

August 2021

BREAKING THE IYSE

International Youth Stem and
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Featured Article

SILICON EXODUS AND SPECIALNESS

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page 5

*"Silicon
Exodus"*



CONTENTS

2 Social Links

3 How are Tech Companies Reacting to the
Silicon Exodus?

5 What's Special about Silicon Valley... and
what's changing?

8 The Truth of the Silicon Exodus

9 The Pandemic and The San Francisco Bay

Area: How Has the Virus Reshaped The Valley?

11 What led to the Silicon Valley Exodus?

13 Word search and crosswords

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How Are Tech Companies

REACTING TO THE SILICON EXODUS

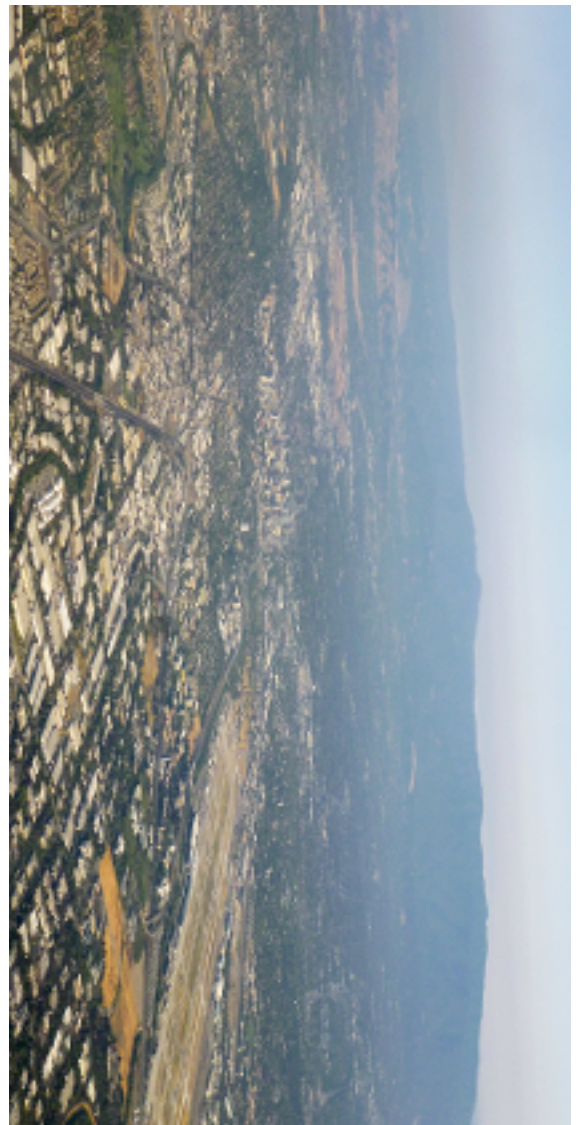
Blanche Cheng

With rising house prices and living costs in the San Francisco Bay Area, affordability has become a major contributing factor to the exodus of many tech companies in Silicon Valley. While companies like Oracle and HP Enterprise have chosen to relocate their headquarters to Texas, others are making adjustments to office sizes. Let's take a look at the how some tech giants are reacting to the exodus:

According to Surface, Google is expanding its office locations, "invest[ing] \$7 billion in ... data centers across the U.S." and "plans to create 10,000 new full-time jobs" (Golenda). The expansion in Google's data centers and offices, however, does not seem to suggest that it is completely moving out of Silicon Valley.

Google announced its plan to invest "\$1 billion" (Golenda) in its San Francisco waterfront offices. While most tech companies in Silicon Valley are either downsizing existing offices in the San Francisco Bay Area, or relocating to cities with more affordable housing, Google does not seem to be following this trend as it is not only opening new offices, but also expanding its San Francisco locations.

Facebook is adjusting its hiring practices and



and transitioning to remote working. Mark Zuckerberg stated that limiting work locations when hiring “cuts out a lot of people who live in different communities, different backgrounds or may have different perspectives” (Frias), according to Insider. Do most Facebook employees prefer the work-from-home setting? Not necessarily. According to Wired, the results of “internal surveys” indicated that many “were eager to get back to the office” (Barber). Facebook’s transition to remote working will perhaps require long-term efforts, as Zuckerberg said that it “could take 10 years” (Barber) for a permanent transition to be possible.

