

# Innovation Spaces in the Global Environment

25

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#### 25.1 Introduction

Many entrepreneurs and leaders are so focused on their product or project that they do not find the time to deal with the big picture of their environment.

The global development of a business activity covering all major continents is one of the most fascinating tasks for an entrepreneur, but also one of the most challenging. Countless entrepreneurs who are successful in their home markets have already failed in this task. Those who have made it are admired.

In this chapter, we would like to show that the time has come to rethink internationalization. The currently developing innovation spaces in the global environment offer epochal new opportunities.

At the beginning of the chapter, we will briefly show how globalization is changing through new technologies. We will then present the drivers of global change and the role of the COVID-19 pandemic in this context. Next, we will describe how the local and global business environments differ and how innovation spaces can be configured. Then we look at changes in Silicon Valley. Finally, we discuss developments in the global startup economy.

# 25.2 How Globalization has Changed

The globalization of the world economy has so far progressed in phases. During a stable phase, the primary task of managers is to realize profits in existing structures (doing things right). During a phase change, it is the primary task of leaders to

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develop business under the changing conditions of the new era (doing the right things) (Drucker 1967).

In the past decades we have had a stable phase in many parts of the world. The holistic use of the advantages of globalization has so far been largely reserved for large corporations in this period of stability. In simple terms, small and medium-sized enterprises (SMEs) could only use international sales markets (export/import) or they could become involved in supply chains.

For entrepreneurs, it is more difficult to build a globally active company in such a stable period. This is also one of the reasons why a country like Germany has not built up a pervasively globally active company in the last 48 years. The youngest fully globalized German company is SAP, founded in 1972.

A different path is being followed by the well-known up-and-coming companies from Silicon Valley and, especially recently, by tech companies from Asia, which have managed to build up world market-leading companies through the courageous use of future technologies combined with entrepreneurship, first with the market launch of the personal computer (PC), then through the development of the Internet, and since the turn of the millennium through new digital methods of social media (see Sect. 25.5). However, it must be taken into account that, with a few exceptions, these rising tech stars have so far only been active in a few service sectors.

Initially, the success of the tech upstarts only had the dimension of a good business, where some entrepreneurs and investors were rewarded with high profits. However, this success then developed into another dimension, which is that precisely these technologies have introduced nothing less than a new phase of globalization.

To better understand the current situation of upheaval, it is useful to take a brief look at the previous upheavals of globalization (see Fig. 25.1).

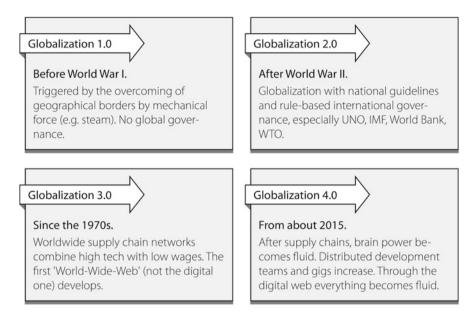
The first phase of globalization came about before the First World War through new forms of transport using mechanical power (e.g. steamship, railways). This new technology led to a rapid increase in international activities and then to two world wars. After the Second World War, globalization took place with national guidelines and rule-based international governance (especially UNO, IMF, World Bank, WTO) (Baldwin 2018).

Starting in the 1970s, global supply chain networks were established, which for the first time combined high-tech with low wages. With these supply chain networks, the first real 'world-wide-web' developed (Khanna 2016).

From around 2015, the digital *world-wide-web* began to gain such momentum that a new phase of globalization was initiated, Globalization 4.0 (Baldwin 2018).

It is to be expected that the upheavals that will take place in this phase will go far beyond the usual understanding of the upheavals brought about by digitization. So far, occupations in the service sector have only been marginally affected by the consequences of globalization. In future, it will be possible for more and more activities to be carried out remotely, e.g. by service personnel, skilled workers, office staff, but also doctors and lawyers.

The Internet of Things (IoT), Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR) and human connectivity through improved telecommuni-



**Fig. 25.1** The four phases of globalization. Categorization by R. Baldwin (2018). (Source: authors)

cation systems will enable teams to work together more easily without having to be in the same place. Distributed development teams and so-called gigs, i.e. work by freelancers, will also increase. In summary, a so-called virtual migration may be on the horizon, where skills and labor cross national borders but workers themselves do not (Baldwin 2019).

