

Places of the Future

Where is the future of work?



Over the last few years, we've published a series of reports describing what we think will be the jobs of the future in this, the age of automation, algorithms and artificial intelligence.

In this report, we outline *where* many of these new jobs will appear. With the insight that jobs of the future often stem from unlikely places, we've identified 21 places around the world where the future is being built right now.

The cities and towns we profile range from the large to the small, the old to the new, and the well-known to the hardly-ever-heard-of. The one thing they all have in common, though, is an appetite to create – or recreate – a future by offering *humans* the work of the future.

As the world looks to get beyond the coronavirus pandemic, places that are hotbeds of innovation and new ideas, and that are affordable and enjoyable to work and live in, will be places that people gravitate to.

Read on to find out where the future of your work lies.

21 Places of the Future

OUTER SPACE

VIRTUAL SPACE

NOVA HANSEATICA

REMOTOPIA



INTRODUCTION

World-changing innovations – production lines, automobiles, nuclear power, semiconductors – often spring from the most unlikely of places.

Manchester was a small rural village before it became the world's first industrial city. Detroit was hardly a speck on the map before it became the epicenter of the global car business. Cambridge University was home to dreamers and punters before it unleashed the atomic age. Silicon Valley was farmland for fruits and nuts before the first seeds of the technology revolution were sown amid John Steinbeck's grapes of wrath.

So, as we move further into the digital economy, it's only natural to ask where the future of work is being built now. Particularly in light of the unprecedented events of the 2020s, only the most myopic would believe "the future of work" is still in the future. The Fourth Industrial Revolution – and now the COVID pandemic – are reshaping global economics and requiring new talents, skills and attitudes.

The Fourth Industrial Revolution – and now the COVID pandemic – are reshaping global economics, the relationship of people to their physical places of work, and the requirement for new talent, skills and attitudes.

In our previous studies, we've imagined "what" the future of work will look like, particularly the new jobs that would emerge from the steady incursion of automation, algorithms and artificial intelligence (AI) into our workplaces and personal lives. Amid the overwhelmingly positive worldwide reception to those studies, including being [featured](#) in the *Harvard Business Review*, we began to hear a second vital question being asked: "Where" is the history of tomorrow being written today?¹ And just as important, what are the characteristics of these unlikely places in the developed and developing world that make them a hotbed of innovation and new ideas?

By understanding this, we realized, other municipalities and locations could begin to nurture and invest in the elements that will help them not only grow their own success but also gestate the future of all our work.



Places defining the future

Going with the “21” theme of our jobs reports, we developed a methodology to pinpoint the same number of places that are fueling the future (see methodology, page 7). Some of these places are in the western hemisphere, some in the East; some are in the southern hemisphere, but many are in the North, reflecting longstanding and inherent advantages. A few – like “Remotopia,” “Nova Hanseatica,” “Virtual Space” and “Outer Space” – are in no hemisphere at all but are best described as “omnisphere” places. *Genuinely places of the future.*

The places we feature often anchor themselves on one key technology or concept. For example:

- **Cybersecurity.** Tel Aviv in Israel has become a well-established and hugely successful location for cyber innovation and keeping data safe.
- **Digital twins.** Wellington, New Zealand’s early investment in creating a cloud-based, IoT-infused digital replica of its physical self hastened its rebuild following a major 2016 earthquake, setting the stage for jobs of the future like “cyber city analysts” and “VR journey builders.”



- **Fintech.** In Kenya, Nairobi’s digitally engineered fintech advances have reinvented it as a highly adaptable financial services metropolis stemming from locally born technological innovations such as M-Shwari and M-Pesa.
- **E-sports.** Dundee, Scotland, has successfully fused the tech-heavy worlds of gaming and design, all epitomized by its gleaming new waterfront design museum.
- **Sustainability.** Kochi, India’s airport is powered entirely by solar energy. (It’s also the home of one of the largest 3D printing “FabLabs” in the world.)
- **Diversity and inclusion.** Atlanta, Georgia, is one of the Western Hemisphere’s burgeoning innovation economies, sourcing some of the most diverse talent in the U.S. with a rich mix of tech-savvy, culture and inclusion.

- **Digital engineering.** Shenzhen, China, showcases world-class lessons in the power of rapid prototyping at its Huaqiangbei electronics market, which features digital engineering at hyperscale. It’s a rich example of making science-fiction dreams become real-life science fact.
- **Virtual workplaces.** [Remotopia’s](#) huge, cloud-based infrastructure investments revealed the poison of legacy kludges of technical-debt-riddled patchworks of systems. It showcases the power of supporting millions of telecommuting employees with modern systems that scale elastically (with [Virtual Space](#) hot on its heels).²

In 2021, we’re on the precipice of stunning advances in new technologies and new ways of working, living, eating, drinking, entertaining, creating and innovating new businesses, which – like the assembly line a century ago – are fueling the workforce of tomorrow in cities and regions all over the globe.

