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## teamLab Research

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# **teamLab Research**

“Tsinghua-Sotheby’s” Art Management Master’s Program  
Dissertation

Liu Chinchun

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# Abstract

teamLab undoubtedly opened a new era of art. It allows professionals in multi-industries to use the latest science and technology to create art, they are all popular for local audiences from Japan to the United States, from Italy to China, wherever they go. As a significant representative form of the trendy show and immersive exhibition, teamLab's works are completely different from the past in terms of creative logic, exhibition experience, and collection methods. By going through the development history of teamLab, this article studies the characteristics of its exhibitions, audience, and the connection with traditional art, in order to explore the development of today's art and look forward to the future of new art.

## Key Words

teamLab , art and technology , new media , wanghongzhan , immersive exhibitions , art collection

# Table of Contents

<b>Introduction</b>	<b>1</b>
<b>Part 1 - Art from a Technological Perspective</b>	<b>2</b>
teamLab, Formation and Experience	2
teamLab Works	3
Collisions and Challenges	4
<b>Part 2 - Immersed In It</b>	<b>6</b>
Art Interaction Based on Technology	6
The Trace of Perceptual Experience	7
<b>Part 3 - teamLab, A Profitable Business</b>	<b>9</b>
Possibilities for Serious Art	9
New Art Economy	10
Art, Design, Products	11
<b>Summary</b>	<b>13</b>
<b>teamLab Timeline</b>	<b>14</b>
<b>Bibliography</b>	<b>15</b>

# Introduction

From form, to technology, to concept, the emergence of teamLab opens a new space for art. Combining holographic projection methods, the technical means of algorithmic programming and interactive on-site experience, teamLab pushes art to new levels. In July 2017, teamLab was exhibited for the first time to Chinese audiences at Pace Beijing. In the same year, Shenzhen Blooming Culture Investment Co., Ltd. obtained the representative rights for teamLab in China through Pace Gallery. In the following two years, with the help of commercial capital, teamLab blossomed everywhere in China's first-tier cities and was favored by audiences without exception. This stood in sharp contrast to China's art museums that have for years faced issues due to low audience numbers. As with new art in every era, teamLab's presentations have received mixed feedback from both inside and outside the industry, from China and abroad. While gorgeous in appearance, if one used "fine art" standards to investigate teamLab, what kind of cultural depth would be discovered behind the form of the work? Is a white cube the best place for artworks? Similarly, what kind of collecting systems and business models do multimedia presentations, like those of teamLab, necessitate? This article examines the development of teamLab, analysing the content of their works in relation to their form, researching their market and impact on art management, exploring future possibilities in the development of art.

Although today we think of "new media" as an art history term from the last century, it remains the most accurate description of teamLab—at least until a better understanding is developed. In *The History of New Media Art*, published by Tsinghua University Press, the development of new media art is summarized through an organization and introduction to its role in artistic creation. *Rethinking Curation—Art After New Media* discusses the issues encountered in the process of presenting new media art. From the logic of its creation to the exhibition of its final form, a new set of procedures and rules govern the field. *Context Providers* discusses how the development of technology has provided a new theme in art. Differing from previous space for the exhibition and appreciation of art, the "manufacture of context" describes technology within the principle of new media. The presentation of teamLab and its effect on social media have, to some extent, spawned a wave of Chinese netizens interested in art. The promotion of art education via social media is unique to China. *Big Bucks* is an up-close look at recent developments in the contemporary art market written by Georgina Adam, who provides an insider's perspective on the art economy. Regarding technology, Kevin Kelly's observations of the times are sharp and accurate, and his series of books reveal an ecology woven by the Internet. These works provide support for the study of teamLab from creation, exhibition, collection, dissemination and other aspects. In inspecting these historical threads and observations, we can more fully define the boundaries of teamLab and grasp the shape of this new art.

# Part 1 - Art from a Technological Perspective

In the 20<sup>th</sup> century, iconology and semiotics abstracted the study of art towards superficial forms. Roland Barthes understood the world through symbols and reconstructed the world with the deconstruction and reconstruction of these "plug-ins". What cannot be ignored is that the development of art itself integrates cultural, economic, political, scientific and technological factors. Not only does form change. More importantly, content changes—which is the basis for the notion of art functioning as historical evidence.

The development of art accompanies the progress of technology. At the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> century, the rapid progress made by industrialization brought comprehensive transformations to visual forms and content, marking a turning point in art history. The Impressionists undoubtedly represent the Industrial age. The invention of photography in the middle of the 19<sup>th</sup> century gradually replaced the appeal of academic painting once valued for its realism, giving birth to Impressionism. In painting the scene of a railway station scene, Monet's brushwork became a record of the prosperity of the steam age. Mass industrial production changed the form of social organization as well as daily life. In the 1960s, the appearance of television changed media communication and gave birth to a new media order. "Everyone has their 15 minutes," says Andy Warhol. According to Neil Postman, author of *Amusing Ourselves to Death*, after television, a presidential candidate needed not only a musical and persuasive voice, but decent looks. In the 1970s, Nam June Paik assembled a cello from TVs, giving birth to "new media" art.

Up to this point, highly characteristic of the 20<sup>th</sup> century, artists used industrial commodities to achieve self-expression. In Nam June Paik's best known work, *TV Buddhas*, the addition of cameras provides a visual interpretation for the Eastern meaning of "all appearances are false." In addition to the novelty of new forms, the intervention of "new media" shortened the distance between real life and works of art. Art was transformed from an "object" under special scrutiny into items and scenes accessible in life. This was furthered by the introduction of performance art from the Fluxus group in the 1960s, as well as Joseph Beuys's decree that "everyone is an artist." In new media art of the 1970s, people as well as objects fully participate in artistic narratives, and the boundary between life and art became increasingly blurred. With the continuous updating of technology, the scope of art also expands.

## teamLab, Formation and Experience

At the turn of the century in 2001, the world did not collapse because of the "Millennium Bug." In following "Moore's Law", hardware and software complemented each other, and computer technology developed rapidly. At this time, Inoko Toshiyuki, a University of Tokyo student, graduated from the department of computer science. Instead of pursuing further study and research in a professional field, he started his exploration in digital images, hoping to help people express themselves in the form of new media. In 2001, teamLab was founded not in the mode of today's commercial brand. In the absence of products and a profit model, the basic means for their work was to form a team of school teachers and students for targeted development. This way of working continues, as the brand name teamLab suggests. After nearly 20 years of development, teamLab has become an art brand with nearly 400 team members and projects around the world. TeamLab members include artists, programmers, engineers, CG animators, mathematicians, architects and other professionals in various fields. Through the combination of technological means and rich imagination, teamLab presents new media art projects beyond the existing sensory experience.