This transition will be a gradual process, although it has already started on a small scale. Many elements of the previous phase will remain for the time being. Observations have shown that the effects of new technologies are overestimated at the beginning and underestimated afterwards (Baldwin 2019).

However, the aspect of digitization described here is only one of several drivers of the global upheaval. Worldwide developments show that at this very moment, a number of other developments are simultaneously taking place that will make the upheaval even greater, and which represent no less than an epochal break. We will briefly explain the details in Sect. 25.3.

# 25.3 The New Epoch

The fourth phase of globalization (Globalization 4.0) outlined in the previous section describes how a new technology of massive worldwide digitization and networking is currently in the process of transforming the nature of globalization into a new form.

However, at exactly the same time as this transformation, a number of other worldwide problems and changes are taking place, which are presented in this section. As a result of these issues, it can be expected that an epochal break will occur that will be strong and fast.

Currently, in 2020, we are in the period of the COVID-19 pandemic. As we all know, this is a crisis of historical dimensions that is already changing everything in our lives, and it is affecting all people around the world practically simultaneously. A great deal of effort is being put into developing medical solutions, which we hope will soon be found.

It is easy to think that one day the crisis will be over and that everything will be as it was. People and companies want to return to their old routines as soon as possible. In particular, established companies have great persistence in their usual efficient processes and are driven more by management than by leadership.

However, as we all know, we should not expect that the old situation will ever return. In many areas there is already talk of a new normality. Entrepreneurs may think that only initiatives of incremental adjustments will be necessary to keep the business running as before.

However, this idea must be questioned. It must be borne in mind that the COVID-19 pandemic is an unexpected additional problem that overlaps with all other current geopolitical changes and problems. The COVID-19 pandemic can be seen as a catalyst or an accelerant, depending on which aspect is considered (Fig. 25.2).

Below is a brief summary of the geopolitical issues that are currently taking place practically simultaneously.

We will not go into details here. Changes in the world and international relations are certainly only of interest to some entrepreneurs and leaders. It has also been shown that those who do not often deal with this topic are finding it difficult to understand. This is not least because these issues are extremely complex. Above all, we do not want to cause fear, although some of these aspects may well have that effect. The sole purpose of this section is to make the reader aware of this historically unique situation in which we all find ourselves together in the world (!) and to open the reader's eyes to new perspectives. In this sense, we also want to show that the connection between globalization and innovation will always be there. Viewed in this way, the opportunities for entrepreneurs can be greater than ever before, simply because the number of very serious problems to be solved is higher than ever before.

In Sect. 25.7 we will mention some aspects of how entrepreneurs and leaders can take advantage of this situation.

In the following, we briefly describe the individual topics (bubbles) shown in Fig. 25.2. As already mentioned, these topics are complex and, in addition, they influence each other, sometimes to a great extent. Details can be found in the respective references.

In the list, the topics are roughly sorted in the order in which they gained momentum. Objective sorting is not possible because the topics have developed in a slow process and there are different interpretations of when relevance occurred. The graph should be interpreted in such a way that topics further to the left have

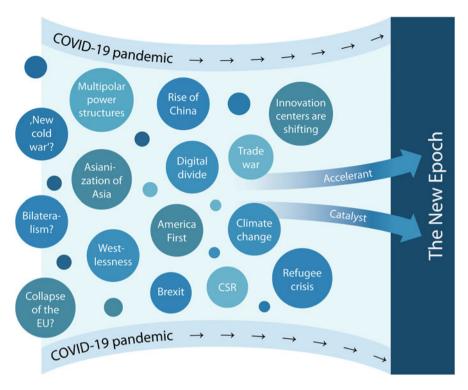


Fig. 25.2 Initializing a new epoch: the influencing factors. (Source: authors)

gained momentum or will gain it later. The first 12 topics have already become a reality; the last three (in the graph with question marks) are speculative.

#### • Innovation centers are shifting

European innovation centers are shifting to Central Asia, Latin America and Africa ("Bundesministerium für Bildung und Forschung" (BMBF) n.d.). US Innovation Centers in Silicon Valley are moving within the US and are also migrating to all areas of the world, primarily to Asia (see Sect. 25.6).

#### Refugee crisis

80 million people are currently on the move worldwide. This figure has doubled in the last seven years (United Nations High Commissioner for Refugees n.d.). It can be assumed that the number will increase even more in the future, e.g. due to climate change.

#### Climate change

Many economies, even very large ones such as the USA, will suffer ever greater damage as the temperature rises (Nunn et al. 2020).