For a variety of reasons – adversity and necessity, situation and circumstance, a lack of anything better to do, an abundance of “greenfield” and “brownfield” spaces where the young (in age and spirit) can experiment and, most importantly, locals are determined to take control of their future – these places could, over time, become the new Manchesters and Detroits and Silicon Valleys of the 21st (and 22nd) century.

Finding out where exactly these trends are happening, in an unevenly distributed fashion in places like these and others, is the purpose of this report. This is a map of the future; gold (and a few dragons) await.

JOBS OF THE FUTURE HAPPEN IN PLACES OF THE FUTURE

In one of the most poignant (and important) conversations we had soon after the publication of our first jobs of the future report, the mayor of a midsize Midwestern U.S. city asked us how he could build these future jobs in *his* city. How could the age of algorithms, automation and AI help *his* town? “What does the future of work look like for us, when we’re at rock-bottom?” he asked. “What’s ‘the formula’ we need to follow?”

His questions caught us short. And frankly, we didn’t have very good answers.

In the mayor’s eyes, the future was happening elsewhere – in global cities, on the coasts, in faraway lands where the grass was a lot greener – but not in his tier-two “Rust Belt” city, a place, he freely admitted, that had fallen into post-industrial collapse. The fear, uncertainty and doubt he shared with us were palpable – and entirely justified. A generation (or two) of winds blowing against him (and the constituents he represented) had left him (and his constituents) numb, nervous and unsure of what to do next.

The mayor’s questions galvanized us and, as in all the best stories, made us think that perhaps the darkest hour is just before dawn – that perhaps we could try and help him (and countless other people in his position) by understanding why the future happens in Place A and not Place B. Perhaps we could help the mayor (and countless others) understand the strengths of his terroir and where his stony ground lay.



And perhaps we could help him (and countless others) learn from the success of other places that are booming, far from the obvious success stories of London, New York, San Francisco and Sydney.

This report is our response to the mayor’s question.

METHODOLOGY

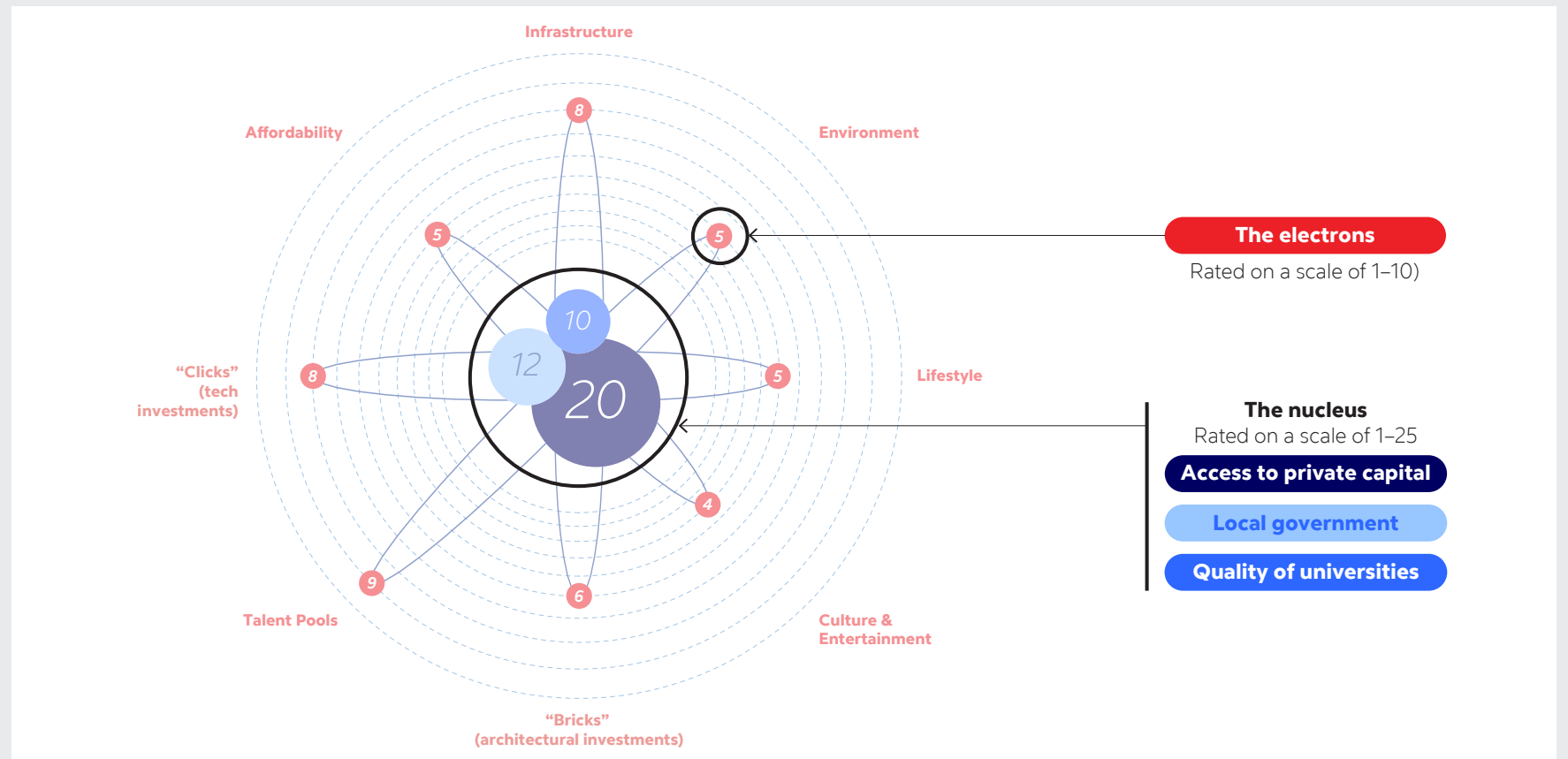
What makes a place futuristic? The interplay of fundamental elements unleashes potent, combined energies that lead to an alchemy of advancement. We employed a detailed methodology to select the 21 places featured in this report. Using the metaphor of an atom, we examined both the “nucleus” and the “electrons” of a place.