In 2011 for Japan's New Year's Even NHK Red and White Song Battle, teamLab created a stage design for the group ARASHI, presenting new visual possibilities. Based on computer algorithm, the form of the presentation and the effect of the interactive stage grabbed attention over social media. NHK Red and White Song Battle is a New Year's concert in Japan. Singers of different music styles and age groups compete on the same stage. It is the most popular music program in Japan. The development speed of new media art is beyond our daily experience. Looking back at the NHK Red and White Song Battle in 2011, while large LED screens were used in the stage setting to present gorgeous images, the content is mostly in the form of combined pictures, stage animation and scene shots. When the idol group ARASHI appeared, the background animation of the performance brought a big surprise to the audience. The geometric shapes on the stage background changed form as the actors performed, like a rehearsed dance group, interacting with the singers in real time. At the end of the song, the five lead singers moved to the screen position, and the geometrical shapes fell into their hands. The interaction between real people and animation became a highlight of the song that year. The success of the NHK Red and White Song Battle made teamLab famous in Japan, where the design industry is famously developed. The expressive force of computer programming in design emerged.

2015 is the year when teamLab officially launched its contemporary works: "Future Amusement Park" in Tokyo's Odaiba; work presented at the Milan World's Fair; the first presentation of "teamLab World" in Tokyo. Each exhibition drew immense crowds, with lines lasting between five and hours. In 2016, the "Living Digital Space and Future Parks" large solo exhibition in Silicon Valley attracted more than 150,000 visitors. A long line formed in Beijing's 798 Creative Square in May 2017, and "Flower Dance Forest and Future Amusement Park" also attracted audiences from China.

As teamLab's first appearance in China, Pace's exhibition in Beijing was highly representative. The two parts, "Living Digital Forest" and "Future Park," presented works of an Eastern cultural sensibility and those more suited to children's interaction respectively. The audience reaches the exhibition hall of Living Digital Forest through a dark corridor, and a sea of flowers suddenly appears in front of them. Rich details fill the audience's sightlines. From the wall to the carpet, HD projection equipment does not leave any empty corners in the space. After walking into the work slowly, the sensors detect the position of the audience. After staying in one place for a few seconds, the image starts to change. The flower stamens slowly grow on the branches, opening, changing color and losing petals. It is apt to say that "Living Digital Forest" is an Eastern creator's imagination of ultimate beauty. The whole atmosphere, from its visual to its sound, completely removes the audience's anxiety from waiting in line. The so-called "immersive" experience has become popular in social media in China since teamLab. "Future Park" is an amusement park—an electronic version. Specially designed for children, it combines table games with scene interactivity. Using the table game, one can put any items on-hand into the sensing area, like a mobile phone, and the interactive video incorporates the object into the animation. The object appears as a childlike animation among other scanned objects in a parade that runs from two sides of the room. A bird flies around the video, landing on objects and taking them away. The most representative work was the interactive hopscotch. Using the same rules, in this electronic version, different animation forms appear as the user jumps, attracting audiences of all ages to participate.

## teamLab Works

There are over 200 works on the main page of teamLab. We can even understand every art work to be an exhibition since every time the work is settled by the special space. Interaction in between the spaces, images and the audiences together create a new piece of art.

### **100 Years Sea 【running time: 100 years】**

2009, Digital Work, 5 channels, 100 years

100 Years Sea is a video work with a running time of 100 years. The work depicts the rising of the sea levels beginning in 2009 and continuing for 100 years, based on the 2009 prediction of the World Wildlife Fund (WWF). The video started on the 10th of December 2009 and runs in parallel with the actual sea for 100 years. When looking at the original artwork 100 years from its beginning, what will be the state of the actual sea? Will the rise in sea levels be more serious than the WWF calculated? Or will the sea levels be lower? The sea in this work continues to rise as we head toward that inevitable time.

Historically, Japanese artists painted waves using a combination of lines. These assembled lines give the impression of the life and energy of the sea as one living entity. Looking at the sea we feel awe, and it is likely due to this awe that Japanese artists chose to express the sea in this manner. Japanese ancestors possibly saw the world as it is depicted in classic Japanese imagery. Based on this idea, teamLab considered recombining the subjective view of ancient times with the fixed objective view of the modern world. We constructed virtual waves in a 3-D environment that have the style of Japanese painting. As a result, we have created a video artwork that has been converted using what teamLab calls ultra-subjective space.

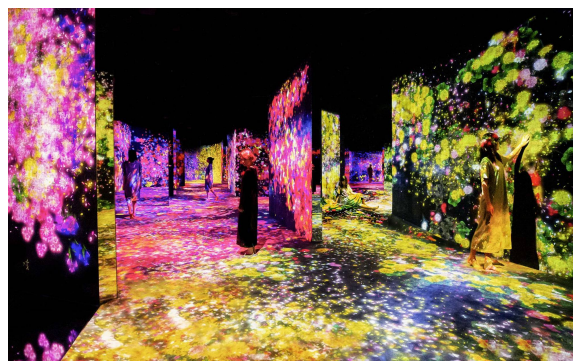
### **Infinity of Flowers**

2014, Interactive digital installation, Sound: Hideaki Takahashi

An art installation that depicts flowers of Tokyo blooming in an infinitely expanding space. The work is not a pre-recorded image that is played back; it is based on a computer program that continuously generates the work in real time.

Within the artwork, the flowers are first born, they then grow, bud, and bloom; and before long, they scatter, wither, and fade away. In other words, the flowers can be seen to be born and disappear over and over for eternity. Additionally, if a person touches the artwork the flowers start to dance in unison.

Overall, the flowers never reach a state previously shown before, and since they are also influenced by the behavior of the viewers, the artwork continuously changes in appearance. What you can see right now will never be repeated again in the future.



**Infinity of Flowers**  
<https://borderless.teamlab.art>

### **Flutter of Butterflies Beyond Borders in the Crystal World**

2018, Interactive Installation of Light Sculpture, LED, Endless, Sound: Hideaki Takahashi

A flutter of butterflies created from an accumulation of light points. This work starts when the Flutter of Butterflies Beyond Borders enter the Crystal World. The work ends when the butterflies leave the space and disappear. The group of butterflies that come into this space are those from the Flutter of Butterflies Beyond Borders (a group of butterflies born from other artworks, such as the butterflies born from people's bodies in the Butterfly House). These butterflies release art from the concept of the frame, removing boundaries from the artwork space, the butterflies seamlessly fly inside other artworks.

Pointillism uses an accumulation of distinct dots of color to create a picture, here light points are used to create three-dimensional objects. The butterflies that are drawn by light points fly freely around the space. A visual illusion due to continuous dynamic behavior, causes the body of people in the space to be immersed in the flock of butterflies. The boundary between the body and the artwork world dissolve. As the shared world of the artwork changes, due to your existence and that of others in the work, people dissolve into the artwork and perhaps feel a sense of unity with others.

Neither prerecorded nor on loop, the work is rendered in real time by a computer program. The interaction between the viewer and the installation causes continuous change in the artwork; previous visual states can never be replicated, and will never reoccur. This moment can never be seen again.

### **Black Waves: Lost, Immersed and Reborn**

2019, Digital Installation, Continuous Loop, Sound: Hideaki Takahashi

An installation made of one continuous wave. The waves projected are all connected and form a single, unbroken body of water. As audiences immerse and meld themselves into the waves, they explore a continuity among people, as well as a new relationship that transcends the boundaries between people and the world. The movement of water is simulated in a computer-generated three-dimensional space. The water is expressed as a continuous body after calculating the interactions of hundreds of thousands of particles. To visualize the waves, lines were drawn in relation to the movement of the particles. The waves created in 3-D space were then turned into an artwork in accordance with what teamLab refers to as ultra-subjective space.