#### • Trade war

This point refers to the trade war between China and the USA. An essential aspect of this conflict is the economic and technological competition between these two great powers (Lau 2019).

#### • Corporate social responsibility (CSR)

CSR has become a business issue, in the way that investors are beginning to demand that companies contribute to society. (Sorkin 2018).

#### Digital divide

Large companies use digitization more effectively and efficiently than small and medium-sized enterprises (SMEs), which leads to division (Frietsch et al. 2016).

## • Rise of China

China has grown to become the second largest economy in the world, behind the USA. Moreover, China is now considered to be very strong in the innovation sector, with the second highest spending on research and development (R&D), also behind the US (Harris 2018).

#### America First

The well-known foreign policy stance in the United States under the administration of US President Donald J. Trump.

#### Brexit

The impact of Brexit will not be limited to the EU. Rather, effects are expected to be felt throughout the UK, EU, USA and China (Mitter 2020).

### • Multipolar power structures

The world order has changed from a unipolar power structure (US power) to complex multipolar power structures (USA, China, Russia) (Collins 2019).

#### Westlessness

Westlessness describes an internally divided West that is increasingly losing its claim to shape global governance (Munich Security Report 2020 n.d.).

#### Asianization of Asia

Almost five billion of the nearly eight billion people in the world live in Asia (1.5 billion of them in China). In the past, Asia was dependent on technologies from Western countries. This is no longer the case, especially due to China's technological progress. As a result, Asia is in a position to shape its own economic world (Khanna 2019).

#### New Cold War?

A *New Cold War* would be a future conflict situation, similar to the historical *Cold War*, between major powers, e.g. USA and China. This scenario is currently a matter for speculation.

#### • Bilateralism?

Bilateralism would mean that the regulators of the global economy (e.g. UNO, IMF, World Bank, WTO, WHO) would lose more and more influence, and bilateral agreements between states would become an increasing priority. This is not the case at present.

#### • *Collapse of the EU?*

Despite the UK's withdrawal from the EU and increasing conflicts, the collapse of the EU is only speculation.

## 25.4 About Local and Global Innovation Spaces

## 25.4.1 Innovation Space: Definitions

The term *innovation space* is used in the literature and in business language in very different contexts. In a common definition, it refers to places, e.g. buildings or metropolitan regions, which form an environment for innovation activities, such as co-working spaces, startup spaces, incubators, accelerators, maker spaces, and research institutes. Thus, it is increasingly the case that these innovation spaces are becoming blurred in their distinction (Wagner and Watch 2018). What these types of innovation spaces have in common is that they provide an infrastructure in a community locally at one location. Due to the COVID-19 pandemic, however, many of these innovation spaces are currently experiencing problems because people are no longer able or willing to use the facilities, as the example of the current major additional problems of WeWork shows (Inagaki 2020). Since the pandemic will not disappear quickly, these spaces may also undergo a fundamental change. Participants (tenants) now often use video communication in virtual spaces. Some of them experience that this technology can also work, although in a different way. The users learn that the disadvantage of the lack of physical proximity is offset by the advantage of independence of location. It is hardly to be expected that physical spaces will disappear, but perhaps virtual spaces will establish themselves as an extension, especially as new technologies such as VR and AR are now becoming suitable for mass use. This could promote spatial expansion, especially international expansion, and may open up new possibilities. It will be exciting to observe how this environment develops.

Another definition of the term *innovation space* is much broader. In this notion, there is no geographical limitation, but rather the connections and exchange are in the foreground, regardless of the medium and location. All stakeholders in the innovation process are possible participants, not only entrepreneurs and startups, but also, for example, multinational companies and policymakers. Providing access to knowledge and resources is one of the goals (McKelvey and Bagchi-Sen 2015).

In yet other publications, the term *innovation space* is used as a generic term and as a replacement for the term *innovation network* (Pyka and Scharnhorst 2009).

# 25.4.2 A Definition for This Chapter

In summary, the idea of an innovation space depends on what it is supposed to achieve. A co-working space has a different definition than an innovation ecosystem of a metropolitan region, and a startup has a different vision than a business unit of a large company.

Since entrepreneurship in the global environment is the priority in this chapter, we use the following definition:

Innovation spaces are location-independent structures where individuals and/or organizations come together to promote innovation. The main purpose of these spaces is to provide access to or share knowledge and resources, to exert influence, and to maintain and develop networks.

