

DOPAMINING

This is a day I've been looking forward to for two-and-a-half years.

Every once in a while, a revolutionary product comes along that changes everything. And Apple has been – well, first of all, one's very fortunate if you get to work on just one of these in your career.

Apple's been very fortunate. It's been able to introduce a few of these into the world.

In 1984, we introduced the Macintosh. It didn't just change Apple, it changed the whole computer industry.

In 2001, we introduced the first iPod, and... it didn't just – it didn't just change the way we all listen to music, it changed the entire music industry.

Well, today, we're introducing three revolutionary products of this class.

The first one: is a widescreen iPod with touch controls.

The second: is a revolutionary mobile phone.

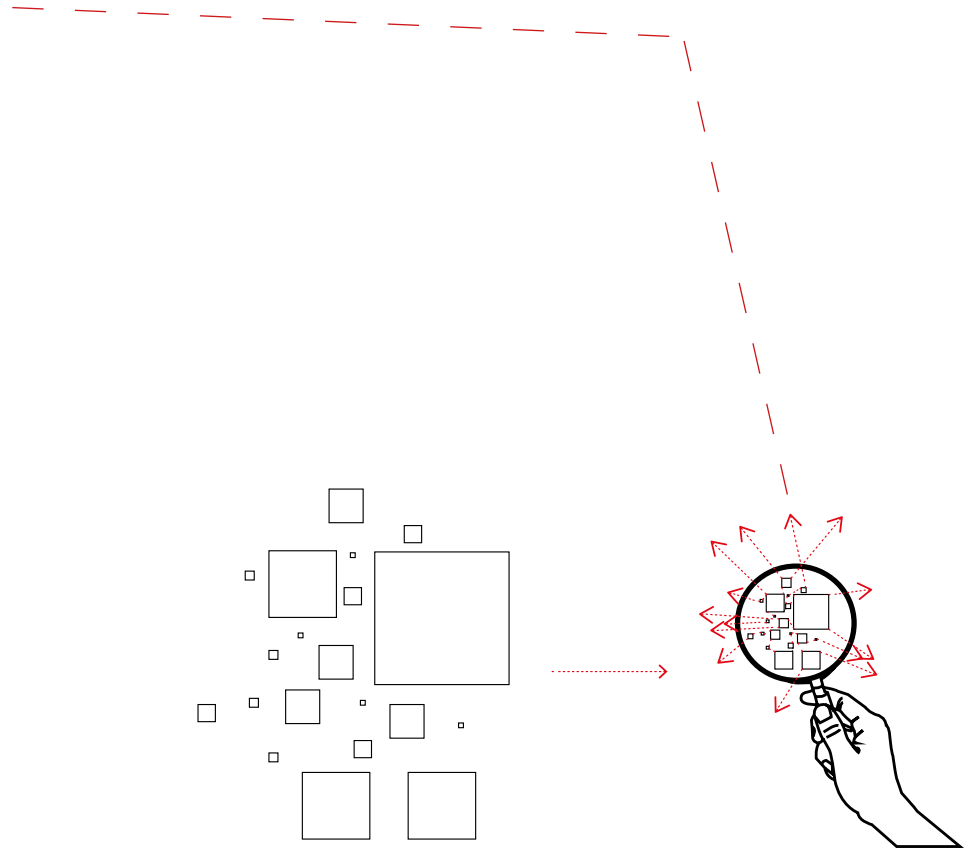
And the third is a breakthrough Internet communications device.

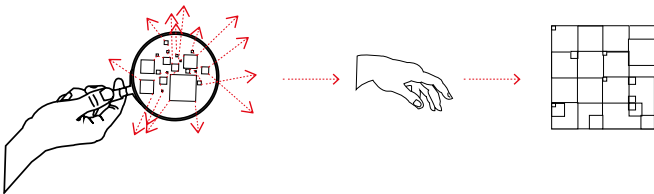
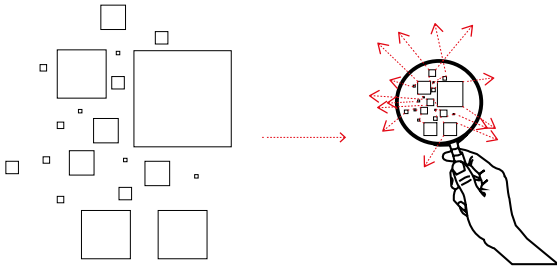
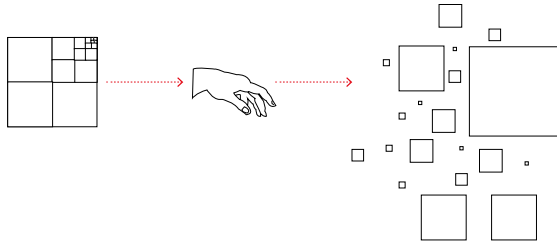
So, three things: a widescreen iPod with touch controls; a revolutionary mobile phone; and a breakthrough Internet communications device.

An iPod, a phone, and an Internet communicator. An iPod, a phone ... Are you getting it?

These are not three separate devices, this is one device, and we are calling it iPhone.

This is my field notes document. A document that keeps on expanding. Several of the photos are snatched from the fields of the www. Quotes I find relevant for my own project and process pictures from my own studio as a reminder of what must be done. It's a personal reflection/to-do list/sketch book. A chaos inspired by Marshall McLuhan and Quentin Fiore's classic *The Medium is the Massage*, and the book *The Extreme Self* by Shuman Baser, Douglas Coupland and Hans Ulrich Obrist.





“The medium, or process, of our time is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. It is forcing us to reconsider and re-evaluate practically every thought, every action, and every institution formerly taken for granted.”

- Marshall McLuhan

The Medium is the Message

Woodlo



Vega Drake Carisson
Christine Dybing
Hedda Grading
Celine Grimnes
August Horn
Kristin Sverrisdóttir
Johnny Huynh

Bill Mobeck
Julie Martine Paulsen
Frida Kaul Varøystrand
Mariya Kaplunenko
Jennifer Lundinner
Marte Elise Nesdal

OPEN UNTIL 28.02

Sympathetic Magic.



Lucretia, Nude female torsoes 48 in kneeling position

Even if the term, **sympathetic magic**, seems a bit silly, this is actually how the evolution of stuff works. Everything is a reaction to the things that already exists. What you now are creating could be the reason for the things that not yet exists. This is how you develop as a designer and an artist. Nothing comes from nothing.

Sympathetic magic is a form of correspondence. By corresponding and by having a dialog with the history or the present situation, you think: *What's next? What should I create?*

This is where your experience kicks in, your knowledge, your practical skills and your thorough research. All of this together strengthens your intuitive powers. Criticality is based on these factors which again generates new stuff. New isms, new eras and new fundamentals. That is the evolutions of the arts. Or at least it might be.





Space Program: Rare Earths



- We go to other worlds not because we've fucked up this planet and are looking for a new home, but to better understand our resources on earth.