In premodern Japanese painting, oceans, rivers, and other bodies of water were expressed as a series of lines. These lines give the impression of life, as though water is a living entity. This form of expression leads the audience to question why pre-modern people sensed life in rivers and oceans. Also, why did they behave as if they themselves were a part of nature? Perhaps something can be discovered by fusing the fixed objective world of today's common knowledge with the subjective world of premodern people. While viewing this artwork, if audience feel a sense of life in the collection of lines — what can be called the subjective world of premodern people — then perhaps this is one aspect of objective recognition. When viewing this artwork, as opposed to when watching images of waves captured by a video camera, people may feel that the boundary between themselves and the waves disappears. They feel immersed in the work, perhaps even feeling life in the collection of lines, as if the waves are luring them in. Perhaps we can find a connection to the way premodern Japanese people perceived the world and, consequently, how they behaved toward the world. If people regard themselves as a part of nature and consider nature not just as something to be observed, we might join pre-modern people in perceiving rivers and oceans as living entities.

### **Born from the Water, a Loving and Beautiful World**

Sisyu + teamLab, 2019, Interactive Digital Installation, Endless, Calligraphy: Sisyu, Sound: Hideaki Takahashi

When people select their favorite characters on their smartphones, and swipe them towards the water screen, the worlds that those characters embody will appear, influencing one another to create a single world. The elements that are born from the characters are placed at various positions within the space, and the physical influences and connections between them produce a single world. For example, when the wind blows, flowers and snow fly away. Birds alight in trees, and butterflies are attracted to flowers. Just as in nature, what you see at this moment can never be seen again. Chinese characters were first carved in turtle shells and ox or deer bones and were engraved in bronze ware. It can be said that at that time, each character contained its own world that was conjured up by its meaning. Through the characters, the worlds that people call up connect and interact with each other to create a new, continuously changing world.

## **Collisions and Challenges**

As we can see, there is new standard of writing the label of teamLab. It was composed by two parts, the visual artist and another sound artist. Though the work must be created by a team, even the coding work take more time to work it out, the final result — which audience can directly feel — play an important role. Shall we take this appearance as a connection of the classical art history, or that is just a strategy of teamLab? That is a question to the art history writing. Large art projects happens in the history, one situation we can easily imagine is the mural painting at the Renaissance time. Great artists in the big time painting in the huge church, with their assistance, students and follower. Today, nobody deny the artist of fresco on the ceiling of Sistine Chapel is Michelangelo Buonarroti, but maybe this rule is not fitting for today's art team. New media art is facing bigger space and more complex environment, it is today urgently calling for an organizer of a team. The one who lead the project would be recognized as the artist, but also, the one who



organize the team would be a key person which should not be underestimated. There are so many people are working remarkable of a team work. How do we change the perspective from an audience? The one who charge for what people see and hear would be easier connected to the direct feeling.

The containing of the art work changes, not only on the displaying form, but also on the width of meaning. A teamLab art work is not one sheet of picture, a block of sculpture, a settle of installation, a piece of video. It would be the comprehensive form of all the art, even interaction is the strength that not the traditional kind of art refers. There are long introduction for every piece of works, introducing the material of what is the background of the history, how the effect was realized, and what audience will get from the interaction. We can always read such works from the critic articles in the past time, but it is showed here today in the tag. One reason is because of the complexity of the work creating, another would be the immersive effect lead the audience get into the illusion environment, the tag is playing a role of instruction book.

Since 2015, with the global economic downturn, the art economy is looking for new possibilities. Around 2015, an "internet wave" emerged in China, and "Internet+" becoming a new economic model promoted from government to people. Of course, art has not been absent in this campaign. Galleries, museums, cultural and creative enterprises all want to attract more audiences through internet channels. The consumption upgrade supported by art seems reasonable in principle, and the intervention of big capital creates an unprecedented visibility for art. In reality, high-priced artworks are difficult to market over the internet, and this difficulty in producing an effective business model has not brought ideal benefits to the arts. Most internet art projects end in failure within two to three years. teamLab came to China at this time. As an exhibition at a commercial gallery—Pace is one of the world's largest commercial galleries—the sale of tickets to limit traffic and subsidize costs raised eyebrows in the art world.

The phenomenal presentation of the art exhibition elicited feedback from a variety of voices within and outside the industry. Those involved in the gallery system seem mostly to have reacted negatively to the format—*it's simply a technological display with no depth of thought, and definitely not in keeping with the reputation of top-tier international gallery*. At the same time, the endless line at the gate during the exhibition demonstrated the standpoint of an outsider—immersion, fun, interaction, a new art form that attracts both adults and children to participate in the experience and at cost. For a long time, the academic field paid no attention to the work of teamLab. Completely different from traditional art forms, their presentations were hard to accept, yet audiences are more concerned with experience, rather than artistic philosophy. Following the wave of interest in art and technology that enwrapped the world, teamLab's significance is undeniable. Moreover, their spirit of collaboration in experience, technology and business has made them this way. Their employment of ticketing has blurred the lines between elitism and mass culture. And the social media response to their immersive works has especially contributed to *wanghongzhan* culture. What's more interesting is that audience and critics alike enjoyed the interactive areas of Future Park. As expected, the immersive exhibition experience brought by teamLab and the response it triggered on the internet became one of the most successful exhibition models in two years. The internet blurs the line between elite art and mass aesthetic. teamLab subverts the old elite cultural narrative of the art circle, and establishes a new set of rules—both for art itself and the business of art.

## Part 2 - Immersed In It

In the 1930s, Bauhaus started a comprehensive art practice incorporating painting, drama, furniture and architecture, separating "design" from fine art to create an independent discipline. Today's cities are visually a large-scale work constructed numerous details. The architecture, transportation, signs, outdoor advertisements, neon lights, interior decoration, furniture and even the green spaces supporting the buildings are all designed and trimmed. As a visual object, the city is deeply contrived by human beings. The emergence of the internet in the 1980s opened up an infinite virtual world. The new internet-based and digital situations greatly extended the possibilities of the real world in both time and spatial dimensions, completely changing the forms of human organization. The rapidly evolving iterations of imaging, sensing and programming technologies has brought the sensory experience closer and closer to reality. The traditional notion of "what you see is what you get" has been rapidly invalidated, and the human-machine integration of the "cyborg" has gradually shifted from a science fiction dream of the future to our current reality.

### Art Interaction Based on Technology

"The development of technology pushes artists off a cliff," says Qiu Zhijie, head of the experimental art department at the Central Academy of Fine Arts, referring to the impact of technological progress on art. "Some die, and some grow wings."