In addition to opening up more positions to remote workers, Facebook, similar to Google, is expanding its current offices in the Bay Area. This includes a new office in Menlo Park “with space for 3,400 workers and 1,700 homes” (Frias).

Apple has begun to invest in new office locations in Texas, North Carolina, as well as expanding to Miami, New York, etc. (Gurman). It is clear that Apple is gradually moving out of Silicon Valley with Apple’s online services chief, Eddy Cue, and its head of custom silicon, Johny Srouji, pushing for this change (Gurman). Additionally, Apple has announced that after all workers return in-person, a “hybrid office”—three days per week of in-person working combined with remote working—will be implemented (Gurman).

Tech companies like Google, Facebook, and Apple have all made different adjustments to their hiring policies or work arrangements with the rise in housing prices in the San Francisco Bay Area and the exodus of many other companies from Silicon Valley. Will we see a transition to remote working in the near future? Or perhaps a combination of in-person and remote working?



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What's Special about Silicon Valley...^{Sam Low}

What is changing

Silicon Valley's story starts with Stanford University. It was founded in 1891 with the aim of being "affordable" and to "teach both traditional liberal arts and the technology and engineering that were already changing America." (Stanford, 2021) but the school really became what it is now after the Second World War (Computer History Museum, 2008). This is because of a decision during the War by the United States Federal Government to create a program of funding universities to do military research. This research was typically in radio and electrical engineering. After the War, Stanford pushed its technology fields to be eligible for these government defense programs. This led to a high involvement with the Cold War and an exceptional quality of education from both the government funding and the schools particular focus on technology. This quality in the technology and engineering departments attracted extremely talented students from even beyond California (Stanford, 2004). In fact, these students were so talented that Stanford is now consistently one of the top ranking universities in the world and is the school of 84 Nobel Laureates since 1901. Another significant element of the school's success is its culture of encouraging students to create companies (Computer History Museum, 2008) which can be seen through Stanford being the school of 74 billionaires as of 2017 (Wealth-X, 2018). The high amount of talented technology students and the encouragement to start businesses spawned numerous technology companies around the University's position in northern California. Today the collection of cities in this area is called Silicon Valley.

The density of new and successful businesses attracted venture capital investors. For several decades Silicon Valley has been a perfect ecosystem for tech startups with its large pool of investors, countless technology companies, and talented tech students and education. One can think of it as Hollywood but for nerdy programmers, engineers, and technology companies instead of handsome actors, directors, writers, and mass media and entertainment conglomerates. Silicon Valley is so influential in the tech industry that it is actually a bit frightening. It is home to the likes of Google (which controls the search results of 92.6% of internet users (Oberlo, 2021)), Apple (which controls the smart phones of 1.65 billion people (The Verge, 2021)), Intel (which has a 79.3% market share in CPU production (CRN, 2021)), and the Unicode Consortium (which decides what languages and most importantly what emojis the

6 *IYSE MAGAZINE* August 2021

the world's keyboards are allowed to use!). However, this article isn't about the uncomfortable power of transnational technology corporations or non governmental computer protocol organizations, so let's dive into what exactly is changing in Silicon Valley.

So what is changing in Silicon Valley?

To put it simply, it is no longer as advantageous for personalities in the tech industry to be in the same space. Previously, one could only work at a company if they lived within commutable distance of its offices. Similarly, investors could only attend board meetings if they could travel to the room where it was taking place. Strangely, this is no longer the case. In fact, the last year and a half (2020 and 2021) have brutishly proven to us how unnecessary even leaving one's house to do these things is! Restrictions created for the COVID-19 pandemic forced businesspeople, workers, and investors to work remotely and connect digitally. Working from home has turned out surprisingly well. 83% of US employers and 71% of employees believe remote work has been a success (PwC, 2021) and 52% of workers now wish for a "hybrid" work model which gives them a choice to work from home (McKinsey & Company, 2021) (which is a significant change in culture as before the pandemic this was only 30% of workers). This culture change is so significant that a staggering ~30% of workers reported being "likely to switch jobs if work returns to fully on-site" (McKinsey & Company, 2021). Remote working has proven itself as a respectable alternative leading several companies, including Twitter, Facebook, and Google, to announce that employees will have the option of permanently working from home following the pandemic. So people can work from home, what does that have to do with tech companies leaving Silicon Valley?