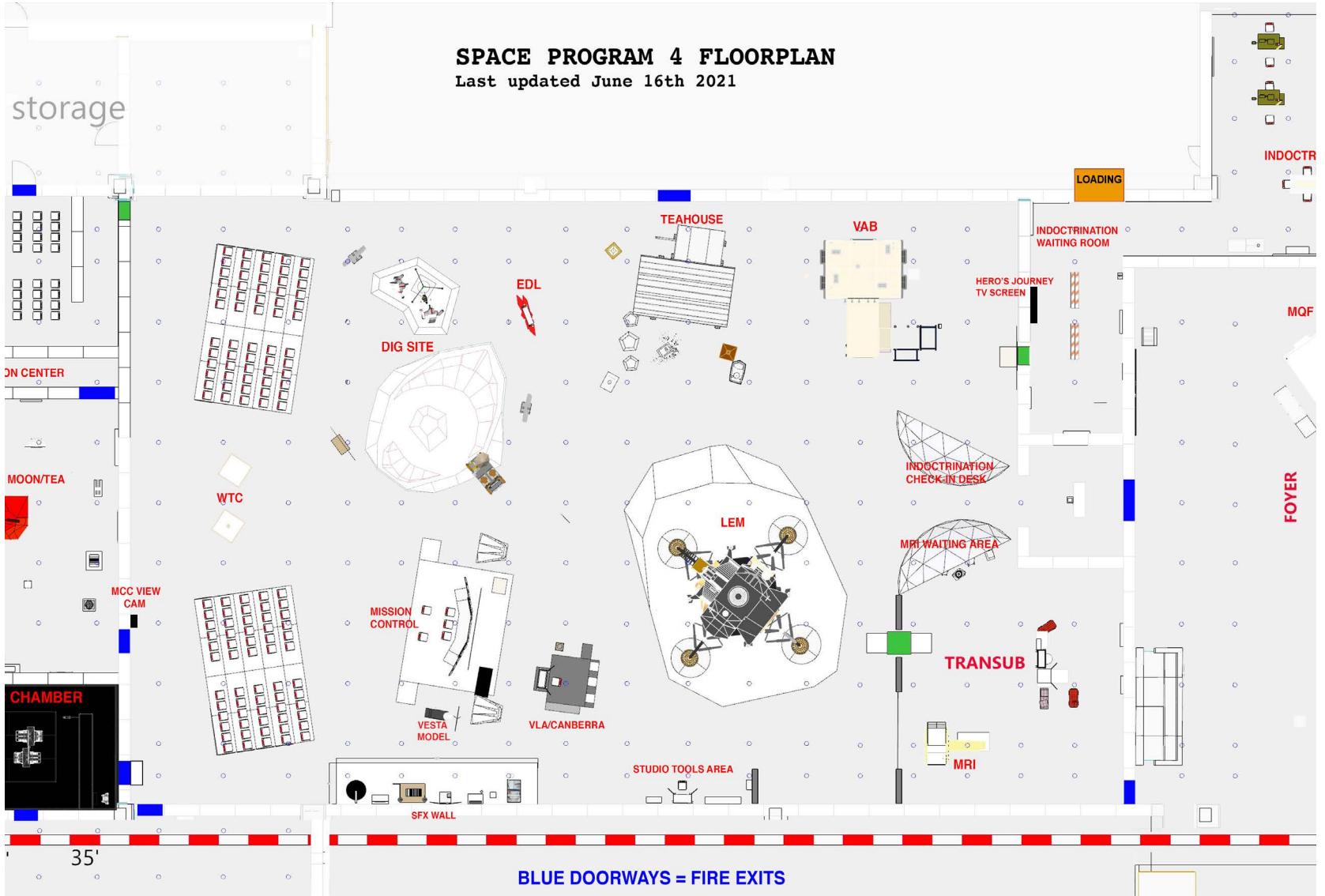
We are all interconnected telepathically through our hand held devices. These devices depend on rare earth elements. We make more phones than the resources of planet Earth can provide. 4-Vesta, with its differentiated core, offers unique possibilities for surface mining: gold, platinum, and palladium we need to fulfill our wants.

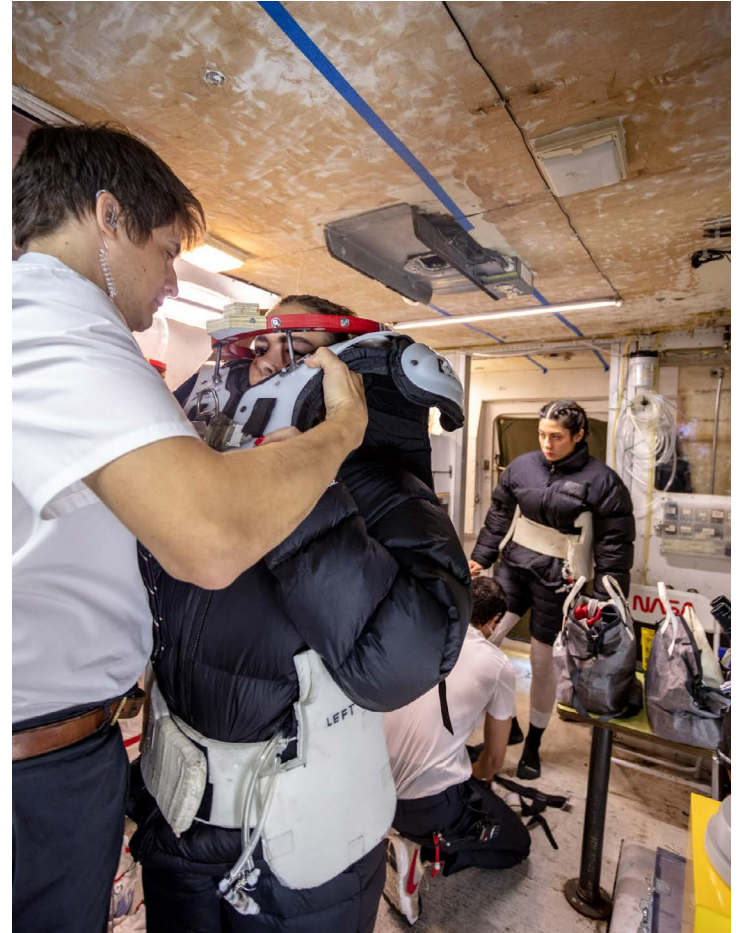
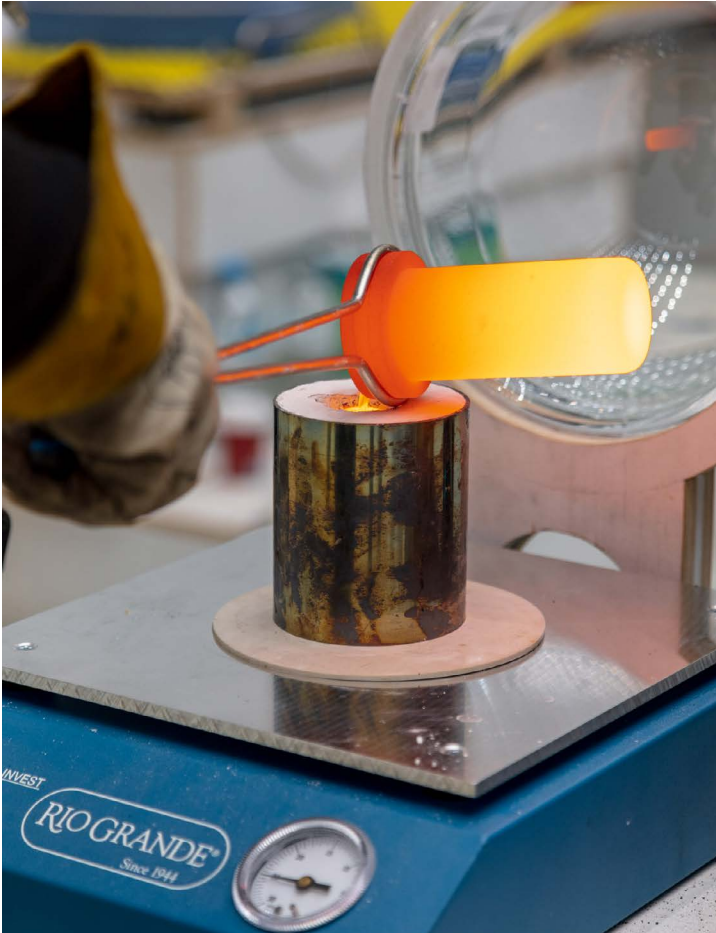