If the invention of photography in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries indirectly led to the rise of Impressionist painting, then ZKM Center for Art and Media, founded in Karlsruhe, Germany in 1997, is an important event for the "combination" of art and technology. On August 2, 1984, the first email was sent from the computing center of Karlsruhe University in Germany. The historic moment in technological practice derived from the local government's to plan for the establishment of ZKM. In 1986, ZKM project group was established in cooperation with the local university, music conservatory, nuclear energy institute and other institutions. After many years of planning and organization, ZKM was formally established in 1997 and achieved its present scale in 2005. ZKM owns two museums of media and contemporary art, as well as two research institutes of visual media and music and acoustics. It has collected the most representative works of artists in the technological frontiers of painting, sound, light, image, computer programming, sensory and interactive works, robotics, biotechnology, VR, blockchain and other media. Nam June Paik brought "new media" into the history of art, and ZKM's research and collection broadened the boundary of "new media" to new fields of audiovisual technology. Although the beginning of this century has seen ZKM explore the development of the intersection of art and technology development in research and exhibitions, for the Eastern world with its relatively strong traditional art market, the lagging college education and the lack of official support for new art are dilemmas to be faced. At the beginning of the 21<sup>st</sup> century, light shows based on architecture and water fountains were very popular. Water shows have become major investment projects to attract tourists in many destinations across China. With the development of images used these settings, computer technology in display, sensors, algorithmic programming and other areas have also rapidly developed. Today we research teamLab precisely because of its introduction by a Western gallery and its commercial success in art.

teamLab is a case in which technology has added wings. teamLab's art relies on algorithmic programming to create random effects, realize real-time interaction with the audience with sensor technology, and create a complete immersive situation through large-scale projections that are linked and play simultaneously, turning the white box of the art exhibition hall into a sea of flowers. Even if you do not visit the site, you can feel the different exhibition viewing experience brought by holographic projection technology from the pictures and images presented on teamLab's official website (teamlab.art). teamLab's works are divided into four main types: holographic projection, HD images, lighting works and planar output works. This is also the basis for our discussion on their production, exhibition, collection and other aspects in comparison with traditional art forms. Holographic display is one of the most memorable experiences of teamLab's work, and uses sensing technology to connect visual design with the viewer. As long as the audience enters the interactive area, they can directly and truly participate in the works. In the exhibition "teamLab: Universe of Water Particles in the Tank" held at Tank Shanghai in 2018, the intention of water and flowers is transformed in the space. The water tilts down from the huge space of the former oil tanks, bypassing the audience slowly, while the flowers grow around the audience from nothing to bloom slowly. The feeling within the scene is that of being surrounded by flowers, while in the pictures advertised by the media, we can see that the ceiling of the space has no images. This is due to the visual strategy of teamLab's work, which draws the audience's attention completely below the eye level with the delicate, complex and varied visual design, without paying attention to the space outside the eye. These spaces are where projection, sensing, and computing devices hide. The works in the light series use light as an element to create wonders in the space. In the work *Moving Lights*, a matrix of spotlights is used to form a space installation. These spotlights change colors and brightness under the control of the computer program, presenting a colorful world of light with melodic changes of lights. However, in a series of works such as *Light Forest*, which is a mirror installation, the relatively narrow space is used to create the experience of infinite light and shadow. HD video works are animation works played on large LED screens or other forms of display. Similarly, planar output works appear in the form of traditional projection display and are sold with limited certification as traditional video works.

The sense of “contemporary-ness” in teamLab's works lies not only in the presentation of technology, but in its means of addressing management in today's art industry. From artistic production, visual presentation, computer programming, spatial modeling, hardware debugging and exhibition site layout, the coordination and operation of teamLab's nearly 400-member team represents a significant work of art management. Adhering to the working mode established at the beginning of their creativity, members are organized into project teams, and the project progress is promoted by the project leader deemed a “catalyst” by Inoko Toshiyuki. This is the unique management method of teamLab, which is not only different from the production of traditional art, but also completely different from the established production processes of new media art. Instead, it shares similarities with the management of internet enterprises and video game production teams. This is an important manifestation of art's entry into the industrial process, and the appearance of a “Hollywood” model in the art field.

In the past days, we regard artists as the pioneer of fashion, first the thinking displayed in art works, then, to the museum, after that, element and conception in art would be use in fashion design, movie, then the public, art inspiration become nutrition to the whole society culture. This process take 10 years even longer time in the past time. Beasts, Cubism as avant-garde art in the times of early 20th century was accepted by the public around the middle of the century, even today, we still take Bauhaus conception as a kind of fashion. But for teamLab, from fine art to products, there is even no gap in between, from an audience perspective, just the content changed and it could be used in an application scenario. In book *The Art in the Age of Mechanical Reproduction*, Walter Benjamin discuss the situation of new art has lost the *aura* which classical art possess. But what is advanced from the perspective of democracy is, people can collect one art piece without difference, and by means it is an original piece. At the classical art period, elite culture settled a boundary from the pop culture, the sophisticated thinking goes far away from the daily life to casting the aura of the only piece of art work. Without doubt Andy Warhol just break the boundary of elite and pop culture. He just made up as an art work himself. With his Factory (the studio's name) and of course his own performance, Andy Warhol diffuses strong charming that even influenced the art history way to the people's road. Today, we come back to teamLab works, it is totally a new situation that any past time can not compare with. We can even evaluate the hi-tech new media art works as mostly a computer program. Since the structure is mostly based on coding, if make an operation on both teamLab work and smartphone app, the result would be more or less the same — the action is controlled with lines of orders, and there would be full screen of code at the backstage. Difference would be the result of art works code always links pictures. In this situation, technology plays an important role in the art presentation, it is the basement and bridge of realizing the exchange of art work and products. Totally different from the elite culture, teamLab works combine the internet industry to visual art.

## The Trace of Perceptual Experience

On 30 October 2017, “Mysterious Dunhuang” opened at the OCT Harbour's exhibition center in Nanshan district, Shenzhen. The ancient Dunhuang frescoes came to Shenzhen, the youngest and most dynamic city in China, as an immersive exhibition experience, setting off a wave of enthusiasm for Chinese traditional culture. The organizer of the exhibition introduced teamLab to Shenzhen Blooming Culture Investment Co., Ltd.

In 2008, Japan's NHK filmed the documentary *Mogao Grottoes of Dunhuang—The Full Picture Beauty*, recording the magnificent pictures of the Mogao Grottoes in two episodes. From the subtitle *The Full Picture of Beauty*, it is not difficult to see that traditional documentary methods using planar filming and linear narration cannot fully represent the dimensionality of a place like the Mogao Grottoes. This is a very difficult for traditional technology. At that time, the most effective image saving technology for cultural relics like the Mogao Grottoes was “panoramic photography.” Panoramic photography imaging technology has become the most popular method for multimedia presentation in major museums and art galleries since 2010. The image presentations of “digital museums” are the most accessible information on the internet today. It is undeniable that “Digital Dunhuang” website is the most rapid and direct access to research materials. However, how does one present the reality of the caves in different places? Holographic imaging technology provides the possibility of three-dimensional presentation. Through the exploration of new technology and aesthetics presented by teamLab, “Mysterious Dunhuang” was quickly launched, presenting traditional cultural resources in an unprecedented form in Shenzhen.