The nucleus consists of the following three components (each of which was rated on a scale of 1–25):

- Local government.
- Quality of colleges and universities.
- Access to private capital.

The electrons consist of the following eight components (each of which was rated on a scale of 1–10):

- **Physical infrastructure:** Quality of airports, public transport, high-speed rail, new talent clusters.
- **Environment:** Sustainability (water, CO2 emissions), recreation (urban parks, outdoor space, access to natural beauty), environmental record (pollution, land conservation, green buildings, stewardship).
- **Lifestyle:** Diversity & inclusion (women’s rights/education, racial D&I, LGBTQ+ rights, accessibility, etc.), income equality, commute time, education levels, “happiness” levels.
- **Culture & entertainment:** Restaurants and bars, music and arts, creative *zeitgeist*/buzz, sports (such as hosting the World Cup, Olympics, Super Bowl, etc.).



Understanding our atom of success

- **“Bricks:”** Architectural heritage, new construction vs. reviving and restoring old buildings and architecture, prevalence of buildings designed by celebrity architects.
- **“Clicks:”** Robustness of digital infrastructure, public WiFi, broadband infrastructure, cellular data coverage, number of tech companies, relative number of new tech startups.
- **Talent pools:** Reliance on professional management, quantity and quality of education, country capacity to attract talent, cooperation in labor-employer relations.
- **Affordability:** Cost of living, consumer price index.

Starting with a list of over 150 places, we used data from sources such as the World Economic Forum, World Justice Project and ESI ThoughtLab to tally a final score for 75 of them.³

The core nucleus was weighted more heavily than the electrons, with the logic that when these three components are well-established, a place stands a greater chance of attracting the other elements needed to create positive momentum. In an atom, for super-charged electrons to rotate, a strong core nucleus is required. Similarly, without the rule of law, talent and capital as foundational building blocks, a place’s chances to succeed are greatly reduced.

MOVING PICTURES ARE WORTH A MILLION WORDS

To accompany our written report, we've created a series of short documentary films that feature seven of the 21 places.

The films capture the essence of some of the key places we've identified – Dundee (Scotland), Kochi (India), Atlanta (U.S.), Nairobi (Kenya), Remotopia, Silicon Wadi (Israel) and Virtual Space. The movies were all made by different filmmakers living and working where they shot – a diverse and talented cadre of young, up-and-coming cinematographers who helped us get inside their hometowns, and tell the important stories that make them special places of the future.

We were also inspired by master virtuosos in storytelling at the intersection of place and idea: writers and artists such as Thomas Friedman, Anthony Bourdain, Richard Florida, J.R., Agnès Varda and J.D. Vance, all of whom share an ability to convey the heart, soul, *zeitgeist* and *gestalt* of a place. (Be honest: You didn't know Brazil's Minas Gerais existed – let alone that it was an epicenter of the future of food – until Anthony Bourdain's compelling *Parts Unknown* boldly proclaimed it so.) Moreover, their talents reveal the galvanizing power of work to transform lives, incomes and living standards ... and through it, to bolster the dignity and well-being essential to all of humanity – at the heart of where we call home (and work).



We think the films (and this report) illuminate important lessons for *all* places (even yours!) to learn while navigating the pandemic and the Fourth Industrial Revolution. By training a telescope (and a movie camera) on the places of the future today, we can try to figure out what work will look like – and where it's happening – tomorrow, when this day is done.

Visit the links on pages 10, 18, 26, 39, 55, 72 and 88 to watch our short documentary films for these places of the future.

Atlanta

GEORGIA, U.S.



Atlantans always knew they'd be shaping the future. As the city's tech scene grows to rival its prowess in entertainment, the rest of the world is catching on.

Silicon Valley casts a significant shadow in the world of tech and innovation. Atlanta has been generating similarly sized shadows for much of the past three decades. In the early '90s, music industry executives left their New York/Los Angeles enclaves to set up shop here. More recently, film and TV production crews have similarly emigrated from their traditional West Coast locales to put Atlanta on the map as a production hub for a wide variety of content. These industries have set the stage for Atlanta's next act as a hotbed for tech, startups and corporate innovation. Thanks to the infrastructure, educational institutions and corporate partnerships already in place, Atlanta is primed to compete on the global stage as a place of the future.