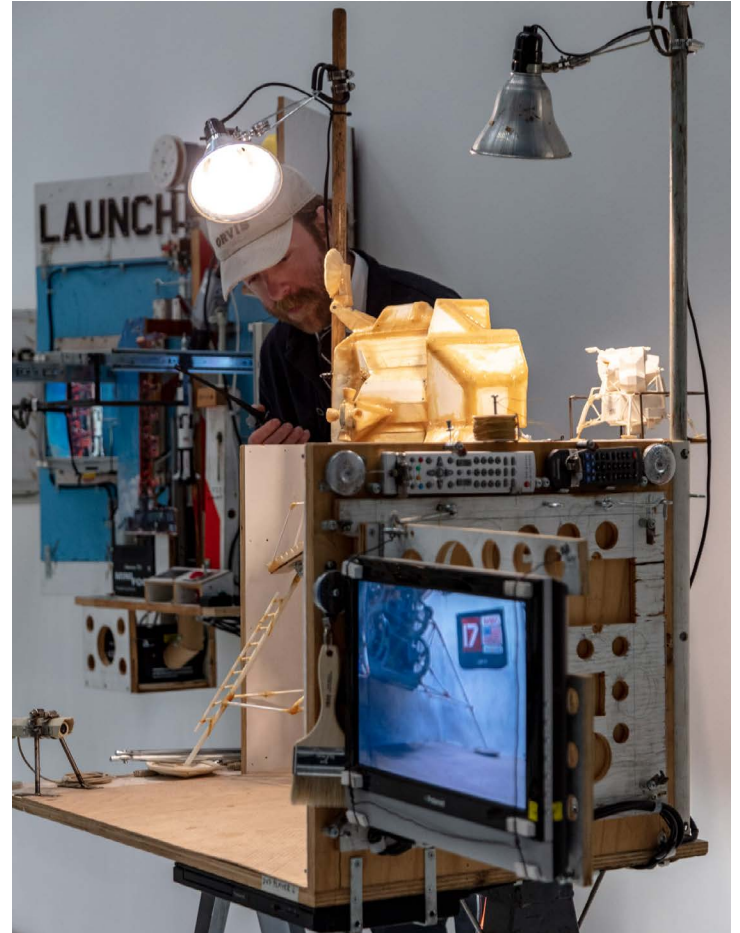
SPACE PROGRAM 4 FLOORPLAN

Last updated June 16th 2021

storage



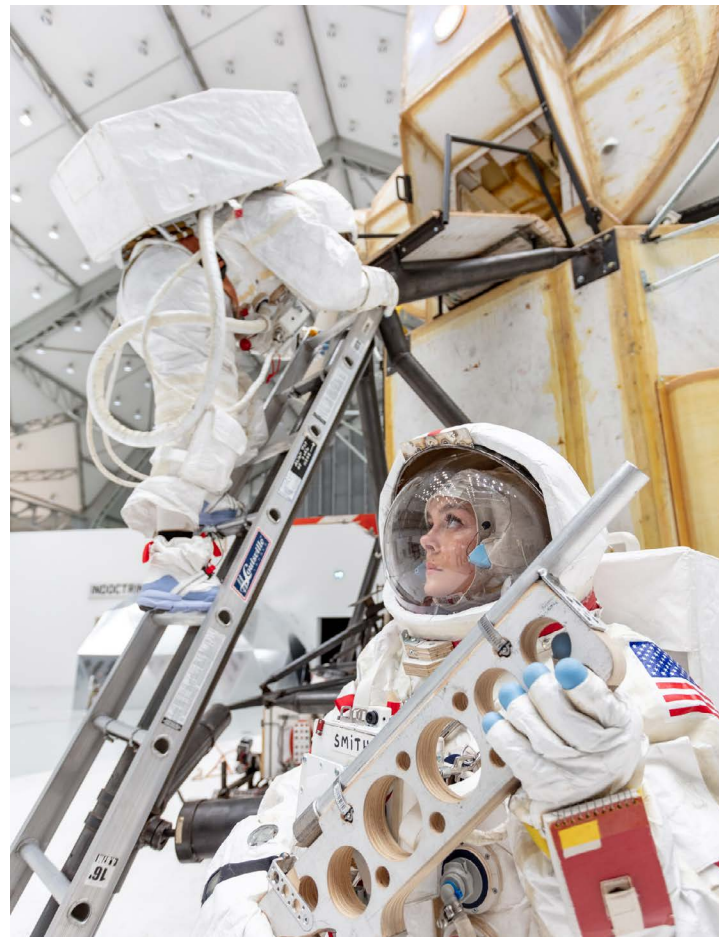






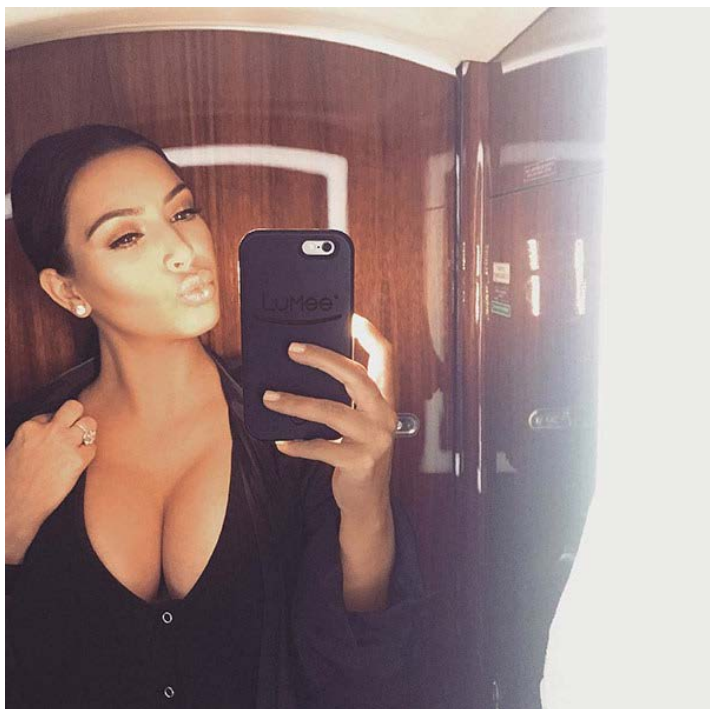






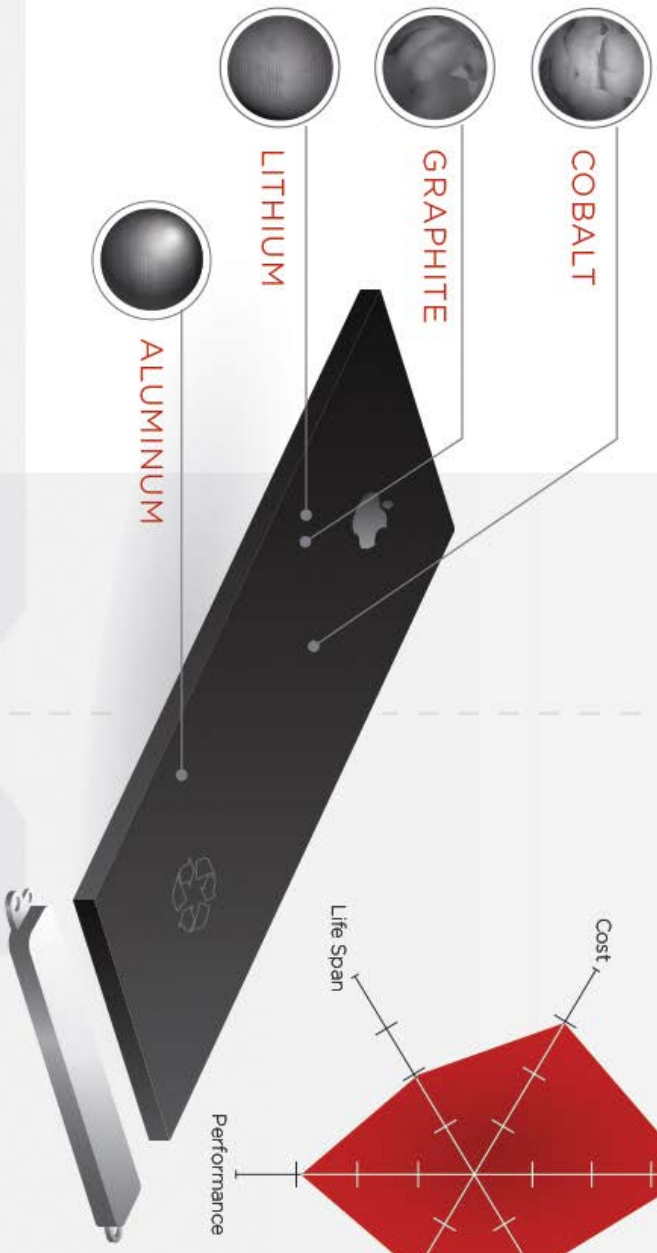


A composite of dredged up earth.



BATTERY

The iPhone uses lithium cobalt oxide (LiCoO₂) chemistry in its cathode, with 60% of it being made from cobalt. It also uses a graphite anode and aluminum casing.



Source: Battery University

CASE

ALUMINUM

The iPhone's case uses aerospace-grade aluminum with an anodized outside layer for extra protection. This layer is just five micrometers thick, thinner than paint.



CAMERA

SAPPHIRE GLASS

This synthetic material covering the lens rates a 9 on Mohs hardness scale, making it nearly as hard as a diamond.



ELECTRONICS

PROCESSOR CHIP

MICRO-ELECTRICAL

Copper, gold, silver, and tungsten are used for electrical connections within the phone. Which metal is chosen depends on the need. For example, while silver is the most conductive metal, gold never tarnishes.



GOLD



SILVER



COPPER



TUNGSTEN

MICRO-CAPACITORS

Micro-capacitors regulate the electricity flow. Apple managed to guarantee the use of conflict-free tantalum in February 2014.



TANTALUM

SILICON

The phone's processor is mainly made from silicon, but it is bombarded by various elements to give it superior electrical properties.



Phosphorus



Arsenic



Boron



Indium



Gallium

SOLDERING



COPPER



TIN



SILVER

SOUND + VIBRATION

To get lots of sound from a small place, high-powered neodymium magnets are used. They are made from neodymium, iron, and boron, and sometimes also contains smaller amounts of other rare earths. The same magnets also power the phone's vibration function:



IRON



DYSPROSIUM



BORON



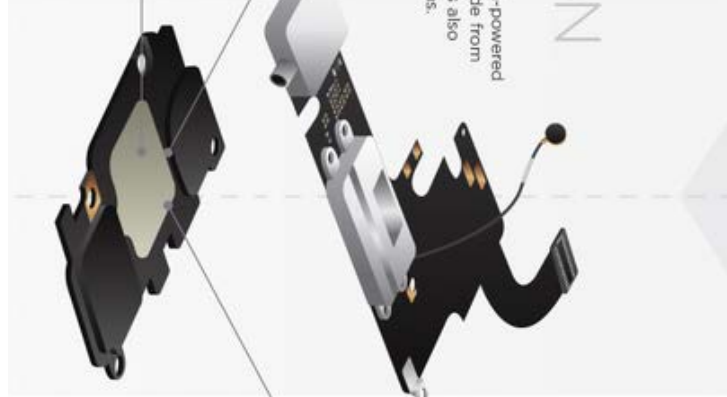
PRASEODYMIUM



NEODYMIUM



NICKEL



SCREEN

The iPhone's screen is much more complex than it may seem. The aluminosilicate glass is bombarded with ions of potassium for strength.