The exchange of technology that brought the arts of Dunhuang and teamLab together highlight a poignant sensory experience common among the two. If anyone has visited the Mogao Grottoes in Dunhuang and also experienced the works of teamLab, it is not difficult to think of thier common feature—soft light. The Mogao Grottoes, Luoyang Longmen Grottoes, Datong Yungang Grottoes and Tianshui Maijishan Grottoes are said to be China's “four great grottoes.” And differing from the stone carvings of the Longmen and Yungang Grottoes as well as the cliff carvings of the Maijishan Grottoes, the geological structure of the Dunhuang Mogao Grottoes is set in sedimentary rock—caves that cannot support large-scale construction. In order to ensure the safety of the spatial structure, small openings were often used, causing the viewing effect shift towards faint light. This is why the media often describes the Dunhuang Mogao Grottoes as “mysterious.” “Beauty” may be the wishful thinking of future generations on the Dunhuang Grottoes. As with Christian niches and altar paintings, the purpose of Buddhist liturgical caves (or temples) is more to accept worship than to provide the “staring” quality of works of art emphasized in art history. Staring at god is not impolite, even taboo. Here, importance is placed on the “site,” and because of the introduction of holographic projection technology, the original function of the Mogao Grottoes can be represented. Catalogues, the internet and other pictures

are incapable of independently producing the “Mysterious Dunhuang” religious atmosphere of the Mogao Grottoes images were unable to reproduce “mysterious dunhuang” religious atmosphere. It’s only when one bows at the entrance and faces images of the Buddha, Lohan, Bodhisattvas and Feitian in the darkness do lofty and transcendent feelings spontaneously arise.

teamLab presents works through projection. In order to highlight the saturation of colors and sharpness of projected images, works are often implemented indoors or in completely black space, which virtually creates the on-site experience of viewing exhibitions in darkness. Projection devices perform at full capacity in dark environments. Infrared sensors do not respond to light images, and images and interactive forms work on multiple levels. Museum studies show that if the audience spends more than 10 seconds before a piece of work, it means they have special interest in the work. teamLab’s especially engaging works calmly alert us. Differing from the traditional psychological presupposition of exhibition space, their works incorporate image and sound to fill the area and the senses. The darkness of the audience’s exhibition environment limits speed. Although teamLab audiences tend not to hurry anyway, but not moving fast forces audience members to absorb more detail. At the same time, the slow pacing provides time for the sensing technology identification and algorithm to take effect. The recognition and playing of large-scale HD works have extremely high requirements on computer computing power, and fast moving speeds often lead to the failure of interaction due to the sudden increase of instantaneous data. Therefore, the weak light source helps form an effective feedback system for hardware feedback. In this system, the discipline of “design”, which was separated in the 1930s, is reintegrated into the category. The fields of graphic design, spatial design and interactive design all provide technical support in realizing the final effect, providing a new possibility within the history of art.

In contrast to the white box of art, the black box corresponds to the cinema model. We also use the word “immersion” to describe the plot of a movie and the effect of turning off the lights in a theater, which is different from the immersion provided by the big screen. For a film, the deepest level of immersion is the sense of substitution for the story. If an actor’s performance can arouse the audience’s empathy, it is the success of a film. Formally, the film hopes that the audience can integrate themselves into a single bright screen. The screen ratio of the film is expanded from 4:3 to 16:9, and the IMAX theater is further enlarged on this basis. There are three screens with super wide angles in the theater. What teamLab provides is the immersion of space, or rather the immersion of light and shadow. The audience is surrounded by light and shadow and sound, and the physical immersion renders the atmosphere at the sensory level.

Although teamLab’s work is presented in a brand new technical form, the Eastern aesthetic carried throughout the work remains the most explicit cultural feature. In 2015, teamLab was invited to collect sounds for a Japanese mobile phone software. The team went deep into nature for six months, collecting the sounds of six scenes: sea, bird song, bonfire, mountain stream, forest and waterfall. This eventually used in the MUJI TO SLEEP app, this project became a milestone that laid the foundation of teamLab’s natural concept. “Man in Nature” is one of the most important concepts in teamLab’s works. Although teamLab members are nearly 400 people from all over the world, the displayed works try to use scientific methods to explore the spatial logic of the East—falling petals, rushing water, clouds. Inoko Toshiyuki calls this “ultra subjective space.” Unlike fixed focus or single-point perspective, ultra subjective space allows gives the viewer multiple angles of experience. The thinking brought by the teamLab phenomenon is three-dimensional, which is beyond the scope of existing art history writing. First of all, the change in the form of the work has brought about the changes in the modes of production and viewing. A creative process with a new set of aesthetics, the projection equipment requirements, quality requirements, the requirements of the computer hardware, the implementation results all imply that the works no longer take the form of an “object.” For visual art, it’s like asking the audience to “enter” a work rather than merely observe it closely. Other than looking to the gallery space for old and new associations, teamLab and Japanese Ukiyo-e share commonalities in traditional culture. Their artistic skills and aesthetic interests combine film, theater, the stage arts, and clearly shrug off the constraint of classical art history. Secondly, the change in the way of viewing brings about a new dimension of artistic democracy. The victory of the French revolution in the 18th century opened the Louvre, the royal palace, to the general public, and art became a feast of culture for the people, whereas it was formerly only enjoyed by the aristocracy. Today’s museum systems around the world continue this democratic system of presentation. The museum space is a bit awkward when it comes to the size of the audience. For masterpieces like the Mona Lisa, this democratic form of viewing seems to have disappointed audiences. teamLab brings the audience into the work as materials for triggering interactive presentation, and the viewing itself is also a part of being watched. The methodology of the Daoist philosophy of Yin and Yang provides a way of thinking for this new democracy of artistic production.

## Part 3 - teamLab, A Profitable Business

teamLab has attracted wide attention from both inside and outside the industry, as well as heated discussions on the contents of the exhibition. Professional audiences (elite and conservative) think that teamLab works only present a nice "background", while the concept behind the flowers and water is superficial. What's more, as a debut work in 2011, the stage design of the NHK Red and White Song Battle was indeed a performance background. However, the number of visitors to the *Future Park* in Tokyo's Odaiba reached nearly 500,000 in 2015, 300,000 in Beijing in 2017, and nearly 400,000 in Shenzhen in 2018. teamLab has created a sensation that no previous art exhibition has been able to achieve.

### Possibilities for Serious Art

Born out of the concept of a "flash mob", these short-term offline presentations that have attracted massive attention and comments online are referred to in Chinese as *wanghongzhan* or "web celebrity exhibitions." On the eve of the opening of the Museum of Ice Cream in San Francisco in the summer of 2017, there was a huge amount of hype on social media and pre-sale of tickets, which received an enthusiastic response from netizens. The exhibition that opened later, with its pink setting, became a classic for audiences to take photos. Viewers posted pictures of the scene on Instagram, from San Francisco on the west coast, to New York on the east coast. Today, using highly saturated colors, mirrors and balloons, sound, VR, video projection and other new media means are the calling cards of so-called *wanghongzhan*. Although pop artist Andy Warhol blurred the boundary between elite art and mass aesthetics in the 1970s and 1980s with a series of images of consumerism, "web celebrity" has always carried more indelible contempt.

