in the decision making process / innovation process?

## F. Synthesis: recommendations for a design strategy

From the different challenges above, we believe that one is overreaching and becoming more pertinent with the passage of time:

*D. How can the LEGO company stay relevant in the face of emerging digital evolution?*

This challenge poses the question how the LEGO company, a physical play based company, will position itself in the digital space. And this is important, since it provides for environmental advantages (e.g. less bricks needed through digital play), a potential way to source crowd-led innovation (e.g. a digital infrastructure where customers can perhaps create resellable content), but also push LEGO to think about values. How does the company bring about its child-friendly brand, valued quality and a substrate for imagination if it has to be in often constrained (and uncensored) digital platforms and media.



This latter point is not necessarily true. During the past ten years, LEGO *has* created innovative and child-friendly games and sets for young and old, that remain true to the original values of the company: innovation, quality, with a focus on imaginative play. It has done so by [1] strategic partnerships with smaller external digital design and game studios, like TT Games, but also by [2] pooling the community-led set innovation in their own crowd-source platform, Lego Ideas. An example of a successful LEGO crowdsourcing product is LEGO Minecraft, which received 10,000 votes within 2 days of its release (Kapustina et al., 2021).

The question at large, however, remains what the weight of LEGO's digital products is to the platform. LEGO Ideas, on its own, has become extremely important in the generation of new sets and themes, currently entering under the name LEGO Adults in the top ten themes sold. Yet it seems that the company's games have a different value for the brand. The LEGO Games, like the Skywalker Saga or Marvel Super Heroes, are licensed partnerships and usually extensions of existing sets. They do not contain the same 'replay'-factor or imaginative substrate that regular lego bricks have.

As mentioned previously, creating digital products that do have these components is still an ambition of LEGO (although perhaps in a little bit of a reduced manner). This is also evident from the fact that LEGO is currently in the works of creating a Metaverse, a digital space as an omnichannel customer experience, for these digital games, products and experiences to exist in. Perhaps in this way the company attempts to replicate the platform-like qualities that the brick has. In light of this, we have formulated several recommendations for the company's design strategy.

## G. List of recommendations for LEGO's Design Strategy

### Never Lose The Physical Core

The overarching principle in the proposed design strategy for LEGO is to not lose the core of the brand - a building block, a tangible token of a play - but rather, enhance the digitality chapter that already has become an integrated part of most of the childhoods.



### Digital Design Teams

LEGO Group's Digital Play Discovery Team is an existing team of innovators spanning across disciplines but with one goal of designing for the future of play, aiming at transforming the play industry. Digital Play Discovery Team is part of LEGO's Creative Play Lab, a start-up-like team working and collaborating toward the *futures* of play. (LEGO, 2022)

Digital play is a fundamental but relatively new cornerstone happening within the world of bricks. It is already known that LEGO is embracing the direction of digital-enabled futures. We believe the main focus should be not on the technologies (i.e. digital manufacturing) and services, but of course the play and products themselves.

The core of digital transformation at the moment is happening in the Chinese studios amongst engineers. We advise designers and researchers to be part of transformation, as collaboration and interdisciplinarity is a key to creating emerging digital play.

## Small Collaborations, Big Impacts

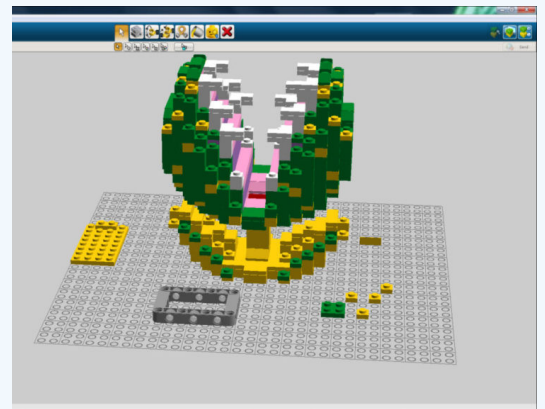
A successful brand partnership can, most importantly, reach diverse new audiences. In its history, LEGO has proven the power of small steps and the future digital design strategy should follow that. By creating smaller-scale collaborations with local digital artists, developers, game studios, VR-ists and others engaged in the creation of the digital world, LEGO has a chance to impact bigger challenges. That solution allows the brand - or rather, digital design teams - to test the implementations, approaches and such.