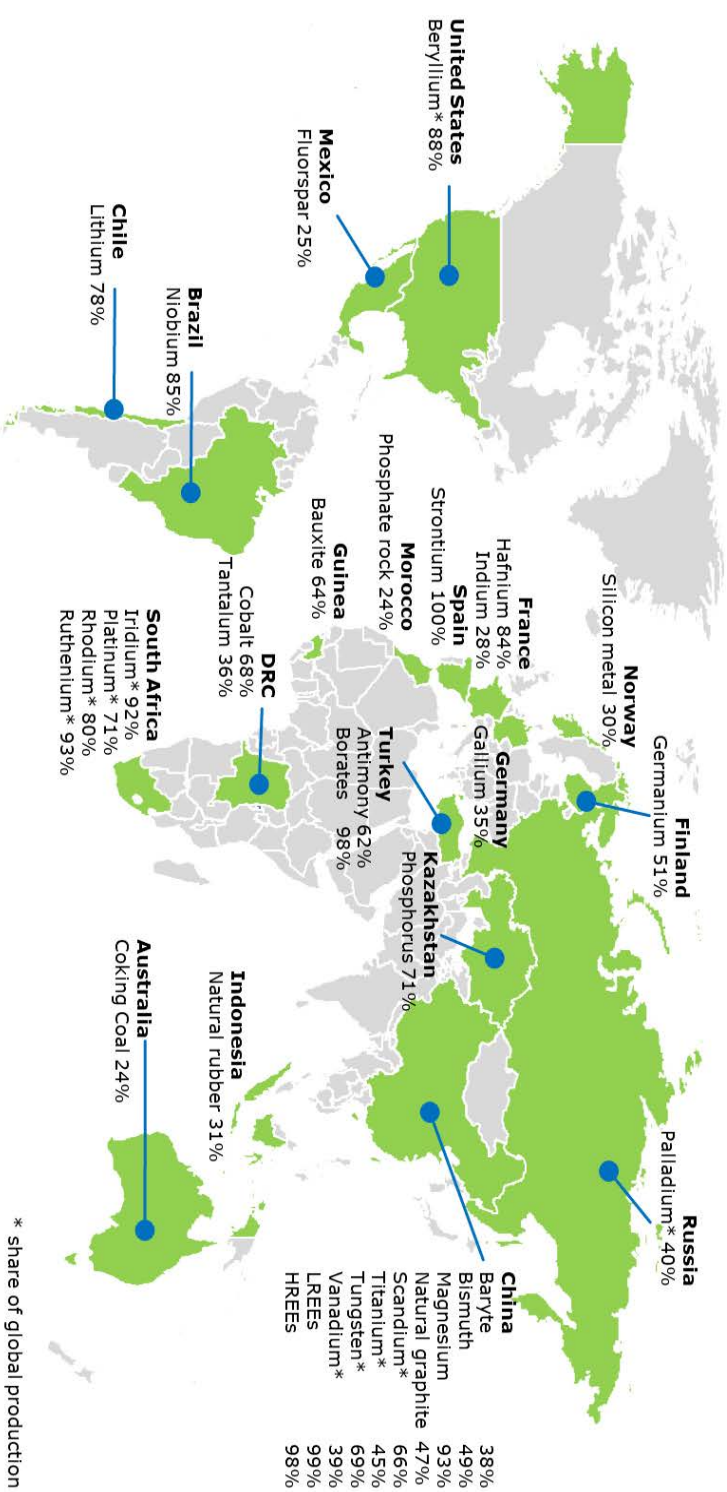
A layer of indium tin oxide is used to make it's touchscreen capable.



RARE EARTH METALS
Small amounts of rare earths are used to produce colors on the screen.



* share of global production





Supplier List

The Apple Supplier List represents 98 percent of our direct spend for materials, manufacturing, and assembly of our products worldwide for fiscal year 2020.



People come first.
In everything we do.



Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
3M Company	Guangdong; Jiangsu; Shanghai	China mainland
	Yamagata	Japan
	Gyeonggi-Do	South Korea
	Alabama; Iowa; Minnesota; Ohio; South Carolina; Wisconsin	United States
AAC Acoustic Technologies Holdings Incorporated	Guangdong; Jiangsu	China mainland
Advanced Semiconductor Engineering Incorporated	Jiangsu; Shanghai	China mainland
	Yamagata	Japan
	Gyeonggi-Do	South Korea
		Singapore
	Kaohsiung; Taoyuan	Taiwan
AGC Incorporated	Antwerp Province	Belgium
	Guangdong	China mainland
	Chiba; Fukushima; Hyogo	Japan
	Lamphun	Thailand
AKM Meadville Electronics (Xiamen) Company Limited	Guangdong; Shanghai	China mainland
Alpha and Omega Semiconductor Limited	Chongqing; Shanghai	China mainland
	Oregon	United States
Alps Alpine Company Limited	Jiangsu	China mainland
	Fukushima; Miyagi; Niigata	Japan
	Negeri Sembilan	Malaysia
Amkor Technology Incorporated	Shanghai	China mainland
	Fukui; Hokkaido	Japan
	Gyeonggi-Do; Incheon	South Korea
	Laguna	Philippines
	Hsinchu; Taoyuan	Taiwan
Amphenol Corporation	Guangdong; Jiangsu; Shanghai; Zhejiang	China mainland

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
ams AG	Styria	Austria
	Penang	Malaysia
	Laguna	Philippines
		Singapore
Analog Devices Incorporated		Singapore
Asia Vital Components Company Limited	Hubei; Jiangsu	China mainland
AT & S Austria Technologie & Systemtechnik AG	Chongqing; Shanghai	China mainland
Auras Technology Company Limited	Guangdong; Jiangsu	China mainland
Biel Crystal Manufactory Limited	Guangdong	China mainland
	Bac Ninh	Vietnam
BOE Technology Group Company Limited	Anhui	China mainland
Boyd Corporation	Guangdong; Jiangsu	China mainland
Broadcom Limited	Colorado	United States
Bumchun Precision Company Limited	Gyeonggi-Do	South Korea
BYD Company Limited	Guangdong; Shanghai	China mainland
Career Technology (Mfg) Company Limited	Jiangsu	China mainland
	Taipei	Taiwan
Catcher Technology Company Limited	Jiangsu	China mainland
Cheng Uei Precision Industry Company Limited (Foxlink)	Guangdong; Jiangsu	China mainland
	Andhra Pradesh	India
Chengdu Homin Technology Company Limited	Sichuan	China mainland
China Circuit Technology (Shantou) Corporation	Guangdong	China mainland
CN Innovations Holdings Limited	Guangdong; Hubei	China mainland
Compal Electronics Incorporated	Chongqing; Jiangsu	China mainland
	Phetchaburi	Thailand
	Vinh Phuc	Vietnam

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Compeq Manufacturing Company Limited	Chongqing; Guangdong; Jiangsu	China mainland
	Taoyuan	Taiwan
Concraft Holding Company Limited	Jiangsu	China mainland
Consumer HK Holdco II Limited	Guangdong	China mainland
Corning Incorporated	Chungcheongnam-Do	South Korea
	Tainan	Taiwan
	Kentucky	United States
Cosmosupplylab Limited	Guangdong	China mainland
	Chonburi	Thailand
Cowell E Holdings Incorporated	Guangdong	China mainland
CymMetrik Enterprise Company Limited	Guangdong; Henan; Jiangsu	China mainland
Delta Electronics Incorporated	Hunan; Jiangsu	China mainland
	Hsinchu	Taiwan
	Chachoengsao	Thailand
Derkwoo Electronics Company Limited	Gyeongsangbuk-Do	South Korea
Dexerials Corporation	Tochigi	Japan
Diodes Incorporated	Shanghai; Sichuan	China mainland
	Thuringia	Germany
	Manchester	United Kingdom
Dynapack International Technology Corporation	Jiangsu	China mainland
Flex Limited	Guangdong	China mainland
	Tamil Nadu	India
	Tennessee; Texas	United States
Flexium Interconnect Incorporated	Jiangsu	China mainland
	Kaohsiung	Taiwan
Foster Electric Company Limited	Binh Duong; Da Nang	Vietnam