## 25.4.3 How to Configure Innovation Spaces

When addressing the topic of innovation spaces it very quickly becomes clear that it is a complex issue. In addition, international aspects increase the complexity even further.

Practice shows that suitably configured innovation spaces are of crucial importance for the success of innovation activities of any kind. The important question in an innovation project is how the innovation space is configured to achieve the planned goal. It is therefore necessary to decide which stakeholders and influencers should be involved and how the space should be organized. Figure 25.3 shows possible influencers and stakeholders.

Regarding the organization of the space, it is important to note that compromises must always be found between the use of open and closed structures and between the use of flat and hierarchical governance. More open is not always better than closed, and flatter is not always better than hierarchical (Pisano and Verganti 2015).

Innovation spaces give large companies the advantage of having the infrastructure, experience, and human and financial resources they need. For example, the takeover of the car manufacturer Volvo by the Chinese automotive company Geely

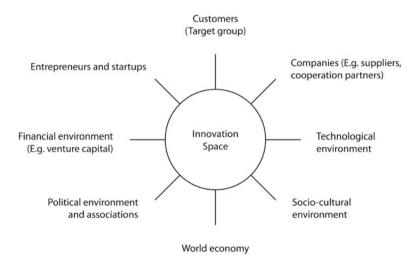


Fig. 25.3 Possible influencers and stakeholders of innovation spaces. (Source: authors)

in 2010 was considered a project in this context. At the time of the takeover, Volvo used a platform of the original owner, Ford. However, Ford did not want to create a major new competitor in the Chinese market. The resulting challenges were solved in an international innovation space (McKelvey and Bagchi-Sen 2015). It can be assumed that all the possible influencers and stakeholders in Fig. 25.1 played a role in this innovation space.

The situation is different for SMEs and startups. It is often the case that these companies configure their spaces in a very reduced way. This is often due to the fact that a maximum focus should be achieved with limited resources. However, it is advisable to define an appropriate innovation space on the basis of defined goals and to coordinate this with any existing investors.

In the startup environment, an innovation space that is too small (unsuitable) leads to the creation of startups that either

- (a) develop only individual aspects of a larger whole (e.g. a new method for diagnosing X-ray images); or
- (b) as a local solution provider (e.g. the German business network Xing) are unable to take the step toward internationalization.

The former are usually sold after a success and ideally give the investors a good exit, while the latter ideally offer the founders and investors good sources of income.

It is okay to proceed in this way if the result is the desired goal. However, really large organizations with a global impact, such as the US tech companies Amazon and Google, or the Chinese tech company Xiaomi, are not created in this way. Incidentally, such a limitation is a problem for an entire continent, namely Europe. This region is therefore in the process of missing its technological boat.

It is precisely at this time that startups have the best opportunities to build up their own innovation space in a borderless economy, provided they have the right mindset.

# 25.5 Silicon Valley: History and Future

If there is one truly world-class example of modern innovation, innovation spaces and global business expansion, it is Silicon Valley. This unique region in California, USA and the world-famous companies that have been established here over the last 70 years, such as Xerox PARC, Apple, and Hewlett-Packard, are widely known. Countless managers, researchers, entrepreneurs and capital investors visit the region each year not only for business but also to be inspired by the spirit of tech innovation.

This section, however, focuses on a slightly different aspect, namely the past and the future of this innovation region. The reason for this is that an epochal break in the worldwide uniqueness and significance of the Valley is currently becoming apparent.

## 25.5.1 The Waves of Silicon Valley

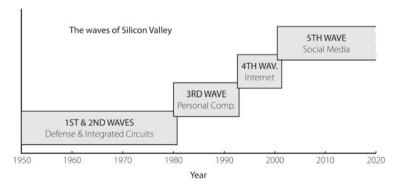
Throughout its history, the region has always been able to reinvent itself when competitors from outside became too strong. In the 1980s, for example, the Valley lost its global technological supremacy in semiconductors to Japan, leading to a recession and the loss of 25,000 jobs in just two years (Benner 2002). The region solved the problem by pushing through a new phase of innovation in the global market, namely by Intel's major development of its microprocessors. These components were crucial in initiating the strong growth area of the emerging PC industry, coupled with a large ecosystem of participating companies, many of them in the Valley. The next technological innovation followed in 1993 with the launch of the Internet and companies such as Netscape, Cisco, 3Com, and Google.