COVID-19 might even speed that transition along. As Bay Area tech companies commit to long-term remote work arrangements, Atlanta has emerged as a top destination for tech workers. The city must find the right balance of local-level guidance on safety and state-level imperatives on business development in the wake of the pandemic.

The place that best exemplifies where Atlanta is and where it's headed is Tech Square. The buzzing Midtown neighborhood sits on the western edge of Georgia Tech's campus and houses the institute's Scheller College of Business. Next-door are research labs funded by the school to capitalize on student and faculty work. One block north sits Tech Square Labs, a startup hub and home to Atlanta's tech ambassador, Paul Judge. On the south end is the newly built CODA, a mixed-use development with ample office space and a high-performance computing center. Interspersed throughout are corporate innovation hubs of Coca-Cola, NCR, Anthem, Boeing and more. And, of course, Atlanta staple Waffle House has an outpost right in the center of it all.

The tech workforce is bolstered by twin drivers of development. Atlanta is home to the Georgia Institute of Technology, one of the top engineering schools in the country and a hotbed for tech talent. Georgia State University, which ranks as the [second-most innovative school](#) in the country (*U.S. News & World Report*) also calls Atlanta home. The Atlanta campus of Savannah College of Art & Design, Emory University (in neighboring Decatur) and the Atlanta University Center round out the list of local schools feeding into the city's creative class of

[WATCH THE ATLANTA MOVIE](#) (13:00 running time)



[Atlanta, Georgia, U.S.](#)

workers. According to realty company CBRE Group, Atlanta also ranks seventh nationally in [tech degree attainment](#).

A thriving innovation scene, however, requires more than just scrappy students. Thanks to a clustering of Fortune 500 companies, Atlanta also has ample experienced talent. As seasoned vets tire of corporate working environments, they've found landing spots within the city's burgeoning startup economy.

An attitude of inclusion

But the key to Atlanta's continued success in tech and innovation is its unprecedented level of diversity. While Silicon Valley has a paltry 6.4% of underrepresented minorities in its tech workforce, Atlanta's rate of employment for minorities in tech is higher than 25%, [according to Brookings Institute](#). Silicon Valley has a ways to go in becoming a truly inclusive place. Atlanta's thriving tech scene is righting those wrongs with a dynamic culture and diverse talent leading the charge.



A) Getting creative on campus

Local colleges bolster the city's talent pool with innovative programs at GSU, inventive engineers at GA Tech and creative problem solvers at the Atlanta University Center.

B) Fostering entrepreneurs – and diversity – at Atlanta Tech Village

The startup hub – which provides office space for hundreds of tech founders – recently partnered with Turner Studios to launch an accelerator aimed at promoting gender and ethnic diversity in tech.

C) Sowing seeds at Tech Square Labs

Nestled at the conjunction of startups and corporate innovation, this early-stage tech hub is dedicated to helping founders build something from nothing.

D) Fusing culture with tech at The Gathering Spot

Every day, movers and shakers from Atlanta's arts scene mingle with tech entrepreneurs and civic leaders in a creative mashup that continues to augment the culture and diversity of the innovation ecosystem.

E) A breath of fresh air

Located in the heart of the city, Piedmont Park is an epicenter for activity, with sports, music and cultural events throughout the year. Atlantans of all walks of life find their place in the park.