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Fujian Nanping Aluminium Company Limited	Sichuan	China mainland
Fujikura Limited	Shanghai	China mainland
	Niigata; Yamanashi	Japan
	Ayutthaya; Lamphun; Pathum Thani; Prachin Buri	Thailand
Future Hi Tech Company Limited	Shanghai	China mainland
General Interface Solution Limited	Guangdong; Sichuan	China mainland
Genius Electronic Optical Company Limited	Fujian	China mainland
Global Lighting Technologies	Shanghai	China mainland
GoerTek Incorporated	Guangdong; Jiangsu; Shandong	China mainland
	Bac Ninh	Vietnam
Golden Arrow Printing Company Limited	Jiangsu	China mainland
Hama Naka Shoukin Industry Company Limited	Jiangsu	China mainland
	Guangdong; Shandong	China mainland
	Baden-Wuerttemberg	Germany
Henkel AG & Company KGaA	Minnesota; New Hampshire	United States
	Hi-P International Limited	Jiangsu; Shanghai
Hirose Electric Company Limited	Aomori; Iwate; Miyagi; Toyama	Japan
	Gyeonggi-Do	South Korea
Hitachi Limited	Ibaraki; Osaka; Tokyo	Japan
Hon Hai Precision Industry Company Limited (Foxconn)	Sao Paulo	Brazil
	Guangdong; Henan; Hubei; Jiangsu; Shanghai; Shanxi; Sichuan; Zhejiang	China mainland
	Tamil Nadu	India
	Texas	United States
	Bac Giang	Vietnam
IDEMIA Group	Shanghai	China mainland

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
IDEMIA Group (continued)	California	United States
II-VI Incorporated	County Durham	United Kingdom
	California; Illinois; New Jersey; Pennsylvania; Texas	United States
INB Electronics Limited	Guangdong; Jiangxi	China mainland
Infineon Technologies AG	Carinthia	Austria
	Bavaria; Saxony	Germany
	Kedah	Malaysia
	Cavite	Philippines
	Texas	United States
Intel Corporation	Liaoning; Sichuan	China mainland
	County Kildare	Ireland
		Israel
	Penang	Malaysia
	Arizona; Massachusetts; New Mexico; Oregon	United States
	Ho Chi Minh City	Vietnam
Inventec Corporation	Shanghai	China mainland
J.Pond Industry (Dongguan) Company Limited	Guangdong; Jiangsu	China mainland
Jabil Incorporated	Guangdong; Jiangsu; Sichuan; Tianjin	China mainland
	Maharashtra	India
	Taichung	Taiwan
Japan Aviation Electronics Industry Limited	Aomori; Yamagata	Japan
Japan Display Incorporated	Guangdong; Jiangsu	China mainland
	Chiba; Ishikawa	Japan
JCET Group Company Limited	Jiangsu	China mainland
	Incheon	South Korea

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
JCET Group Company Limited (continued)		Singapore
Jiangsu Gian Technology Company Limited	Jiangsu	China mainland
Jinlong Machinery and Electronics Company Limited	Guangdong	China mainland
Jones Tech PLC	Jiangsu	China mainland
JXTG Holdings Incorporated	Ibaraki; Kanagawa	Japan
Kam Kiu Aluminium Products Group Limited	Guangdong	China mainland
Kinsus Interconnect Technology Corporation	Hsinchu; Taoyuan	Taiwan
Kioxia Holdings Corporation	Mie; Tokyo	Japan
	Jiangsu	China mainland
Knowles Corporation	Penang	Malaysia
	Jiangsu	China mainland
Kunshan Kersen Science and Technology Company Limited	Jiangsu	China mainland
Kyocera Corporation	Guangdong	China mainland
	Kagoshima; Kyoto; Shiga; Yamagata	Japan
Largan Precision Company Limited	Guangdong	China mainland
	Taichung	Taiwan
Lens Technology Company Limited	Guangdong; Hunan; Jiangsu	China mainland
	Bac Giang	Vietnam
LG Chem Limited	Jiangsu	China mainland
	Chungcheongbuk-Do	South Korea
LG Display Company Limited	Guangdong; Jiangsu; Shandong	China mainland
	Gyeonggi-Do; Gyeongsangbuk-Do	South Korea
	Haiphong	Vietnam
LG Innotek Company Limited	Gyeonggi-Do; Gyeongsangbuk-Do	South Korea
	Haiphong	Vietnam
Lingyi iTech (Guangdong) Company	Amazonas	Brazil
	Guangdong; Henan; Jiangsu; Sichuan	China mainland

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Lingyi iTech (Guangdong) Company (continued)	Tamil Nadu	India
	Bac Giang	Vietnam
Lite-On Technology Corporation	Guangdong; Shanghai	China mainland
Longwell Company	Guangdong	China mainland
LOTES Company Limited	Guangdong	China mainland
Luen Fung Group	Guangdong	China mainland
Lumileds Holding B.V.	Penang	Malaysia
		Singapore
Luxshare Precision Industry Company Limited	Anhui; Jiangsu; Jiangxi; Zhejiang	China mainland
	Bac Giang	Vietnam
Marian Incorporated	Guangdong; Jiangsu	China mainland
Maxim Integrated Products Incorporated	Cavite	Philippines
	Bangkok	Thailand
	Oregon	United States
Microchip Technology Incorporated	Pays de la Loire	France
	Trøndelag	Norway
	Laguna	Philippines
	Hampshire	United Kingdom
	California; Colorado	United States
Micron Technology Incorporated	Shaanxi	China mainland
	Hiroshima	Japan
		Singapore
	Taichung; Taoyuan	Taiwan
MinebeaMitsumi Incorporated	Phnom Penh	Cambodia
	Shandong; Shanghai	China mainland
	Hokkaido	Japan

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
MinebeaMitsumi Incorporated (continued)	Cebu	Philippines
	Ayutthaya; Lopburi	Thailand
Molex Incorporated	Shanghai	China mainland
	Kagoshima; Shizuoka	Japan
	Penang	Malaysia
	Sonora	Mexico
Murata Manufacturing Company Limited	Guangdong; Jiangsu	China mainland
	Fukui; Ishikawa; Miyagi; Miyazaki; Nagano; Okayama; Shiga; Shimane; Toyama; Yamagata	Japan
	Perak	Malaysia
		Singapore
	Taichung	Taiwan
	Lamphun	Thailand
	Da Nang; Tien Giang	Vietnam
MYS Group Company Limited	Chongqing; Guangdong; Jiangsu	China mainland
	Bac Ninh	Vietnam
Nanofilm Technologies International Private Limited	Shanghai	China mainland
	Hai Duong	Vietnam
Nanya Technology Corporation	Jiangsu	China mainland
	Taipei; Taoyuan	Taiwan
Nexperia B.V.	Negeri Sembilan	Malaysia
	Laguna	Philippines
NGK Spark Plug Company Limited	Nagano	Japan
Nichia Corporation	Tokushima	Japan
Nidec Corporation	Guangdong	China mainland
	Laguna	Philippines

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Nissha Company Limited	Hyogo; Ishikawa; Shiga	Japan
Nitto Denko Corporation	Guangdong; Shanghai	China mainland
	Aichi; Hiroshima; Mie	Japan
	Gyeonggi-Do; Gyeongsangbuk-Do	South Korea
NOK Corporation	Guangdong; Jiangsu	China mainland
	Ibaraki	Japan
	Kaohsiung; Tainan	Taiwan
	Ayutthaya	Thailand
	Hung Yen	Vietnam
NXP Semiconductors N.V.	Shanghai	China mainland
	Kaohsiung	Taiwan
		Singapore
OFILM Group Company Limited	Guangdong; Jiangxi	China mainland
ON Semiconductor Corporation	Oudenaarde	Belgium
	Guangdong; Sichuan	China mainland
	Zlín Region	Czech Republic
	Fukushima; Niigata	Japan
	Gyeonggi-Do	South Korea
	Negeri Sembilan	Malaysia
	Cavite; Cebu; Tarlac	Philippines
		Singapore
	Idaho; Maine; Oregon; Pennsylvania	United States
Paishing Technology Company	Chongqing; Guangdong	China mainland
Panasonic Corporation	Jiangsu; Shandong	China mainland
	West Java	Indonesia
	Fukui; Hokkaido; Kyoto; Mie; Niigata; Okayama; Saga; Toyama	Japan