A striking feature of this development are the short innovation cycles of 10 to 15 years, known as waves, which are shown in Fig. 25.4 (Silicon Valley Competitiveness and Innovation Project n.d.).

This was followed in the early 2000s by the wave of the social media age, the so-called fifth wave, which is still going on today. In summary, this development resulted in the following waves (Fig. 25.4):

- 1st & 2nd waves (1950s–1980s): Defense & Integrated Circuits
- 3rd wave (1980s–1990s): Personal Computer
- 4th wave (1990s–2000s): Internet
- 5th wave (2000s–Present): Social Media

The website of the Silicon Valley Competitiveness and Innovation Project assesses the transition to the fifth wave as follows: "The rise of Social Media represented a shift in the region from engineering innovative technology products and services toward creatively applying that technology for consumer markets. Comparatively low barriers to entry (e.g. low costs) have helped to spur rapid



**Fig. 25.4** The five waves of Silicon Valley. Adapted from the Silicon Valley Competitiveness and Innovation Project (n.d.). (Source: authors)

growth of startups, particularly in San Francisco" (Silicon Valley Competitiveness and Innovation Project n.d.).

Smartphones (Apple as of 2007, Google Android as of 2008) with their ecosystems of apps are part of the social media wave in this view, although the two system providers were and still are only responsible for technology, and hardware production takes place in Asia without exception. This constellation was a novelty, because in the past hardware was produced both in the Valley and in Asia.

This development of the division of labor with Asia, which was not so sharply defined before, seems to be very interesting economically in the short and medium terms, but it does have long-term risks. Experience in other industries over the past decades has clearly shown that outsourcing production to areas with lower labor costs leads to the gradual diffusion of all know-how to the regions of production (Pisano and Shih 2012). It is therefore questionable how long the duopoly of the smartphone operating systems of Apple and Google with exclusive production of the hardware in Asia can continue in this form. Asian software manufacturers such as Huawei are already working on an operating system alternative (Kotabe and Helsen 2020). The hurdle is certainly very high because of the closed ecosystems of the apps. However, the market pressure is also very high, because almost 5 billion of the world's population live in Asia (Khanna 2019).

## 25.5.2 Backlashes in the Valley

It is also not the case that Silicon Valley has been able to successfully implement all the planned business initiatives. In 2006, for example, the cleantech sector was to be the *next big thing*. Until the financial crisis of 2008, investors provided around USD 1 billion in venture capital to startups in this sector. However, the investment flopped. In particular, the long development times, but also the enormous capital requirements were not properly assessed, and companies were not able to develop suitable business models. Venture capital firms had planned too many quick exits, as was normal in the software industry. Instagram, for example, returned 29 times the amount of investment to its supporters within two years. This principle proved impossible to implement in the cleantech sector (Sivaram and Gaddy 2016).

# 25.5.3 Manufacturing Innovation Example: Tesla

In another area, entrepreneurs in Palo Alto in Silicon Valley took a completely new approach to developing mobility on the basis of electrical energy by founding Tesla, Inc. back in 2003. One year later, in 2004, Elon Musk joined the company as an investor, co-founder and chairman of the board of directors (Vance 2017). Tesla's approach was to completely rethink the software side of electric vehicles, which in the future should also be able to drive autonomously. Traditional car manufacturers such as Volkswagen or Toyota are up to six years behind Tesla in the development of these technologies, as a teardown of a Tesla Model 3 in

Japan at the beginning of 2020 showed. From a technological point of view, the central processing unit developed by Tesla proved to be particularly outstanding. At competitor Volkswagen, these tasks are distributed among around 70 control units running eight different operating systems. This example shows what technological achievements Silicon Valley is still capable of, and how willing they are to make major investments with a long-term perspective. It also shows how seriously modern manufacturing is taken there. Manufacturing startups require enormous investments and take a long time to become profitable. Tesla's manufacturing takes place mainly in plants at various locations in the USA. Only one plant is located in Shanghai, China, and a plant in Germany is planned. There is no sign of manufacturing taking place long term in low-wage countries as happens with smartphones. However, Tesla has not yet generated profits. But that exemplifies the heart of the mindset: growth over profitability. What is important is technological leadership and the early development of international markets.