Introducing the techies to the cool kids

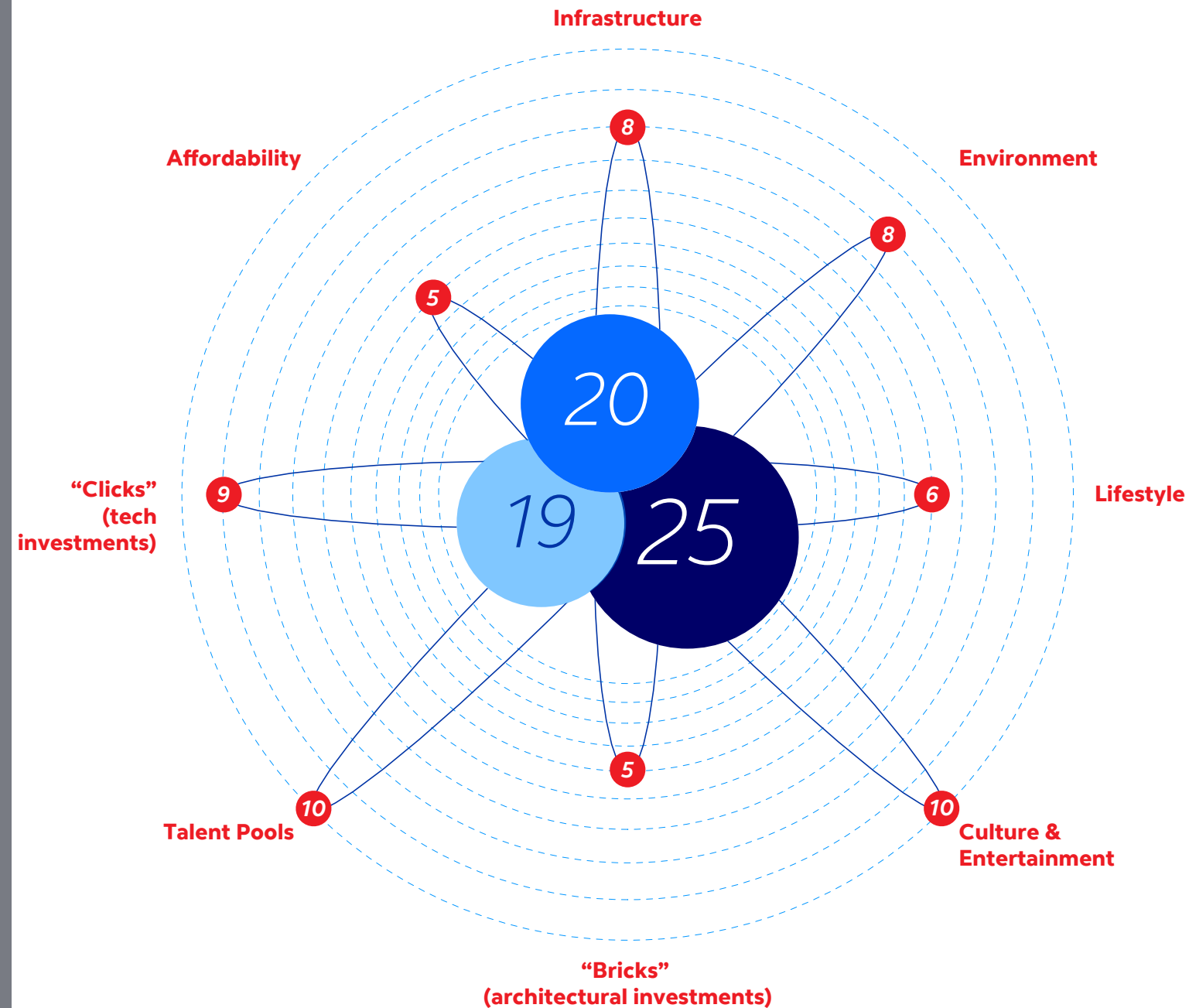
THE NUCLEUS

(Scale of 1-25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

● (Scale of 1-10)



What Atlanta can teach other places readying for the Fourth Industrial Revolution

Culture is key.

The future being forged in Atlanta is one of inclusivity and tech creativity, wrapped in a layer of cultural magnetism that continues to attract new and diverse arrivals of both companies and people.

Grow talent through local education.

The combo of engineering and design programs undergird the Atlanta tech workforce. Young workers are joined by experienced corporates who can lend their seasoned skills to upstart businesses.

Ignite the scene with tech hubs.

Enclaves of innovation dot the city's landscape, from Buckhead's Atlanta Tech Village, home to over 300 companies (and the fourth largest tech hub in the country), to Midtown's Tech Square, which fosters a mélange of startups and corporations.

Da Nang

VIETNAM



Da Nang, a melting pot of Vietnam's old and new, is gradually morphing from a simple coastal town to a global destination, poised to become the next transformation jewel of Southeast Asia.

Close your eyes and visualize the place where you'd like to settle for the rest of your life.

What comes to mind? A river, sea or mountain backdrop – maybe all three? A vibrant atmosphere with a combination of modern and colonial architecture? Warm-hearted, hospitable locals?

Welcome to Da Nang.

A central coastal city that once acted as the U.S. airbase during the Vietnam War, Da Nang is making strides toward becoming an eco-smart urban area, a hub for startups and innovation and one of the most livable cities in Asia. Even after a mid-summer outbreak of COVID-19 resulted in the immediate evacuation of 80,000 tourists and short-term losses to the local economy, Da Nang remains an attractive destination for international companies. Most restrictions have now been lifted, and airlines are offering heavily discounted fares to the city. Vietnam offers a valuable lesson to the world that having extensive financial resources is neither necessary nor sufficient to fight an epidemic successfully; it's the early and aggressive response that makes all the difference.

Da Nang is roughly equidistant to the “biggies” of Hanoi and Ho Chi Minh City. And unlike these other two locales, Da Nang is refreshingly located directly on the Pacific Coast. Along with its variety

of transport to choose from, the city is an attractive base for businesses serving all of Vietnam.

More than just a tourist hotspot, Da Nang is all about growth – massive growth – and it's poised to become an investment destination for the world. Rampant construction and incipient skyscrapers are proof of a new Da Nang in the making. To stimulate post-COVID-19 consumer demand, Da Nang is eyeing stimulus investments to promote domestic businesses, and a restructuring of the tourism sector.

A tale of sea and startups

Moreover, if you're in marine logistics or high-tech, Da Nang should be of paramount interest. As a coastal city that hasn't yet fully taken advantage of its ocean access, Da Nang is now turning its gaze seaward, with 10% of Vietnam's regional GDP slated to come from maritime revenue [by 2025](#), according to a 2018 government committee resolution. The next decade will also see Da Nang flooded with tech talent. The city has set up a Da Nang Business Incubator and is developing a startup training network. Its Information Technology Park is expected to generate US\$1.5 billion revenue per year and 25,000 jobs.