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Pegatron Corporation	New South Wales	Australia
	Jiangsu; Shanghai; Zhejiang	China mainland
	Moravian-Silesian Region	Czech Republic
	Tokyo	Japan
	Seoul	South Korea
		Singapore
	Taoyuan	Taiwan
	California	United States
Phone In Mag-Electronics Company Limited	Guangdong; Henan; Jiangsu	China mainland
Pioneer Material Precision Tech Company Limited	Chongqing; Guangdong; Jiangsu	China mainland
Plansee Group	Shanghai	China mainland
POSCO International	Gyeonggi-Do; Gyeongsangbuk-Do	South Korea
Primax Electronics Limited	Guangdong	China mainland
Qorvo Incorporated	Beijing; Shandong	China mainland
	Haredia	Costa Rica
	Florida; North Carolina; Oregon; Texas	United States
Quadrant Solutions	Zhejiang	China mainland
QUALCOMM Incorporated	Styria	Austria
	Jiangsu	China mainland
	Bavaria	Germany
		Singapore
Quanta Computer Incorporated	Chongqing; Shanghai	China mainland
	Bangkok	Thailand
R.R. Donnelley and Sons Company	Guangdong; Jiangsu; Shanghai; Sichuan	China mainland
Radiant Opto-Electronics Corporation	Guangdong; Jiangsu	China mainland
Renesas Electronics Corporation	Aomori; Kanagawa; Shiga	Japan

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Renesas Electronics Corporation (continued)	Penang	Malaysia
	California	United States
Robert Bosch GmbH	Jiangsu	China mainland
	Baden-Wuerttemberg	Germany
Rohm Company Limited	Tianjin	China mainland
	Fukuoka; Kyoto; Miyazaki; Okayama	Japan
	Daejeon	South Korea
	Kelantan	Malaysia
	Cavite	Philippines
	Pathum Thani	Thailand
Royal DSM	Jiangsu	China mainland
	Drenthe; Limburg	Netherlands
SABIC Innovative Plastics	Guangdong; Shanghai	China mainland
	Indiana	United States
Samsung Electro-Mechanics Company Limited	Tianjin	China mainland
	Busan; Sejong	South Korea
	Laguna	Philippines
	Chachoengsao	Thailand
Samsung Electronics Company Limited	Jiangsu; Shaanxi	China mainland
	Chungcheongnam-Do; Gyeonggi-Do	South Korea
	Texas	United States
	Bac Ninh	Vietnam
Samsung SDI Company Limited	Tianjin	China mainland
Selen Science & Technology Company Limited	Jiangsu	China mainland
Seoul Semiconductor Company Limited	Gyeonggi-Do	South Korea
	Ha Nam	Vietnam

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
SFS Group AG	Jiangsu	China mainland
Shandong Innovation Group	Shandong	China mainland
Shanghai Industrial Holdings Limited	Henan; Jiangsu; Shandong; Sichuan	China mainland
Sharp Corporation	Jiangsu	China mainland
	Mie	Japan
	Binh Duong	Vietnam
Shenzhen Deren Electronic Company Limited	Guangdong	China mainland
Shenzhen Desay Battery Technology Company Limited	Guangdong	China mainland
Shenzhen Everwin Precision Technology Company Limited	Guangdong	China mainland
Shenzhen Fortunta Technology Company Limited	Guangdong	China mainland
Shenzhen Sunway Communication Company Limited	Beijing; Guangdong; Jiangsu	China mainland
Shenzhen YUTO Packaging Technology Company Limited	Guangdong; Henan; Jiangsu; Shanghai; Sichuan	China mainland
	Karnataka	India
	Bac Ninh	Vietnam
Shin Zu Shing Company Limited	Jiangsu; Shandong	China mainland
	Taipei	Taiwan
Simplo Technology Company Limited	Jiangsu	China mainland
SK hynix Incorporated	Chongqing; Jiangsu	China mainland
	Chungcheongbuk-Do; Gyeonggi-Do	South Korea
Skyworks Solutions Incorporated	Osaka	Japan
	Baja California	Mexico
		Singapore
	California; Massachusetts	United States
Solvay S.A.	Jiangsu	China mainland
	Georgia; Ohio	United States

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Sony Corporation	Kagoshima; Nagasaki; Yamagata	Japan
STMicroelectronics N.V.	Guangdong	China mainland
	Auvergne-Rhône-Alpes; Provence-Alpes-Côte d'Azur; Centre-Val de Loire	France
	Lombardy; Sicily	Italy
	Johor	Malaysia
		Malta
	Laguna	Philippines
		Singapore
Stora Enso Oyj	Guangdong; Hebei; Jiangsu; Zhejiang	China mainland
	Northern Savonia	Finland
Sumida Corporation	Guangdong; Hunan	China mainland
Sumitomo Chemical Company Limited	Jiangsu	China mainland
	Ehime	Japan
Sumitomo Electric Industries Limited	Guangdong	China mainland
	Aomori; Shiga	Japan
	Laguna	Philippines
	Hanoi	Vietnam
Sunrex Technology Corporation	Jiangsu	China mainland
Sunwoda Electronic Company Limited	Guangdong	China mainland
	Uttar Pradesh	India
Suzhou Anjie Technology Company Limited	Jiangsu	China mainland
Suzhou Dongshan Precision Manufacturing Company Limited	Jiangsu	China mainland
Suzhou Victory Precision Manufacture Company Limited	Jiangsu	China mainland
Suzhou Xinjieshun Hardware Machine Electricity Company Limited	Jiangsu	China mainland
Suzhou Zhongjiemai Panel Industry Technology Company Limited	Jiangsu	China mainland

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Taiwan Hodaka Technology Company Limited	Tainan	Taiwan
Taiwan Semiconductor Manufacturing Company Limited	Hsinchu; Taichung; Tainan; Taoyuan	Taiwan
Taiyo Yuden Company Limited	Guangdong	China mainland
	Fukushima; Gunma; Niigata; Wakayama	Japan
	Gyeongsangnam-Do	South Korea
	Sarawak	Malaysia
	Cebu	Philippines
TDK Corporation	Fujian; Guangdong; Jiangsu; Liaoning; Shandong	China mainland
	Akita; Iwate; Nagano; Yamagata; Yamanashi	Japan
	Hsinchu	Taiwan
	Wisconsin	United States
Teikoku Printing Inks Manufacturing Company Limited	Shanghai	China mainland
	Yamanashi	Japan
Texas Instruments Incorporated	Sichuan	China mainland
	Bavaria	Germany
	Fukushima; Ibaraki	Japan
	Selangor	Malaysia
	Benguet; Pampanga	Philippines
		Singapore
	Taipei	Taiwan
	Maine; Texas	United States
Tianma Micro-Electronics (Hong Kong) Limited	Fujian; Hubei	China mainland
TK Group (Holdings) Limited	Guangdong	China mainland
Tongda Group Holdings Limited	Fujian; Guangdong	China mainland
Toyo Rikagaku Kenkyusho Company Limited	Jiangsu	China mainland
TPK Holding Company Limited	Fujian	China mainland

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Trinseo S.A.	Hsinchu	Taiwan
Trio Metal Company Limited	Guangdong	China mainland
Triotek Technology Incorporated	Guangdong	China mainland
Tripod Technology Corporation	Jiangsu	China mainland
Tsujiden Company Limited	Nagasaki	Japan
TXC Corporation	Zhejiang	China mainland
	Taoyuan	Taiwan
UACJ Corporation	Jiangsu	China mainland
	Aichi	Japan
Unimicron Technology Corporation	Jiangsu	China mainland
	Hokkaido	Japan
	Hsinchu; Taoyuan	Taiwan
Unitech Printed Circuit Board Corporation	Taipei; Yilan	Taiwan
United Test and Assembly Center Limited	Guangdong	China mainland
	Bangkok	Thailand
VARTA Microbattery GmbH	Baden-Wuerttemberg	Germany
	Riau Islands	Indonesia
Viavi Solutions Incorporated	Jiangsu	China mainland
Western Digital Corporation	Shanghai	China mainland
	Prachin Buri	Thailand
Wickeder Group	North Rhine-Westphalia	Germany
	Massachusetts	United States
Winox Holdings Limited	Guangdong	China mainland
Wistron Corporation	Guangdong; Jiangsu	China mainland
	Karnataka	India
	Texas	United States

Supplier Name	Primary Locations Where Manufacturing for Apple Occurs	
Yageo Corporation	Fujian; Guangdong; Jiangsu	China mainland
	Tamaulipas	Mexico
	Kaohsiung	Taiwan
	Chachoengsao	Thailand
	Dong Nai	Vietnam
Young Poong Corporation	Gyeonggi-Do	South Korea
Zhen Ding Technology Holding Limited	Guangdong; Hebei; Jiangsu	China mainland
	Tamil Nadu	India
Zhenghe Group	Guangdong	China mainland