Ideas can be tested in forms of workshops (think, certain universities with design students or children-focused communities). That allows the designers and researchers to test the boundaries of physical and digital tools even faster than implementing a collaboration would while still reaching out to new audiences.

## Generating Own Ideas

A strong element of the company's digital future will be the creation of a series (mechanics, methodology, Universum) that is not an adaptation or transformation of already existing mechanisms and gamification of known and liked hits. Upon our research, we believe that LEGO and the design team should propose plays and games that exist in digital reality, but do not duplicate existing solutions or themes (e.g. using specific movies).

This is not to say that LEGO should give up all the licensing of known and beloved characters, but rather, have a parallel, equally strong line of digital toys coming from the inside of the group. That type of hybrid approach, combining already strong assets and resources, can help generate the interest and emotional engagement that is easy to lose while designing the digital and that is already a very strong parameter for the LEGO toys and services.



## H. Redefine digital play - small scale intervention to address big scale challenges

From the above recommendations one important thing follows - *LEGO must find a way to define - in its own way - what digital play is and how users can experience it*, which is a key task for the next months and years.

Today's children grow up in a new socio-cultural (and not only) context. Part of this new context is rapidly changing technology, and in some ways it may seem obvious that LEGO, as a company that understands the process of play (and learning by play) very well, will not remain indifferent to the development of the digital playground.

As we mentioned above, the start-up-like atmosphere of design teams working at LEGO supports the process of rapid testing of prototypes, crash tests of ideas, and it should be no different in solutions for experiencing digital fun.

How can LEGO test the limits of play and collect feedback from users (even if not the target audience)? We talk about two methods - through "small" collaborations and student workshops.

These two methods bring similar benefits, except that collaborations can be media-driven, test the market and explore reactions, and workshops (e.g. in the form of several-day meetings or multi-week residencies) create an intimate atmosphere and can reverse the roles - it is students who become innovators with LEGO designers (or other workers) as mentors (in a similar way that today fans can submit sets of bricks that can be produced).

## Digital Residency

One of the formats we propose is a hybrid form of residence.

### Format

A several-week residence for multidisciplinary design students who, in their research and design subassemblies, respond to digital play issues (and those challenges that the LEGO digital design team can face). The suggested thematic columns concern, for example, forms of digital play, security, emerging technologies, robotics, new media, multiverse (if not more specified and precise ones). Thematic layers are additionally supported by mentors.

### Mentors


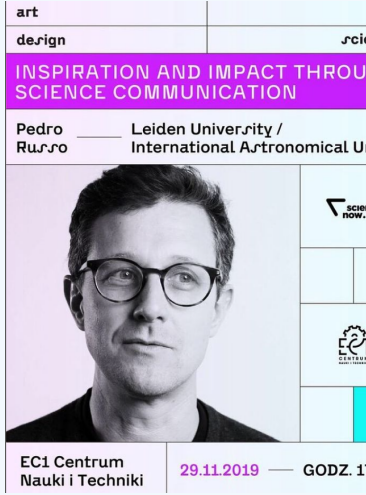

Although the facilitator of the workshops is LEGO (digital design team), the participants and experts are supported by invited guests who act as mentors for individual groups. The inclusion of experts in the student design process is a nod to the collaborative / partnerships format.

### Why?

This format draws on the history of LEGO and already tested formats, introducing a hybrid in the form of a win-win. Students participating in the workshops, in addition to the experience gained, have the opportunity to work on real issues. They also get a chance to implement the proposed solution. In turn, LEGO gains space for exploring and researching innovation, which is also becoming a community-driven approach.