With its highly hardware-intensive, high-tech manufacturing approach, Tesla has a completely different business compared to players in social media, the companies of the fifth wave. You could almost say that Tesla goes back to the roots of the early Silicon Valley. However, it is already the case that Tesla, in contrast to the early days, is building up its own ecosystems, e.g. for charging infrastructure, and has strongly internationalized at a very early stage. How this new automobile scene will develop in the future on a possible path to becoming an industry of mobility service providers cannot be predicted today. It is possible that in this regard Tesla has laid the foundation for a sixth wave of the Valley.

# 25.5.4 Thoughts on the Future of the Valley

If there will be a sixth wave in the Valley, it is likely to be related to AI in some way. This AI reference is particularly relevant to Tesla in the development of self-driving cars, and there are also strong orientations toward AI among social media companies.

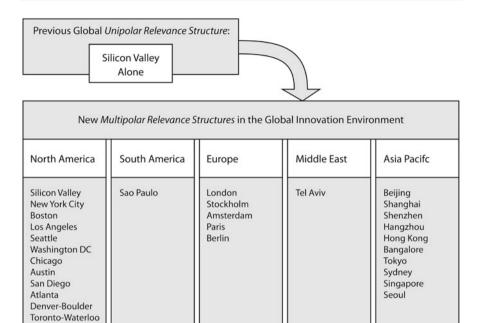
However, the region will then no longer have the exclusivity to which it has been accustomed, as China is already in the process of overtaking the US as a pioneer in AI systems (Lee 2019).

Further details on the future of the Valley in the global environment will follow in Sect. 25.6.

# 25.6 The Global Startup Economy

In this section we will describe how Silicon Valley is developing in comparison to other innovation centers worldwide and what the global scene of innovation ecosystems is like. The current fifth wave of Silicon Valley (social media, see Fig. 25.4) has been going on for 20 years now, longer than any other previous wave, and

Vancouver



**Fig. 25.5** New multipolar relevance structures in the global innovation environment. Data source regarding locations and ranking: The Global Startup Ecosystem Report GSER 2020 (n.d.). (Source: authors)

there is no end in sight. This could be an indication of an end to the typical short, centralized innovation cycles of the Valley.

In the first to fourth waves, Silicon Valley was characterized by worldwide exclusivity of the respective technologies, combined with the highest relevance as a center of innovation, and it is no exaggeration to say the Valley has changed the world from a central location. In reference to geopolitical power structures (see Sect. 25.3), we therefore speak of unipolar relevance structures in this period. Silicon Valley alone determined innovation in the tech sector at that time (see Fig. 25.5).

The question is whether and how this predominance of relevance as a center of innovation changed in the fifth wave. Here are some facts about this: Silicon Valley has slowed down its overall growth. For the last three years in a row, more people have moved away from the Valley than have moved in. The immigration of people from abroad is declining. Real estate prices fell by 7% in the last year under review. The costs of doing business in the Valley are among the highest in the US (Brennan 2020).

The 2020 Global Startup Ecosystem Report by Startup Genome LLC (The Global Startup Ecosystem Report 2020 n.d.) comments on the situation as follows: "There Will Be No "Next Silicon Valley. There Will Be 30.""

**Table 25.1** Top 30 global startup ecosystems. (Data source: 2020 Global Startup Ecosystem Report (n.d.)

City	Ranking 2020	Change from 2019
Silicon Valley	1	0
New York City	2 (tie)	0
London	2 (tie)	0
Beijing	4	0
Boston	5	0
Tel Aviv	6 (tie)	0
Los Angeles	6 (tie)	0
Shanghai	8	0
Seattle	9	3
Stockholm	10	1
Washington, DC	11	8
Amsterdam	12	3
Paris	13	-4
Chicago	14	3
Tokyo	15	New
Berlin	16	-6
Singapore	17	-3
Toronto-Waterloo	18	-5
Austin	19	-3
Seoul	20	New
San Diego	21	-1
Shenzhen	22	New
Atlanta	23	5
Denver-Boulder	24	-3
Vancouver	25	-1
Bangalore	26	-8
Sydney	27	-4
Hangzhou	28	New
Hong Kong	29	-4
Sao Paulo	30	New

This quote clearly calls into question Silicon Valley's unique position. The authors of the report describe a situation in which the 30 most important startup ecosystems (see Table 25.1) address relevant technology areas at different locations worldwide. Performance (value creation and exits), funding, connectedness, market reach, knowledge, and talent were evaluated. The analysis is conducted annually. The change from the previous year is indicated. In addition, the report lists 15 other locations that have the potential to be among the top 30 in the following year.