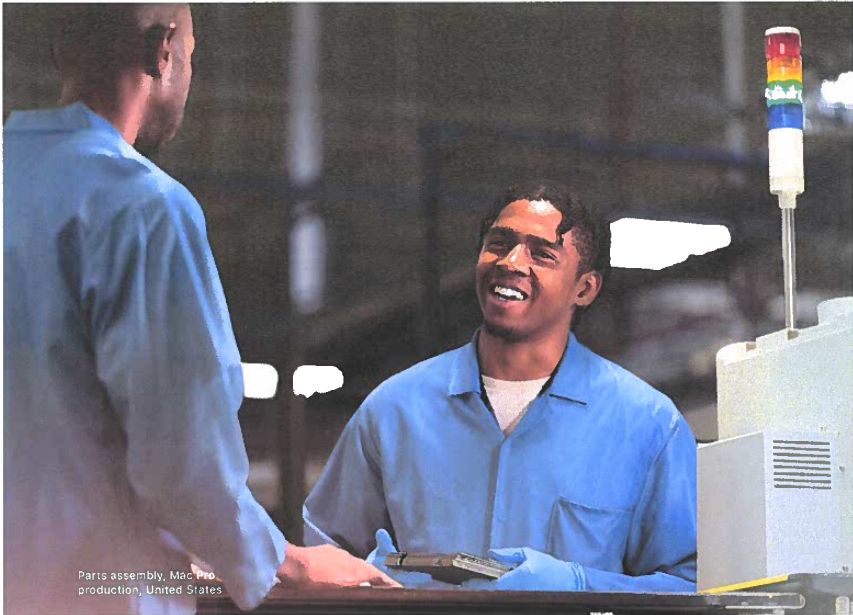
The suppliers below do not have internal manufacturing sites related to Apple spend, so we have provided the locations of their headquarters. Apple audits the facilities providing manufacturing services to our suppliers.

Supplier Name	Location of Supplier Headquarters	
Advanced Micro Devices Incorporated	California	United States
Cirrus Logic Incorporated	Texas	United States
Dialog Semiconductor PLC	Berkshire	United Kingdom
GigaDevice Semiconductor Incorporated	Beijing	China mainland
Lumentum Holdings Incorporated	California	United States
Parade Technologies Limited	California	United States
Silicon Works Company Limited	Daejeon	South Korea
Synaptics Incorporated	California	United States

This list reflects spend in fiscal year 2020 and may contain suppliers no longer in Apple's supply chain.

For more information about Apple's work to uphold the highest standards of human rights and environmental protection, visit apple.com/supplier-responsibility and apple.com/environment.

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Enabling strong performance with a powerful platform

SupplierCare is an Apple platform that enables us to capture the most up-to-date information on our dynamic supply chain, as well as to communicate and provide training to suppliers.

Beyond facilitating direct access to Apple experts, SupplierCare provides online tools for suppliers to improve their operations and refine new processes. Through the platform, suppliers are able to collaborate with us to track assessment results, develop Corrective Action Plans for assessment findings, reference best-practice resources, and monitor the progress of improvements.





Learning to lead

At Henan Polytechnic, a vocational school in China, a group of 18 students are working side by side in an assembly line simulation to learn how to be supervisors, or Line Leaders. The simulation is part of the Line Leader program, which encourages students to take an active role in their learning. "We don't tell them what is right and what is wrong," says teacher Wang Kun. "They experience it for themselves. We let them step back and look at the situation objectively."

Students in the Line Leader program learn critical leadership skills, including English language, computer, and management skills. The classroom environment and curriculum have had a major impact on





Operators at lunch,
iPhone production, India



Health and safety by design

Everyone has the right to a safe and healthy workplace. We assess supplier performance in this area across five core concentrations: occupational health and safety, including the safe handling of chemicals; emergency preparedness; health and safety permits; living and working conditions; and incident management.

Workplace safety is the foundation of a healthy workplace, but we go further by providing health education and wellness awareness programs for supplier employees. In 2019, our health education program expanded beyond China and India to include Vietnam. We also accomplished our goal of providing health education to 1 million people in the supply chain by 2020, and we continue to integrate the lessons learned along the way into future program enhancements.





New opportunities built on a strong foundation

Strong labor and human rights protections are our foundation, and we go further to provide new opportunities and pathways through educational programs. We also help supplier employees develop the skills needed to advance and prepare for future employment opportunities.



Planet

As we design, build, and recycle our products, we have a profound responsibility to fight climate change and to protect the planet we all call home.

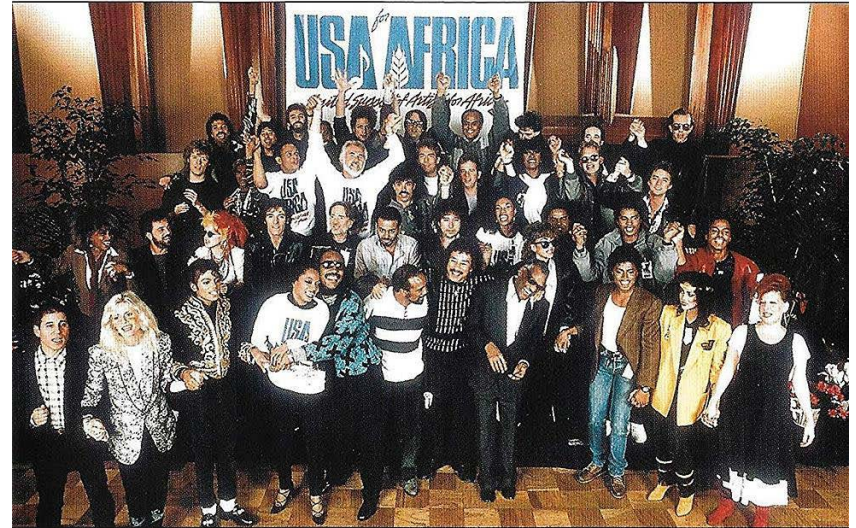
Water stewardship	61
Zero waste	67
Clean energy	71
Green factories	73