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Silicon Valley has been held together by the advantage of keeping important players in the industry in the same space. Now that that space can be digital, those players can judge their own physical locations using present day factors and not be anchored to each other in a location that was determined sixty years ago by the success of some old university. Remote working is the Liquid Surface Safe Adhesive Remover to the popsicle stick house that is Silicon Valley: it loosens each component and leaves the entire structure vulnerable to collapse. What ends up delivering the destructive blow to this now vulnerable Silicon Valley is the cost of living and doing business there. A study by Mattermark reports that the average house price in Silicon Valley rose by around \$675 thousand over only the eleven years between 2005 and 2016. Joint Venture's 2021 Silicon Valley Index cites the median sale price of a Silicon Valley home as \$1.2 million, making Silicon Valley one of the most expensive places in the world to own property. The Index explains that these skyrocketing house prices are due to the attractiveness of working there and Mattermark's study backs this up through finding that investment in Silicon Valley is highly correlated with house prices. Despite the average income in Silicon Valley doubling the national average, 32% of homeowners in Silicon Valley in 2019 spent more than 30% of their gross income on housing, 5% higher than the national average (Joint Venture, 2021). Additionally the United States Bureau of Economic Analysis reports that "all items", including goods and services, are 16.4% more expensive in the state of California than the national average. All these factors lead to the cost of living in Silicon Valley being extremely high. Even in just California 43% of voters "feel they can't afford" to live there (Quinnipiac University, 2019) and a survey by the networking app Blind, claims 66% of "working professionals" in the Bay Area (the region which holds Silicon Valley) "would consider relocating if given the opportunity to WFH [work from home] as much as they like." It isn't just employees that have reason to relocate. For Silicon Valley businesses, this high cost of living means they must pay their workers higher wages than they would in other regions or states. On top of that, the state government also places constraints on businesses. California has some of the highest taxes on corporations in the United States. CNBC's ranking on "Cost of Doing Business" places California as the fourth worst state because of these taxes. Silicon Valley's cost of living and business taxes have previously been overshadowed by the advantage of its productive ecosystem but remote working has untangled its entities, leaving those negatives to drive them away.

Many companies and key personalities have moved away from Silicon Valley recently, but the tech industry there is still alive and strong. Google, Apple, Facebook, and many other tech giants remain in the area, but for how long? The future of Silicon Valley is uncertain. There is a lot of weight on the reaction to the exodus by the governments involved. Will the housing crisis be addressed and tax plans adjusted? Is that enough to halt the exodus? It is all to be determined.

The Truth of The *Silicon Exodus*

Charles Zhang

The “Silicon Exodus” has been described as a phenomenon whereby companies already present in the Valley are starting to leave, and new companies and entrepreneurs find it hard to invest when the low success rate is apparent. However, is this exodus truly on track to dethroning Silicon Valley as the world’s biggest hotspot for tech companies, or is it just over exaggerated rumours about tech companies collapsing?

Around December 2020, around the early portion of the Exodus, many high profile executives and investors such as Elon Musk announced that they would be moving out of Silicon valley. Other companies, such as Hewlett Packard Enterprise Corp. also started relocating their offices and headquarters out of the valley as well. These series of relocations were alarming for some, and these series of events made the Silicon Exodus appear to be a serious movement for most tech companies to move out of Silicon Valley.

Though tech companies largely took the blame for the Exodus, many other factors such as the high cost of land, limitations on commercial construction, the limited parking, etc. caused many companies to be limited in what space they could buy, and how they could customize it to suit their needs. California also has the highest corporate income at a rate of 8.84%, making the premise of having a company’s headquarters in Silicon Valley less desirable. Young entrepreneurs and investors are also finding it difficult to create new startups, as these factors continue to be a massive inconvenience that compounds in severity for less developed and established companies.