## Inspiration for the Digital Residency

		
<p><i><b>Fabrica</b> is the Benetton Research and Development Communication Center. Led by an international team, Fabrica is an applied creativity laboratory, a talent incubator, a studio of sorts in which young, modern artists come from all over the world to develop innovative projects and explore new directions in myriad avenues of communication, from design, music and film to photography, publishing and the Internet</i></p>	<p><i>ART+DESIGN+SCIENCE program's goal is to break down barriers in thinking about collaboration and creativity, experience that one might not experience in a traditional, educational setting. Young creators explore questions and issues addressing socially important issues. Supported by local mentors and input from renown guest experts, creators have the freedom and space to develop original concepts and persuasive case studies</i></p>	<p><i>Domaine de Boisbuchet is an "architectural park" that has been hosting design-themed workshops for the past 25 years. Founded by Alexander von Vegesack, the program has always focused on the creative process, rather than finished products. Each summer, renowned designers, architects and artists flock to Boisbuchet to lead short, experimental workshops on the grounds and centered around the year's loosely defined, overarching theme</i></p>

## I. Personal Reflection

As mentioned earlier, LEGO is an example of a company led by design as an overarching mindset - design is used in product planning and used as a business tool. As a result, LEGO is more than a company, it is a playful staple product, it is a brand, it is a value. Their movements have repeatedly redefined the standards of not only industry but also thinking about research-led design, the strategy of a brand and the experience the users get to have. The monetary or tangible impact of incorporating design into the entire ecosystem of the company is clear (and well tested). But what is its value?

In the example of the above analysis, we have extracted the statements that represent the values of inclusion of design thinking within the company space.

### More than a brick

LEGO's flagship product is the brick, but what sells is the value and experience the users ultimately get. Including the practice of design beyond objects makes it possible to provide solutions that break down the division between physical and digital, creating a complex (yet

simple) hybrid experience. Moreover, LEGO goes further than that, a brick is not just a brick - it's a development and hands-on learning opportunity in a teacherless environment - it's a solution to multi-layered issues, addressed one brick at a time.

### **More than market research**

We argue that there is no design without research. At many points in its history, LEGO has used research processes to better its outcome (or sometimes even get out of a rut). Observation and understanding not only of the market, but above all, of the users, their needs, ways of interaction, and in particular - way of playing, translates into a well-designed experience of the product. It's an iterated loop of observing, learning, understanding and implementing.

### **Possibility of creative iterations**

It's not just research that exists as an ever-continuous iteration. The same can be said about creative practices. Product ideas can be easily tested, without risking the whole company's heritage. Design, if understood holistically (and not as a stage), affects the entire life of a product. Thinking of design as a broader process rather than a phase creates a continuing process that, like research, is based on observing, testing, and understanding users. That, in effect, allows for those involved to turn ideas into actions and learn from the outcomes rather than see it as a binary win-or-fail situation.

### **Creating ecosystem**

LEGO, with all its ups and downs, was able to create a universal language of play - through their expertise, experience, and their products. That led to using design for the creation of a system of opportunities and possibilities, reaching far beyond a single brick set. Within that space, the creative process is used to address challenges (both within the company and its users, especially in the field of learning). The final "good design" is, in the end, everyone's responsibility. The experiences become immersive.

### **More than following trends**

While LEGO as a company does follow trends and the temporary interests of its users, there is an understanding that design can be seen as an opportunity to tackle more than that. Their mission statement says, "inspire and develop the builders of tomorrow" which translates to knowing (and practicing that knowledge) that the future we want tomorrow needs to be acted upon today. By addressing current societal challenges (i.e. gender bias) or weak signals (i.e. technology for equality, imagining new jobs, long-termism) by design, they provide a structure for opportunities - on a company, business level as well as on a user, learning one.