As the facts and data show, there are many indications that Silicon Valley's unique position has changed fundamentally as the importance of other regions has increased. The resulting relevance structures can be described as multipolar (see Fig. 25.5). The resulting term *multipolar relevance structures* is also used in reference to multipolar power structures in geopolitics.

The groupings by world zones (see Fig. 25.5) show a fairly even distribution of locations in terms of geography, with the exception that Europe is severely underrepresented compared to economic performance. This is exactly in line with the analysis of *The Billion Dollar Startup Club*. Here too, the USA and Asia are in the lead, while Europe is lagging behind (The Billion Dollar Startup Club n.d.).

Geopolitical power structures became multipolar some time ago (see Sect. 25.3). At a very similar time, the relevance structures of the global innovation environment also became multipolar. Whether the approximate contemporaneousness of the changes is a coincidence or whether there is a causal connection cannot be answered here.

It is a fact that our entire world is becoming more and more multipolar, which is due to the ever-increasing networking of the global infrastructure (Khanna 2016). For entrepreneurs and leaders, this means that opportunities increase if they use international arbitrage with creativity and persistence (see Sect. 25.7).

#### 25.7 Conclusions

In the previous sections, we have described the enormous changes that have taken place and continue to take place in many areas of globalization, geopolitics and entrepreneurship, and how these are interrelated. All these issues have a global dimension and invite entrepreneurs and leaders to take action like never before.

However, for many entrepreneurs the global environment is still something abstract, something difficult to understand, difficult to assess. It is something where entrepreneurs quickly lose their focus and for reasons of efficiency prefer to concentrate on their local environment in order to be successful there first. But that's where internationalization usually ends up. The reasons for this are many and varied.

We would therefore like to encourage entrepreneurs and leaders to rethink internationalization. Concretely, this means not just limiting business initiatives to sales and procurement markets alone, but also taking a holistic view of internationalization in connection with innovation. This begins with the targeted international expansion of the personal network in all relevant areas of the entrepreneurial innovation space (see Sect. 25.4.3). This process of expanding the personal network has never been easier, due to the international momentum of social media (e.g. Linkedin, Twitter, webinars). Interestingly enough, the COVID-19 pandemic has simplified this process even more, because due to travel restrictions all participants have become more accustomed to the possibilities of Internet communication. This is especially true for video conferences with screen sharing and collaboration tools. Of course, good will must be presumed on the part of all those involved. We are all learning that right now, at this particular time. The same applies to virtual teams, i.e. teams that work together via Internet communication regardless of location. This concept, which had already been developed at the end of the last millennium but did not catch on, can flourish with today's possibilities and in the current

situation. Entrepreneurs can take advantage of the associated arbitrage in the global environment (see also Sect. 25.2).

In summary, waiting for better times during the COVID-19 pandemic and beyond is not an option. Only those who take active steps now will remain relevant to the market as well as society.

Entrepreneurs are now facing challenges as never before, but at the same time there are opportunities as never before. Google and Facebook, for example, have emerged from the dot-com crisis and have thus initiated the age of social media.

It is to be hoped that it will be entrepreneurs who will solve the really big problems of humankind such as climate change. It is even possible that it will have to be entrepreneurs, because world politics seems to be failing in some areas. There is a reason why investors are beginning to demand CSR from companies (see Sect. 25.3).

#### References

Baldwin R (2018, December 22) If this is globalization 4.0, what were the other three? https://www.weforum.org/agenda/2018/12/if-this-is-globalization-4-0-what-were-the-other-three/.

Accessed 30 June 2020

Baldwin R (2019) The globotics upheaval: globalisation, robotics and the future of work. Weidenfeld & Nicolson, London

Benner C (2002) Work in the new economy: flexible labor markets in Silicon Valley. Blackwell, Malden, MA

Brennan B (2020, February 1) Silicon Valley competitiveness and innovation project—2020 update. https://www.svcip.com/files/SVCIP2020-FINAL3,9.2020.pdf. Accessed 30 June 2020

Bundesministerium für Bildung und Forschung (BMBF, Federal Ministry of Education and Research, a cabinet-level ministry of Germany) (n.d.) Vernetzung weltweit. https://www.bmbf.de/de/vernetzung-weltweit-268.html. Accessed 30 June 2020

Collins A (2019, January 15) The global risks report 2019. https://www.weforum.org/reports/the-global-risks-report-2019. Accessed 30 December 2019