Da Nang is already one of the most popular destinations for digital nomads. As travel bans eventually ease, and remote working remains



Da Nang, Vietnam

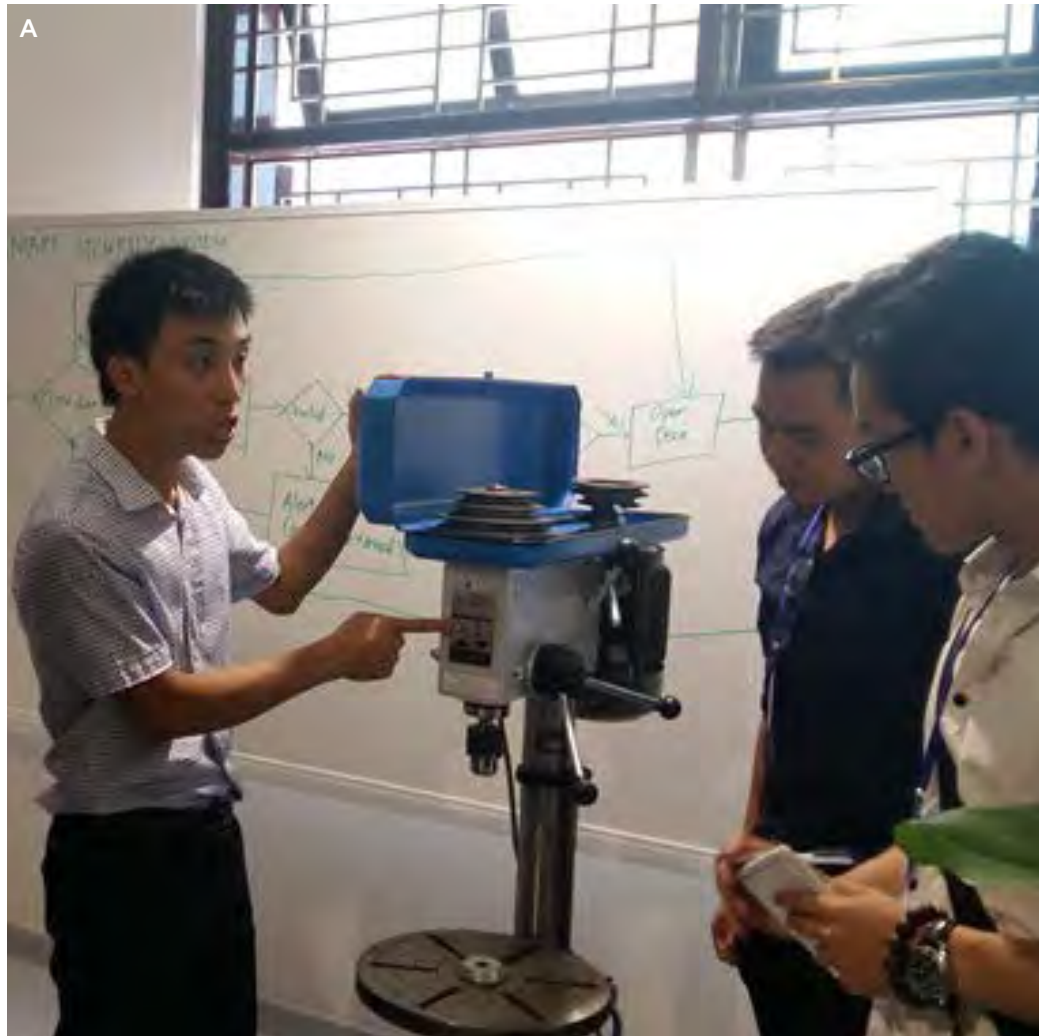
prevalent, more travelers and digital nomads will likely make it the [Remotopia](#) hub for the region.

Technology also keeps its denizens engaged. Da Nang [scores highest](#) of all Vietnam's provinces in e-governance and public service delivery, according to the 2019 PAPI Index. And it's planning to implement AI-driven chatbot services to provide real-time public service information.

Nowhere can claim to be a “place of the future” without environmental protections. Da Nang [aims to cut](#) greenhouse gas emissions by 25%

by 2030. It has already eliminated 12,000 tons of carbon emissions by introducing hybrid cars and solar-powered water heaters, bolstering its push to become a “green city” by 2025. Furthermore, it built an integrated electric bus rapid transit system that, along with solar plants and active promotion of biofuel gasolines, present cleaner alternatives.

Da Nang represents one of the most significant economic opportunities in Asia Pacific for the next decade, and it's a source of innovative ideas for leaders globally. In the best possible way, whatever you expect from Da Nang, you're in for a surprise.



A) Makerspace: preparing future entrepreneurs

The University of Da Nang houses a fully equipped laboratory space where university students can design, prototype and create manufacturing projects. The idea is to cultivate an entrepreneurial mindset among students in an educational facility that doubles as an invention laboratory.