However, this Exodus isn’t as severe as some people would like to think. Many tech companies such as Apple, Google and Facebook have increased their market caps and expanded further into Silicon Valley. These companies have been doing well even through the COVID-19 pandemic, and have yet to relocate from Silicon Valley (at least publicly). Growth is still present here, and companies are still thriving and turning profits in the Valley.

Unfortunately, those factors mentioned above still contribute to the slow down of new start ups and the decision for existing companies to leave altogether. The Exodus may not be severe in the present, but over time even the giant tech companies may reconsider whether or not to move their offices and headquarters to another state. Overall, the factors contributing to the Silicon Exodus harm smaller businesses and startups more than bigger, more established corporations. It is entirely possible that Silicon Valley may be dethroned as the King of Tech in the future, though there will still be large corporations sticking around regardless.

The Pandemic and The San Francisco Bay Area:

How Has the Virus Reshaped The Valley?

Jiawei Ryan Zhang

On March 11, 2020, The WHO officially declares COVID-19 a pandemic, reshaping the way we work and shop (AJMC Staff, 2021). Companies began to shift to remote work for fear of transmission of the virus. This included much of the technology industry in Silicon Valley, dubbed so for being the epicenter of technological innovation in the United States, a reference to the material's importance in the manufacturing of electronics. Since the shift to working from home, large technology companies (HP and Oracle), investors, and billionaires (Elon Musk, Larry Ellison, Keith Rabois) alike have begun to move out of the valley (Hartmans, 2020). However, is this just the next step of a long-standing trend, or has the advent of the prevalence of at-home work heavily accelerated the Silicon Exodus?

Historically, Silicon Valley's work environment has been very office-oriented: Apple and Alphabet are examples of this, with even companies like Best Buy, Reddit, and Yahoo having reversed accommodations that would allow for more flexible work arrangements within the last decade (Bliss, 2020). The idea was that having people with similar knowledge backgrounds together in physical proximity would yield innovative ideas and greater economic productivity (Bliss, 2020). In general, this seemed to have worked for much of the 21st century: according to Bloomberg CityLab, "the Bay Area produced nearly 20% of all patents in the United States in 2015 (up from 4% in 1970)" (Bliss, 2020). Because of the exodus, this has been changing.

The Silicon Exodus has actually been happening for a longer period of time than the span of the pandemic. Even pre-pandemic, Silicon Valley was experiencing a net outflow of residents (Swindells, 2021). However, the year 2020 with the pandemic saw a marked increase in the net outflow, with a near quadruple to 34% (Swindells, 2021).

Although the pandemic has provided an extra nudge towards a move away from the Bay area, the factors ultimately driving this move have been long present: high housing prices (the median one-bedroom rental was over \$3,700 per month in the area before the pandemic [Bliss, 2020]) combined with the increasingly ideologically polarized culture in the nation are key reasons why many are leaving.

The shift to remote work has increased both of these. The shift to at-home work has also prompted a decrease in attachment to the physical area of Silicon Valley. Especially with companies like Twitter and Slack that are now allowing their workers to work wherever they want even post-pandemic, this has become more true, causing many to reconsider physically living in the area with the high housing prices. At the same time, the COVID-19 pandemic has heightened and created ideological divisions. For example, before making a shift to Texas, Tesla and Space X's Elon Musk protested California's lockdown measures (Hamilton, 2020).

How will this shift impact Silicon Valley? Right now, it seems unlikely that there will be a sudden shift to other locations as technology hotspots: many of the large companies such as Facebook, Apple and Google still remain in Silicon Valley, and it's also where many of the best job opportunities are (Iyengar, 2021). There are signs that the valley is recovering from the recent wave of departures as well, since rents have begun rising again after they bottomed out (Iyengar, 2021). Although its geographic dominance will likely not be as strong as it was previously, it will likely be a dominant player in North American technology for years to come.