Web celebrity brings audiences to exhibitions. In October 2014, M Woods opened "Pale Fire—Revising Boundaries." During the opening ceremony, the art museum's entrance grew a long line, an endless stream. Notably, the exhibition crowd was not the typical art institution "old men" that go to shows, but rather dandified young people—most of them fans of the founder Wanwan Lei. While M Woods uses the concept of "FAT" for its exhibitions and associations with audiences, its social media operations, from exhibitions, to programming, to merchandise, and even the restaurant service owe to founder Wanwan Lei's media presence. From their content through social media and audience interaction, M Woods is classified as a "web celebrity" museum. Of course, compared with those web celebrity art exhibitions that rely purely on star power, the authentic collection of M Woods and the excellent art history background of the founder make us see the possibility that the "web celebrity" phenomenon is reliable and substantial. In 2015, *Rain Room* was exhibited Yuz Museum in Shanghai. In 2017, Pace exhibited teamLab "Living Digital Forest and Future Park" in Beijing, and a retrospective of James Turrell was hosted at the Long Museum on Shanghai's West Bund. In 2018, Beijing's Red Brick Museum exhibition Olafur Eliason. In 2019, Tank Art Center's "Force Temple", and the teamLab Borderless museum opened in Shanghai with a permanent space of 6,600 sqm. These represent huge investments. The shocking effects of the exhibitions stimulate audience's audio-visual senses. The spectacle of immersive experiences provides favorable means for dissemination over the internet. As a cultural phenomenon since the beginning of the new century, the relationship between exhibition, audience and public education has always been an important subject troubling practitioners of the National Art Museum of China. Modern exhibitions of the 21<sup>st</sup> century began in Beijing and Shanghai. Since 2010, government lead initiatives to build museums have taken off, as museums have become the symbolic standard of large to medium-sized cities, and on a business level, they are evaluated on the quality of public service through the number of exhibitions and viewers achieved per year. The public's acceptance of the new in various fields of culture is not exactly high, and contemporary art often keeps audiences away with obscure theories and unwieldy texts. For a long time, the balance between exhibition, audience and public education has troubled art museum practitioners. Around the five or six years after 2010, as the internet ecology wasn't fully developed, the blame for low museum attendance has generally been the lack of art education in China and a general lack of interest in art. Today, web celebrities check into exhibitions regularly and lead a surge of viewers that can only be called a phenomenon in the art world. This could even be seen as a form of art education. At the same time, the attendance of a "web celebrity" can be basically regarded as a KPI for an exhibition. From June to September 2019, "Picasso: Birth of a Genius" was exhibited at the Ullens Center for Contemporary Art (UCCA) in Beijing. Super IP accompanied the UCCA's professional promotion team, and the exhibition obtained a reach of nearly 1 billion through multimedia channels. Every day saw long lines at the exhibition, including work days.

Getting information, arriving at the site, queuing for admission, seeing the exhibition and taking photos, posting pictures on social media, getting likes and interactions: this has become a new art exhibition viewing model in the context of social media. In the second half of 2017, teamLab's IP was introduced to China by Chinese enterprise Blooming Investment, and its commercialization process began in the form of a nationwide exhibition tour. In the following two years, teamLab toured in Beijing, Shanghai, Shenzhen, Chengdu, Guangzhou, Wuhan and other cities, and was welcomed by local audiences. The success of teamLab has further stimulated the potential of the cultural industry. Since 2018, immersive exhibitions with IP at their core—supported by image and projection technology and themed with beautiful colors—have become a trend. Art historical exhibitions include Leonardo Da Vinci, Van Gogh, Picasso. Celebrity and entertainment exhibitions include The Beatles, Elvis and David Bowie. Viewers line up in an endless stream. At the same time, lifestyle-themed art exhibitions have also appeared. Big IP paired with the traffic

flow provided by web celebrity has become an effective model for an online space. Pet exhibitions have even started to appear. Exhibitions are announced through trending topics, breaking with the fixed channels for art, using media means for early promotion. After the exhibition opening, influence engagement is necessary. With a single post, one influencer can reignite interest in the show and capture more audiences. And when audience view the show themselves and post pictures, it creates even greater promotion. The network data created is similar to nuclear fission. Media continuously enlarges a topic, bringing audiences to the show. This business model has rapidly spread in large and medium-sized cities in China. Framing an angle, posing for the picture, saving a beautiful moment: these have become the main purpose of exhibitions. Posting pictures on social media is a standard operation. Winning praise and interaction online gives one a sense of accomplishment, completing the final psychological step. The consensus on the internet today is that time is the only scarce resource. Whether it's social media, content platforms, online shopping... The notion of "rivals" today is no longer the traditional sense of "competitive goods." Art has always been regarded as an elite and niche field, but with the continuous improvement of network transmission speed and the continuous evolution of social media, the engagement of smaller groups via web celebrity advertising has reinstated art in the public sphere. With the participation of diverse audiences, "art" itself has begun to expand into diverse narratives, and what was once "elite" has been given a new perspective in popular culture. Similarly, artists who are themselves users online have also joined the carnival, creating a new round of reflection and criticism on mass culture. The distinctive Trojan horse is also a parade float, where the elite and the masses mix as one. Just as the internet is increasingly flat, with data as the standard, everyone amounts to a single click.

## New Art Economy

Whether it is art galleries, art institutions, or the media, the blind elitist rendering of art keeps it removed from mass culture. Peripheral audiences often get artistic information from the media, such as "Another Sky-high Price in the Auction Market", which strips away the relationship between art and mass consumption. Around 2008, the rise of art foundations pushed the price of art higher, and at the cost of hundreds of thousands of dollars, art becomes prohibitive. In 2015, the boom of internet investment added wings to the imagination of art consumption, and the influx of hot money drove the consumption upgrade of art, especially in the huge market of art derivatives. Practice has proved that due to the cultural background of highly elitist art, mass consumption is more inclined to buy design products with relatively affordable prices, and the "consumption market" of art is not as large as expected, while the emergence of teamLab brings a new mode of art consumption.

Pace Beijing's "Living Digital Forest and Future Park" was priced at RMB 120 in 2017, sparking a heated debate in the capital. Although private art galleries in Shanghai began charging high prices for exhibitions a year or two previous, the price of more than RMB 100 in Beijing was the first. Due to special cultural policies, most official art institutions in China are open to the public free of charge for public benefit, while gallery agencies limit the flow of visitors with tickets. Galleries in 798 Art District set a price of RMB 2-20 according to tourist seasons. With a ticket price of RMB 60 for the 600-year-old Forbidden City in Beijing, it is hard for an art institution to start selling tickets at those prices. In recent years, private and enterprise art museums and other types of private art museums in China have emerged rapidly and achieved professional operation. Most exhibitions are also opened to the public in the form of selling tickets, with more flexible operation methods and more practical methods. In 2018, teamLab opened its first special art museum in Tokyo, with more than 2.3 million visitors in the first year, making it the world's largest independent art museum with the most annual visitors. The EPSON teamLab Borderless art museum, which opened in Shanghai in 2019, follows a similar pattern. Each appearance of teamLab is presented as a large-scale exhibition, and the operation mechanism of a theme park generates a complete management system. In addition to selling tickets, the model of systematically developing derivatives, theme stores, restaurants and cooperating with enterprises and institutions such as commercial space and real estate projects based on the exhibition contents makes the realization of art IP (rather than just works) possible. Evidence of the blurring of the boundary between art venues and theme parks is also emerging as a self-perpetuating system for art exhibitions and venues. teamLab drives the flow of offline visitors to the exhibition with great social media effect. Ticket revenue ranges from negligible relative exhibition costs to a part of the cost that can really support the exhibition. According to Artnet's report on Pace, the gallery received as much as \$10 million in ticket sales from its teamLab shows in Palo Alto, London and Beijing alone, and attracted more than half a million visitors. At the same time, in China, after obtaining the agency of teamLab in China, Shenzhen BloomingCulture Investment Co., Ltd. has successively obtained the exhibition authorization of Universal Pictures's Minions, Dunhuang, GAME ON of Barbican Art Center in Britain and other IP. The shows have grossed 100,000 tickets.