B) The city of "fire-breathing-bridges"

With nine old and new bridges spanning the Han River, the new Dragon Bridge steals the limelight – and hearts of Da Nang residents – every night. It also breathes fire and water each Saturday and Sunday night at 9:00 PM.

C) Coffee for everyone

Coffee is deeply rooted in Da Nang's culture. Whether you're looking for a focused-on-work hipster café (43 Factory Coffee Roaster) or a noisy place where locals languorously sip iced coffee (Cong Caphe), the city caters to everyone.

D) Incubating the seeds of global and local startups, alike

Da Nang Business Incubator is a public-private partnership helping local startups provide knowledge, training, co-working space and networking opportunities. Everyone can be a part of the startup community.

E) The party is just getting started

Locals are always ready to welcome others. Be prepared to be spoiled by their hospitality.

Burgeoning opportunity in a coastal town

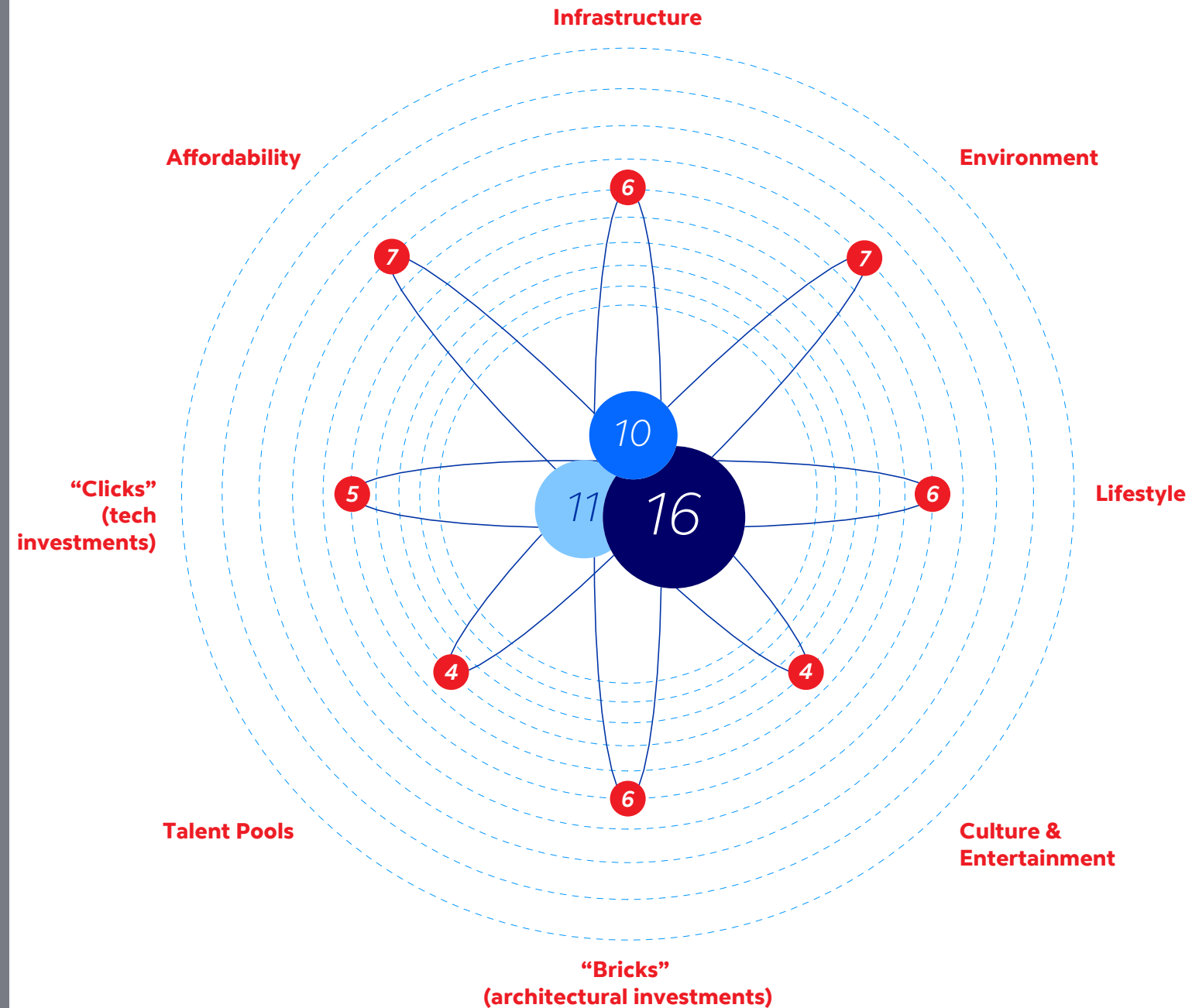
THE NUCLEUS

(Scale of 1–25)

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- Quality of Universities
- Access to Private Capital

THE ELECTRONS

(Scale of 1–10)



What Da Nang can teach other places readying for the Fourth Industrial Revolution

Convergence of old and new.