The shift to remote work could also provide new possibilities for the Valley. Previously, it was extremely difficult to hire young talents in Silicon Valley and provide them with wages that would allow them to afford living there. Allowing them to live further away from the area may open up opportunities to these younger talents (Bliss, 2020).

At the same time, however, there are downsides. Some companies have seen decreasing productivity for remote work (Bliss, 2020), which could become much more of a long-term problem. Furthermore, working remotely could deprive younger, less experienced recruits of the skill training gained by working alongside older, more experienced colleagues (Bliss, 2020). The absence of nearby employers could also negatively affect entry-level workers' career growth.

In conclusion, the exodus of workers from Silicon Valley caused by long-term issues and amplified by the pandemic has the potential to reshape the technology industry. While it has downsides, it can also open up new possibilities. It may weaken Silicon Valley's position as the dominant geographical hub of technological innovation, but it likely will not cripple it. However, it is too early to be certain of all of this. Only time can tell what will happen next. For now, it is important for the companies in Silicon Valley to carefully consider their choices and build flexible plans to deal with the upcoming years.

What led to the *Silicon Exodus?*

Hiba Mastas

Silicon Valley is considered to be the U.S center for innovative technology companies. It houses approximately 2,000 tech businesses, and acts as a beacon to draw world leading companies ranging from the production of lasers to that of medical instruments.

The great depression was a crucial factor that led to the birth of Silicon Valley. The need for more and new job opportunities encouraged people to create high tech companies. However, the success of silicon valley was the contribution of many factors. The most important one is the spirit of cooperation between the companies since many of the founders used to go to school together meaning that they are already familiar with one another. This familiarity encourages them to work together and help each other with new and innovative ideas. In addition, the state of california, where the silicon valley is located, prohibited non-compete clauses and this encouraged people to start their own companies and test out their ideas. The silicon valley is also surrounded with top ranked universities, this means that well educated students with new and fresh ideas live close to the valley. Cultural diversity also contributes to its success, engineers from all over the world are attracted to the silicon valley with different ideas, ready to invest in their triumph.

Like always, everything good must come to an end, and the same applies to the silicon valley. The recent pandemic has led to an exodus in the silicon valley, or as other claim has only accelerated what was already an emerging trend in the area. The cost of living has sky-rocked in San Francisco, home to the bay area, where the average monthly rent costs about 4,000 dollars for a two bedroom house. Not only the property prices are high, but also those of public transportation and alimentation. In addition, the fierce competition that is present in the area discourages young entrepreneurs from starting their companies there, giving into the fear fueled by the low possibility of success. Furthermore, the nervous political climate caused by the 2016 elections left the potential founders worried to start their companies under such unpredictable circumstances. Already these factors encouraged new innovators to turn their heads towards new places other than the silicon valley, and the pandemic only increased this exodus.

Since all work has been shifted to an online format, many companies are now start-ups that require a minimal amount of workers. Another emerging problem is that previously if you wanted to hire an engineer to work in the Bay Area you would have to give them an office there. However, now with remote work being the norm these engineers are recruited by companies from all over the nation, even all over the world. So now the question remains, will the reign of the silicon valley as the epicenter of the global technology ecosystem come to an end?

The time to write off the Bay Area has not come to term yet. Despite all these challenging factors, Silicon Valley still holds its banner of glory. These challenges have just occurred recently, warning the silicon valley of its vulnerability and telling it to change its old ways to keep up with the change that has occurred due to the Covid-19 pandemic. The companies at Silicon Valley need now more than ever to create a strong company culture to keep its employees engaged and loyal despite their easy access to other offers from different companies outside the Bay Area.



Games: *Word Search*

You made it! Thank you for reading until the end! Here are some games for you to play!