We can buy a set of Mickey Mouse and Donald Duck hoodies at the Disneyland store, but not a Walt Disney manuscript. At Pace you can buy a teamLab video that plays in the gallery space. Obviously, the theme park model does not conflict with the classical art business model. In addition to the high box office revenue, teamLab works push the art market into a broader dimension in a very diverse form.

1. IP authorization. In 2017, after the teamLab exhibition in Pace Beijing, Shenzhen BloomingCulture Investment Co., Ltd. bought the teamLab IP license in China, and received a warm response after the exhibition in first-tier cities across the country. Scale operations reduce operating costs, and each new city presents a new audience, the box office revenue objective.

2. Space customization. As an immersive experience, the teamLab works require adjustment of the equipment and sensors according to the specific space for each exhibition. Outside of IP licensing, immersive works can be sold as a whole. teamLab restaurant, also a brand of BloomingCulture Investment, is a typical case of application.
3. Video works. teamLab also has artwork based on traditional screens (eg. *Black Waves: Lost, Immersion and Rebirth; Live and die, Now and Forever*). Similar to immersive spatial display content, screen playback provides a channel for art collection to be associated with traditional methods.
4. Limited edition prints. Flourishing flowers and gorgeous colors paired with high-quality output of collection-grade printing. Limited edition prints produced by teamLab provide possibilities for light-weight collection at the family level.

Ticketing, video, crossover collaborations, spatial customization, planar output—teamLab is good business.

## Art, Design, Products

Art for me, design for you. Art and design separated at the time of 1920s when Bauhaus define design as an independent subject in the school. In a long time, fine art and design developed in two clearly different ways, fine art seeking for the ultimate value, focus on the spirit and ontology. Just on the opposite, design solve the concrete problems. Technique development changes the requirement of life style, more and more industry products meet the detailed need in the daily life, design is fast expanding its territory. By the consensus, modern design looking for the need of the function, and the purpose of the function will lead to a special form. With the improvement of life quality, the daily requirement has been more and more artistic. People pay more attention to the form, colors, material and so on additional aspects that make products not only easy to use, but also with good sensory experience. What should be noted is, concept in design has been evaluated heavily that meets the need of special life view. That do not means heavy design would be the best way to express, light design meets the low demand life style perfectly. Since design is more and more spiritual and conceptional developed, the boundary with art has been blurred.

teamLab is a typical case that play on the boundary of art and design. Of course we can regard their immersive pieces of works as art. And further, there is one special column with art on the main page of the official website is PRODUCTS. Compare to the art pieces of the teamLab works, we can easily observe that the technology which used in the art piece and products are similar, large screen, camera, sound, interaction and so on.

**Digital information Wall** is a touchscreen signage that allows users to intuitively select and closely view the works that catch their eye from among large quantities of images. When you touch your favorite photo out of the many that are spread across the screen, the photo becomes enlarged, and you can see detailed information about it. There are many different ways to use it depending on what photos you have running across the screen: for example, products and works, company histories, or photos of stores. In addition, a QR code that can be read by a smartphone can be displayed along with the detailed information about the photo, making it possible to send even more detailed information to the user. **The Message Pillar** is an AR pillar linked to an application where you can use your smartphone to throw in messages and watch or take pictures of the floating messages. When you first open the application, a tree composed of floating messages will appear above your smartphone screen. If you throw in your message, it will dance together with the other messages, creating a special experience that will live up any event. You can also take a picture together with the tree composed of your messages, creating a photographic record of this fantastical experience. **Sketch Piston - Playing Music** lets people play music by drawing lines on the screen with their fingers and then tapping the screen to place various stamps. The canvas is the world, and the lines and stamps drawn affect the world, which is created as sounds are played and characters bounce around. The musical scale played on a line depends on the height where it is drawn. People play music together by drawing lines and tapping the screen to place stamps.



**Digital information Wall**  
<https://borderless.teamlab.art>

**teamLabCamera** is digital signage that automatically takes photographs and connects with Facebook. Stand in front of the signage and press the start button, shooting will start automatically and photographs with various effects applied to them are uploaded to Facebook. A camera is no longer just another piece of equipment. teamLabCamera is a module designed for a new era in photography that allows free and diverse use across a wide range of platforms, including; digital signage, iPhone, smartphone, web camera, kinect, and 360degree photography. It allows a high degree of freedom and interaction for networked digital media and increases the opportunities for photographic shooting. teamLabCamera modules cooperate with social medias such as Facebook and Twitter. It utilizes facial recognition, cutout backgrounds, manga and comic effects, combination of images, change of clothing, and 360degree photography. **teamLab 360°studio** is a photographic studio product created at teamLabStudio, offering a unique experience to users. It uses technology that allows people to enter fictional 3D spaces generated in real time by computer graphics, and



combines it with automatic photo shooting technology for creating bullet-time movies by taking photos of a person at camera angles circling 360 degrees. With this technology, any location can be easily turned into a photographic studio.

**teamLab Albot** is a chat interface personalization tool. It is a SaaS-type cloud service that allows you to, just by embedding a few lines of code, incorporate a chat widget into your website, grasp users' actions on your site in real time, and speak to users based on information such as the last time, date and page they accessed, access counts, what OS the user is using, and so on. Furthermore, as it is linked to teamLab Recommend & Search, other than the ability to recommend items personalized for users, by directly listening to various information from users, it is also possible to feedback learning data for even better precision in recommendations. **FaceTouch** is an internal employee search system that can "see" which people are where. It is an employee search system which can easily confirm the characteristics and seating of employees by looking at photographs of their faces. Even if you work with somebody in the same company, it can often be difficult to remember the face of the person you are looking for, or remember where they are seated. Face Map is equipped with substantial search methods like utilizing the real layout of the office to search with tags such as seats, names, and positions, you can know immediately which people are located where. In addition, you can easily check information about the people you work with, as well as what skills they have. The affinity between employees can deepen, and harmonious, rich communication within the company can occur.

**Future Arita porcelain cafe.** With an unbroken 400 years of history behind it, Arita ware embodies and encompasses a world of beauty envisioned by generation after generation of its creators. We believe that Arita ware's greatest strength is its custodianship of that beautiful world that its creators envisioned and brought to life during those 400 years. We capitalized on that strength to create our Arita ware of the future. When our Arita ware is set on the table, the worlds contained within it unfold over the table and into the surrounding space. The worlds released by placing various pieces of Arita ware on the table begin to influence and affect each other, transforming the table and the surrounding space into a new world. Simply by installing some projectors and sensors, any table—and any space—can be transformed into a world of beauty just by setting it with Arita ware of the future. teamLabCamera is digital signage that automatically takes photographs and connects with Facebook. Stand in front of the signage and press the start button, shooting will start automatically and photographs with various effects applied to them are uploaded to Facebook.