Drucker PF (1967) The effective executive. Harper & Row

Frietsch R, Beckert B, Daimer S, Lerch C, Meyer N, Neuhäusler, P et al. (2016, November 15) Die Elektroindustrie als Leitbranche der Digitalisierung—Innovationsstudie. https://www.zvei.org/presse-medien/publikationen/die-elektroindustrie-als-leitbranche-der-digitalisierung-innovationsstudie/. Accessed 30 June 2020

Harris B (2018, February 7) China is an innovation superpower. This is why. https://www.weforum.org/agenda/2018/02/these-charts-show-how-china-is-becoming-an-innovation-superpower/. Accessed 30 June 2020

Inagaki, K (2020, May 29) SoftBank investment chief given 113% pay rise despite Vision Fund woes. https://www.ft.com/content/08248d28-b7b7-4809-8d78-d2df86944d40. Accessed 30 June 2020

Khanna P (2016) Connectography: mapping the future of global civilization. Random House, New York

Khanna P (2019) The future is Asian: commerce, conflict, and culture in the 21st century. Simon & Schuster, New York

Kotabe M, Helsen K (2020) Global marketing management. Wiley, Hoboken

Lau LJ (2019) The China-U.S. trade war and future economic relations. Chinese University Press, Hong Kong

Lee K (2019) AI SUPERPOWERS: China, Silicon Valley, and the new world order. MARINER Books

- McKelvey M, Bagchi-Sen S (eds) (2015) Innovation spaces in Asia. Edward Elgar Publishing, Cheltenham, UK. https://doi.org/10.4337/9781783475681
- Mitter R (2020, January 19) With Brexit imminent, what are the chances of a UK trade deal with China? https://www.theguardian.com/commentisfree/2020/jan/19/brexit-uk-tradedeal-china-us-compromise. Accessed 30 June 2020
- Munich Security Report 2020 (n.d.). https://securityconference.org/en/publications/munich-security-report-2020/. Accessed 30 June 2020
- Nunn R, O'Donnell J, Shambaugh J, Goulder LH, Kolstad CD, Long X (2020, April 6) Ten facts about the economics of climate change and climate policy. https://www.brookings.edu/wp-content/uploads/2019/10/Environmental-Facts\_WEB.pdf
- Pisano GP, Shih WC (2012) Producing prosperity: why America needs a manufacturing renaissance. Harvard Business Press, Boston, MA
- Pisano GP, Verganti R (2015, July 15) Which kind of collaboration is right for you? https://hbr.org/ 2008/12/which-kind-of-collaboration-is-right-for-you. Accessed 30 June 2020
- Pyka A, Scharnhorst A (2009) Innovation networks: new approaches in modelling and analyzing. Springer, Dordrecht. https://doi.org/10.1007/978-3-540-92267-4\_5
- Silicon Valley Competitiveness and Innovation Project (n.d.) By the Silicon Valley leadership group. http://www.svcip.com/. Accessed 30 June 2020
- Sivaram V, Gaddy B (2016, July 26) Clean energy technology investors need fresh support after VC losses. https://www.ft.com/content/917de65a-4500-11e6-9b66-0712b3873ae1. Accessed 30 June 2020
- Sorkin AR (2018, January 15) BlackRock's message: contribute to society, or risk losing our support. https://www.nytimes.com/2018/01/15/business/dealbook/blackrock-laurence-finkletter.html. Accessed 30 June 2020
- The Billion Dollar Startup Club (n.d.). https://www.wsj.com/graphics/billion-dollar-club/. Accessed 30 June 2020
- The Global Startup Ecosystem Report 2020 (n.d.) Startup Genome. https://startupgenome.com/reports/gser2020. Accessed 30 June 2020
- The Hamilton Project and the Stanford Institute for Economic Policy Research, Ten Facts about the Economics of Climate Change and Climate Policy. https://www.brookings.edu/wp-content/uploads/2019/10/Environmental-Facts\_WEB.pdf
- United Nations High Commissioner for Refugees (n.d.) Figures at a glance. https://www.unhcr.org/en-us/figures-at-a-glance.html. Accessed 30 June 2020
- Vance A (2017) Elon Musk: Tesla, SpaceX, and the quest for a fantastic future. Ecco, an imprint of HarperCollins, New York
- Wagner J, Watch D (2018, October 24) Innovation spaces: the new design of work. https://www.brookings.edu/research/innovation-spaces-the-new-design-of-work/. Accessed 30 June 2020