Silicon Exodus Word Search

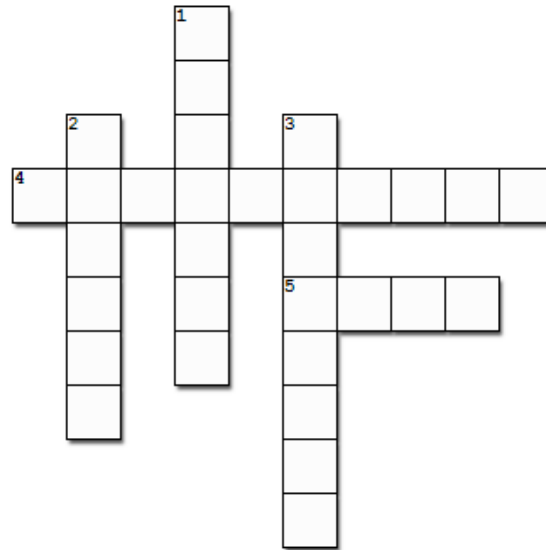
A	N	D	E	H	O	E	S	I	I	S	E
E	I	I	S	S	G	F	C	E	A	C	A
T	Y	I	L	I	V	O	Y	F	X	I	I
O	L	O	E	A	L	I	H	I	E	N	X
A	O	A	L	X	T	I	O	S	E	O	X
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S	T	E	M	R	I	T	E	E	T	A	C
E	I	S	I	T	E	T	E	A	R	Y	C

SILICON
ELECTRONICS
VALLEY
GIANT
EXODUS
CALIFORNIA
IYSE
STEM
SOCIETY
TECH

Name: _____

Silicon Exodus

Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

Across

- 4. A state in the US that hosts Silicon Valley
- 5. International Youth Stem and Education

Down

- 1. The word that is used before _ Valley
- 2. Silicon _
- 3. Pandemic

Flip to the next page for the answers!! Be careful not to flip if you haven't finished the word searches yet!

Answers: *Games*

Did you get the answers right?

Silicon Exodus Word Search

Sample Preview

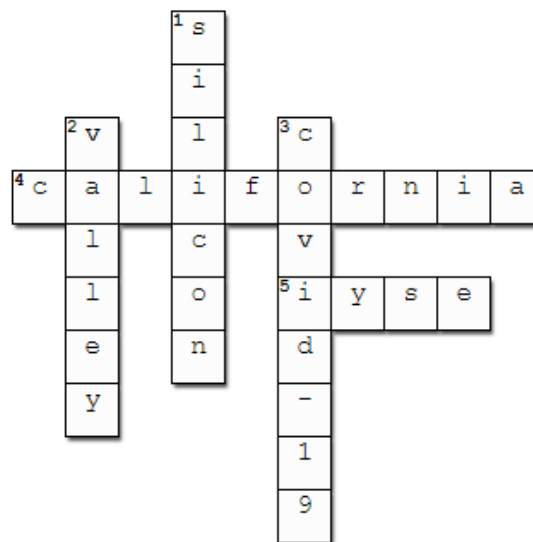
K	L	K	F	C	A	L	I	F	O	R	N	I	A
E	V	A	L	L	E	Y	I	D	X	A	T	G	M
R	B	O	X	L	F	F	B	P	W	E	V	S	J
C	I	D	N	E	X	O	D	U	S	V	E	R	C
O	O	A	I	Q	P	P	K	W	A	Q	L	O	A
M	V	G	I	A	N	T	S	F	R	M	E	Q	X
X	R	C	S	I	L	I	C	O	N	L	C	Y	I
I	E	S	M	A	V	O	Z	L	L	D	T	B	S
F	I	I	Y	S	E	S	I	V	R	N	R	L	O
N	C	Q	H	C	X	K	W	S	Z	R	O	H	C
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C	P	H	O	H	E	P	J	M	X	G	C	C	T
G	W	F	J	X	R	K	I	W	Z	P	S	H	Y

- SILICON
- ELECTRONICS
- VALLEY
- GIANT
- EXODUS
- GALIFORNIA
- IYSE
- STEM
- SOCIETY
- TECH

Name: _____

Silicon Exodus

Complete the crossword puzzle below



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Across

4. A state in the US that hosts Silicon Valley (**california**)
5. International Youth Stem and Educastion (**iyse**)

Down

1. The word that is used before _ Valley (**silicon**)
2. Silicon _ (**valley**)
3. Pandemic (**covid-19**)