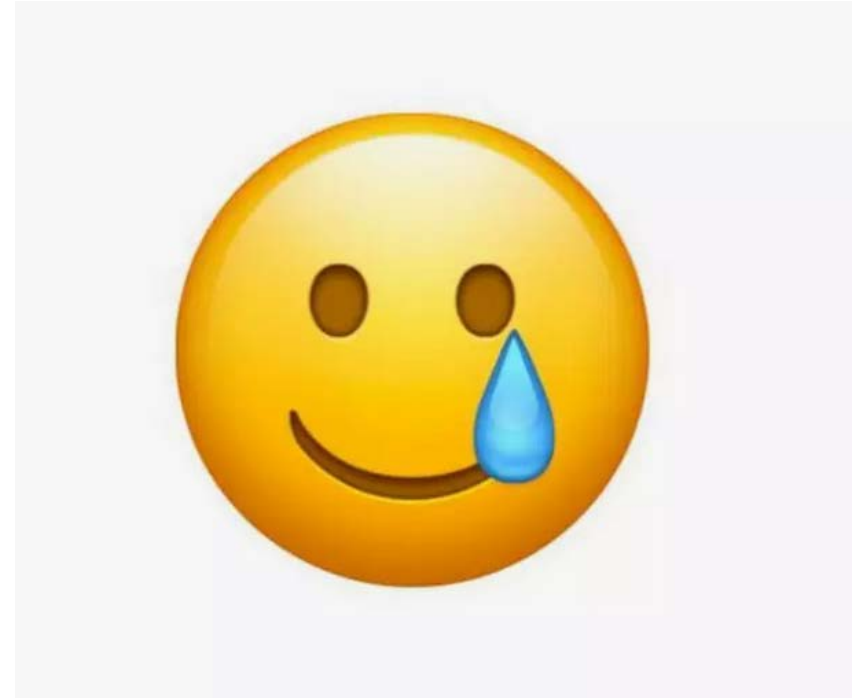


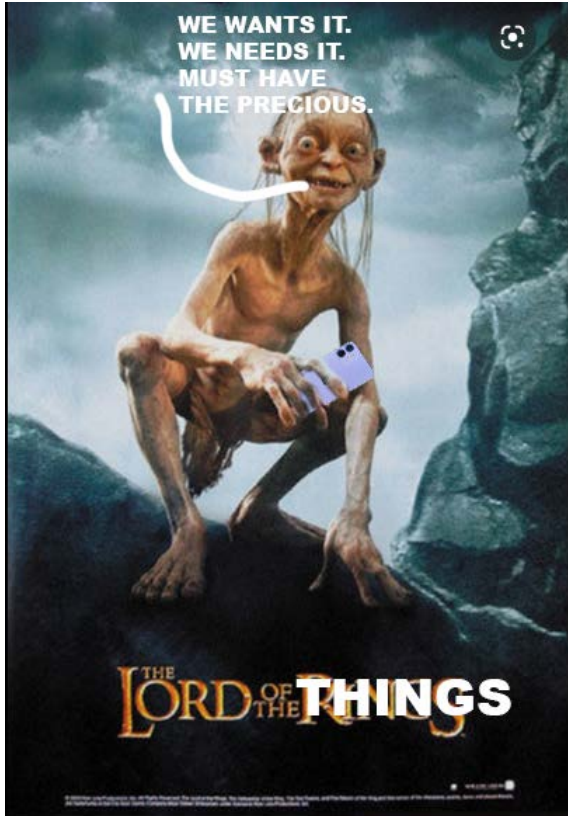
We Are The World

THE STORY BEHIND THE SONG



**THE MEDIUM IS
STILL VERY MUCH
THE MESSAGE.**



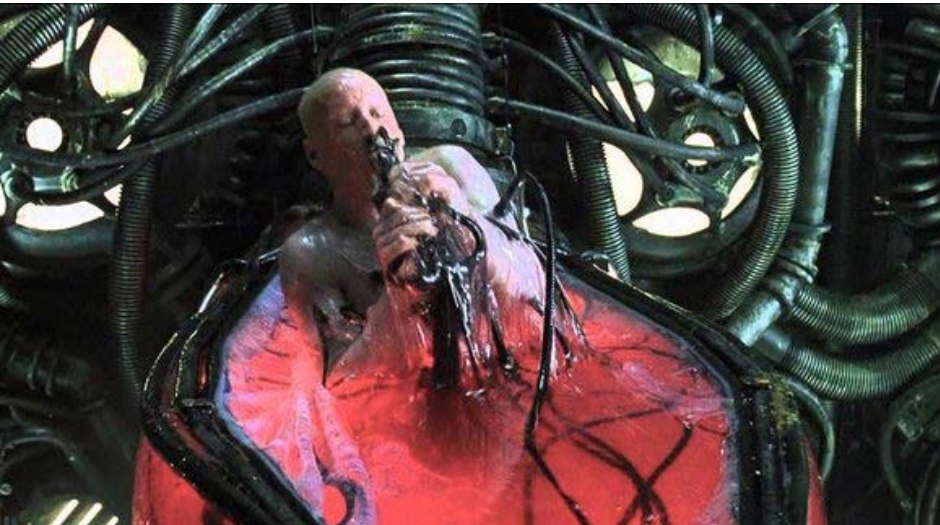


OUT?



IN?





“The day of political democracy as we know it today is finished. Let me stress again that individual freedom itself will not be submerged in the new tribal society, but it will certainly assume different and more complex dimensions.”

- Marshall McLuhan



EL TIO DE CERRO RICO





I KNOW THAT FEEL BRO



I FEEL YOU BRO



KNOW THAT

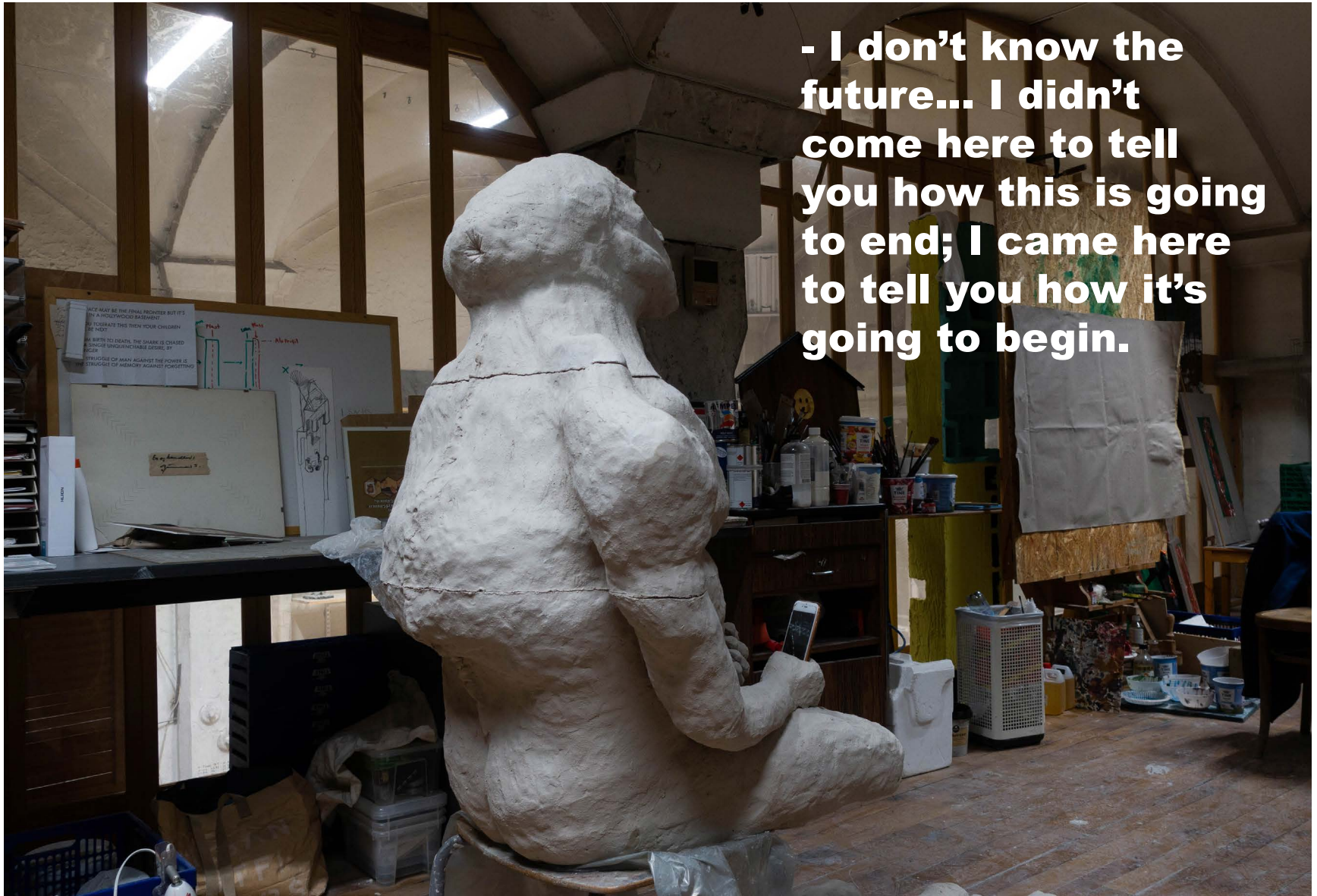




THE WOJAK







- I don't know the future... I didn't come here to tell you how this is going to end; I came here to tell you how it's going to begin.





- Alright, so here we are in front of the, uh, elephants, and the cool thing about these guys is that, is that they have really, really, really long, um, trunks, and that's, that's cool, and that's pretty much all there is to say.

- Jawed Karim
Co-founder of Youtube



Rant.

The medium is still very much the message.

As it is now, the information-based visual landscape we have domesticated through our devices replaces the role that physical environment used to have. Our sensory needs as humans are now apparently satisfied through screens. Is this a key factor on how cities, spaces and objects are shaped today?

An example is public museums that in themselves, as an object, serves as important architectural landmarks in the public and urban domain. They operate as containers of sensory experiences. Through its program of gallery spaces, it invites the viewers to contemplate and reflect together with the space and what's on view.

For the last couple of years, I've discovered that the museums have added new digital supplements to their spaces. Small entertainment stations consisting of a variety of touch pads and screens often placed in the middle of the gallery competing with the space and the art. These spots serve as "favors" for those who're deprived of entertainment. Often aimed towards kids brought there by their parents. The atmosphere and information the museum is offering is not enough. The museums are doing the public a disservice by not believing in the power possessed in their own content.

Millennial's and gen Z's upbringing depended on two worlds, and neither of them inclined them to grow up in a traditional sense. World 1: The digital child is attuned to up-to-the-minute "adult" news – inflation, rioting, war, tiktok, climate change, bathing beauties, onlyfans and snapchat abysses. Of course, they become bewildered when they're at all the time connected to the media that serves information and truth in a constant state of flux. World 2: When the child then enters the environment where information is scarce but ordered and structured by fragmented, classified patterns, subjects, and schedules. (Education, Museums, Literature, Architecture) It is naturally an environment much like any factory set-up with its inventories and assembly lines.

A frame is an invitation to a show. And almost all of us are constantly carrying one around in our pockets. You can take it or leave it. Whether that frame be designed for picture or puppet-show, store window or drama, it serves as a temptation to look, to see, even to participate. A frame is a promise of excitement. The psychologist calls this Scopophilia, the fascination of looking. The very limited use of materials, colors, structures, ornaments and techniques in contemporary architecture and design might be a consequence of digital domination.

It is in a constant competition with your physical surroundings. We are using the devices to start activism campaigns, entertain, argue, share, exclude, exploit, trade, view and so on and so on. Isn't it then a tragedy that these emotional tools that extends your body and mind, is totally depended on others making offerings to the devil to survive? The Software makes you ignore the hardware. Your surroundings.

This is the start of David Foster Wallace's 2005 commencement speech to the graduating class at Kenyon College.

There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water?"