### **Generative customers**

Design at LEGO company is generative - it's an iterative process, capable of reproduction and production of multiple outcomes. It is also true to the products that allow the end user to

be if not a designer, then a creator, a constructor. The experiences that LEGO provides are constant iterations.

But it doesn't end here - what LEGO does is push that generative process a step further. Although LEGO is not a community-led brand, it is by any means a community-influenced one. This is especially visible in the example of bricks. Although LEGO sets contain instructions, they are still open-ended play, with the possibility of free modification and arrangement of individual elements. This, in effect, allows users to create their own compositions and unlocks the playfulness in the creative process.

Users receive design tools - not only blocks with many assembly options, but also software enabling the digital construction of the idea. Such an idea can be submitted to LEGO, which can produce such a set, generating new energy in its community and, in the long run, new ideas. Design goes beyond the boundaries of the company and users become part of the generative process.

## J. Attachments

### Ecosystem map

In the business language, an ecosystem of a company is defined as a network of actors involved within the business, and that includes entities such as suppliers, customers, competitors, governmental bodies, in other words, those involved in the life of a product. In this exploration, we use that term to describe the space of LEGO as a provider of experiences, meaning, what needs and promises lay within certain user groups and the portfolio of the products.

The LEGO Group's product portfolio starts with a LEGO brick, differently coloured blocks that can be interlocked with each other in numerous ways, assembled, constructed and disassembled. The brick is a flagship product, manufactured since 1949. It is sold in a form of separate pieces, bundles and thematic sets (that include LEGO original themed kits - Bionicle, Lego Ninjago, Lego Technics, as well as licensed pop culture ones such as Star Wars, F.R.I.E.N.D.S., Harry Potter).

One of the most significant steps toward the digital world was a collaboration with MIT Media Lab. As a result, LEGO launched a series of robotics sets - LEGO Mindstorm and its further versions. It originated from a programmable brick developed at the MIT Media Lab. The research was done by Seymour Papert, a computer scientist, and sponsored by LEGO. The heart of the set lies in a programmable brick and contains a variety of sensors. The product has undergone an evolution since its initial start in 1999, but the principle stayed unchanged. Interestingly enough, the existence of this tool led to the setup of several robotic competitions (mainly within USA middle- and high schools), i.e. RoboCup Junior football, Botball, or FIRST Lego League Challenge.

Another example of the digitalisation of the products (or rather, stepping into the digital products Universum) is the movies LEGO has created. It started with a straight-to-DVD release of Bionicle: Mask of Light (2003). But the popularity of LEGO movies reached its high peak after the release of *The Lego Movie* (Warner Bros, 2014). Reportedly, some

independent stores mentioned a shortage of LEGO toys after the movie was screened. There is something to be said about the community-based practices, as LEGO held a contest for ideas and designs for vehicles that were to be used in the movie. In the next years, the company released its next movies, i.e. *The Lego Batman Movie*, the continuation of *The Lego Movie*, or its original *The Lego Ninjago Movie*.

Under the LEGO umbrella, besides physical products or digital entertainment, services can be found, and that includes: a website (mainly for e-commerce), Legoland - themed entertainment parks, retail stores and a business consultancy called Lego Serious Play.

Besides its commercial and monetary-oriented actions, LEGO created a non-profit organization focusing on empowering children through play and learning-by-doing. The LEGO Foundation starts with an assumption parallel to LEGO philosophy - children learn best through play. As it is explained in the mission description, not every child gets the time and chance to play that they deserve. The goal is a systemic change in access to playful childhood and in extension, to learning and education.

All this is to say that even though LEGO as a company has various branches, it comes down to a very universal language that the group was able to create. The above examples are merely scratching the surface of what LEGO proposes and sells. And while each and every product provides a different experience for its users, they all answer to one particular need - the need for a joyful, blissful time. They provide entertainment in various forms and through various mediums - through playing, building, riding a rollercoaster, reselling and collecting - and at the same time, find a way to empower and enrich the development process.

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