As we have discussed, the structure and backstage of art works and multi-media products are similar, it is a chance for us to analyze teamLab technically by their products. Interaction is the method teamLab to create their works and also it is the strength way to show the effect in a product. Digital screen presenting is the easy and cheap way to realize interaction. The digital information wall based on the technique of touch screen, the Screen combination make new experience from the common environment, and the response point following the user's move, taking people into the aura of participating with the information. Interaction based on the cell phone would be another important way. People today are connected by the social media, screen occupied most of our attention. Message Pillar connects the cyber world and reality. With the AR app, people send message will appear in the illusion of a message tree around the pillar. Through the app, this product create a group effect in a kind of public aura in the cyber space. Sketch Piston is a work which combine visual effect and sound. Signals from shape and color occurs to different sound that you can compose your music by painting. It somehow refers to the 1960s Fluxes, to name every occasional flash as art. These three products uses technique not that complex, instead of art playing a more important role. Just as another piece of product from teamLab, the blackboard where little people live. The little people run around and do not notice us, but touch the little people or the floating bubbles and the world of the blackboard world will change in response to the touch.

At the same time, camera as a simple part with key function as the same with touch screen get large extension possibility. teamLabCamera based on the software, creating special scene for the photo, stick model's picture with different frames and stickers. And teamLab 360°studio is the updated camera which to take the 360° photos, offering large imagine space to meet the nowadays teenagers creativity. teamLab Albot and FaceTouch two products are created with the deep thinking of the artists group. For today, most big companies start to use Albot to take part in the seat which there would be real worker behind the screen. It is not such a fresh technology to make the culture shock today, but teamLab is the very first group to make the AI products all over the world. Electronic equipment largely extended human being's connection. Mean while the connection is becoming weak, even half of the contact list didn't meet each other. FaceTouch is created with deep thinking of the relationship in the modern life, helping to build a better social relationship.

Customizing is regarded to be the high class application of all the teamLab technique. Future Arita porcelain cafe is an example for restaurant. Under the projector, all the space is immersed in the image, flowing clouds and blooming flowers make the meal vivid. Even the animation play on the dishes, we can imagine the background the whole team was engaged. By the same means, PleasantHouse which site in Shenzhen China cost RMB 4,000,000 inviting teamLab made a customized restaurant in 2017-2018. It was that hot customers have to book the seat 3 months ahead of time, the average cost for the special site around RMB 2000, and everyday just receipt 16 guests. A Profitable Business.



## Summary

In November 2018, the establishment of the school of art management at the China Central Academy of Fine Arts marked the arrival of a new era. The default theme of "art" has shifted from "small art" with individual style, to a "big art" of much larger scale. "Art" can be a work, an exhibition or an activity. At the same time, it can also be a practice of social intervention. It is the breaking of rules that makes art, art. As the understanding of "art" continues to expand, the processes of production and realization also shift from personal expression to the implementation and management of projects. A successful model, artists hiring assistants to assist in producing work is not uncommon. Since Andy Warhol's "Factor," "art production" has become a mainstream narrative, while art criticism has, on a sociological level, probed the industrialization and conventionality of art production. Yet no one can deny that the large installations and sculptures placed in today's giant construction are incompatible. Jeff Koons, Anish Kapoor, Damien Hirst, Ai Weiwei, Takashi Murakami create works of immense volume, and accompanying those works are complete sets of production, installation, documentation—a vast group of personnel. It would be apt to compare it to the industrial processes of filmmaking, which require specialized technology, personnel, capital, etc.—the support of many levels of human resources. The forms, concepts, creative methods, technical requirements and organization of "art" have all undergone fundamental changes. teamLab is undoubtedly successful in project management and commercial operations, which is exactly what the age of the internet era requires of art. Similarly, what we are experiencing in China of the art practices today provides us with plenty to think and exploration with regards to the internet, business and creativity.

If you are not scanning facebook for news or post, you would be scanning the amazon for shopping. People living in today's internet times never put off their cellphones. For the internet product, the only rare resource is time. The internet product competitors are not competing in a specialized field, the only thing they are fighting for is the users' time. The border of art, design and product are totally blurred. When we open the teamLab website, click into different tag pages always showing us confusing feeling that we can hardly separate different kind of works. Based on the structure of teamLab work, or presenting forms, it is hard to say if they are the audiences of an art work or a product users. Reviewing the creation we mentioned in the article, teamLab is just like a Pandora's box, where ideas flies out endlessly. Mean while the strong computing team back up the data structure, small change of the image will tell a new story. The "team" shows its power, and "lab" is efficient.

teamLab is not so much a successful business model as it is a prodigious team of adventurers with Inoko Toshiyuki at its core. teamLab's official website is teamlab.art, the domain name suffix ".art" was originated by Ulvi Kasimov, a wealthy Russian businessman. The .art domain name is supported by block chain technology to guarantee the copyright and economy of artworks, and teamLab is the first organization to use this domain name. teamLab operates on multiple levels, and it is difficult to define whether it is an artist group, an art institution, a cultural and creative enterprise or an art design company. However, in today's era of rapid technological change, there seems to be no boundary to explore the meaning of something in a specific domain. Compared with the changes of in art today, the development of the art market is more closely related to traditional collecting habits. The writing of art history is a comprehensive feedback of science, technology, economy and culture from an era. The demand for projection equipment, computer technology and art design is coordinated and managed by a large number of participants in large-scale projects, full of vitality and without boundaries, the fundamental meaning of teamLab.

## teamLab Timeline

- 2001 Inoko Toshiyuki graduates from studies in computer science. With teachers and classmates, he forms a team for targeted development, founding the brand “teamLab.”
- 2008 teamLab receives the Asia Digital Award
- 2011 teamLab design the stage for ARASHI during NHK Red and White Song Battle, grabbing the attention of the design world
- 2012 teamLab receives the Laval Virtual ReVolution award
- 2015 “Future Park” opens in Odaiba, receiving 500,000 visits in two months, and making it the third most visited exhibition in Japan that year; at the Milan World’s Fair, visitors line up for upwards 8 hours to view teamLab’s works; nominated for Design for Asia Award top ten exhibitions; receives “Asia Design Award—Most Influential Design in Asia”; nominated for Prudential Eye Awards.
- 2016 “Living Digital Space and Future Park” receives 150,000 visitors in Silicon Valley
- 2017 teamLab premiers in China at Pace Beijing; rights for teamLab are sold to Shenzhen BloomingCulture Investment Co., Ltd.; a country-wide tour is started; receives the Indian “Future of Asian Art” award.
- 2018 After one year of operations, teamLab Borderless in Odaiba receives 2,300,000 visitors from more than 160 countries, topping the Van Gogh Museum to become the most visited museum featuring a single artist.
- 2019 “EPSON teamLab Borderless opens in Shanghai, a 6,600 sqm space presenting 50 works.

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