The town is increasingly cosmopolitan yet still retains a relaxed feel, with streets flanked by a rich architectural heritage in the form of centuries-old pagodas and faded yellow homes from the French Colonial era, and far less frenetic motorbike traffic than Ho Chi Minh City.

Sustainable infrastructure for a sustainable future.

Considering its strategic location, Da Nang's sea-based economy is set to become its growth engine. This also means much more work is needed to prevent degradation of the natural environment and to restore and preserve important marine ecosystems. The city plans to leverage advanced technologies and sciences, as well as human resources, to implement protections and respond to climate change.

A food scene that fosters families (and networks).

In a digital-first world, we still need human engagement. A visit to any of Da Nang's local restaurants at night reveals a strong bond between families and friends over drinks and dinner. Communities are core to the city's culture, with locals learning from each other, discussing new ideas and exploring ways to execute them.

Dundee

SCOTLAND



This little-known Scottish city thrives at the intersection of creativity, design and technology – just like the best-in-class video games industry established here.

[WATCH THE DUNDEE MOVIE](#) (13:00 running time)



Dundee is a city surrounded by world-famous neighbors. Down the road is the golf mecca of St. Andrews, where Prince William and Kate Middleton met at university. It's an hour by train to Scotland's capital city of Edinburgh, and 90 minutes to Glasgow. But this East Coast city deserves its own global recognition.

Catapulting Dundee onto the global stage is a culture of creativity and design, reinforced and epitomized by its £1 billion (over \$1.3 billion) Waterfront redevelopment. The undisputed star of this initiative is the V&A Dundee design museum, created by renowned Japanese architect Kengo Kuma, which seems to float on the River Tay.

The V&A's greatest gift to Dundee is helping it achieve a reputational overhaul. Once an easy punchline for British comedians (described by Dundonian writer A. L. Kennedy as "somewhere you shut up about, with no space for imagination"), the city now bustles with tourists (and media) catching a glimpse of Kuma's stunning building.⁴

Long before the V&A museum was built, Dundee was home to a comic-book industry that inspired generations of artists and illustrators (best personified by Britain's beloved and longest running

children's comic magazine *The Beano*). It's also the only UK city to be granted UNESCO City of Design status for its contributions to the arts and sciences, including the invention of aspirin and numerous cancer drugs.

A rising star in the experience economy

Dundee is also famous for the creativity found in its tech sector. Historically known for producing jute, jam and journalism, today there's a fourth "J" in town: joysticks. The well-known video games "Grand Theft Auto" and "Lemmings" were created here, and the city's Abertay University was the first in the world to offer a degree in computer game design in 1997 – the result of a collaborative effort between the university and the games design sector. These types of skills will turbocharge Dundee's position as a player in the experience economy.

The city's two world-class universities will be essential catalysts for generating both talent and job opportunities in key fields. Abertay is hoping to replicate its video game success in the cybersecurity field, offering the world's first degree in ethical hacking.



Dundee, Scotland

Dundee University has one of the highest concentrations of life scientists in the UK and aims to be the most sought-after biomedical location in the region. Government investment is helping the university achieve this goal, with a £25 million investment in growing the Tayside Biomedical Cluster and a further £15 million for JustTech, the world's first institute for innovation in forensic science.

The city's scientific prowess is central to Scotland's international effort against COVID-19, with an

additional £5 million in government funding channeled into Dundee University to ameliorate the worst impacts of the virus on Scottish citizens. So, while its cool new design museum may have elevated the city's stature in the world, it's clear that Dundee forged its identity as a hub of creative design and tech long ago – and continues to do so today. Whether it's the joysticks of videogames, technology's creative side or life sciences, Dundee is the destination.



A) Dangling over the River Tay, it's the V&A

Scotland's first design museum is a sight to behold. At the heart of Dundee's cultural revolution, it was unsurprisingly voted one of the world's [100 greatest places](#) in 2019 by *Time* magazine.

B) Three stars for the Michelin plan

When tire maker Michelin announced it was moving out of the city, a partnership between Dundee City Council, Scottish Enterprise and Michelin PLC turned the company's old site into an innovation park. With a focus on sustainable mobility and low carbon energy, this park aims to recreate the 850 jobs lost by Michelin's departure.

C) South by Southwest? Try North East of North: NeON Digital Arts Festival

There's a long history of design in Dundee – for locals, tourists and students alike – that makes it the perfect location for the NeON Festival. From the Dundee Contemporary Arts center to the Duncan of Jordanstone College of Art & Design, design was in the very fabric of this city long before the V&A landed.

D) Water's Edge, for watery weather

Water's Edge is a co-working development that supports collaboration, creativity and innovation across the city. It's designed as an "indoor street," to avoid the somewhat unpredictable weather.

E) Take my breath away, River Tay

Dubbed Scotland's sunniest city, the beauty of Dundee and the wider Tay region is stunning. A brisk walk to the top of "the Law" (Dundee's extinct volcano) provides a panoramic view that will quite literally take your breath away.

A hub of creative design and technology

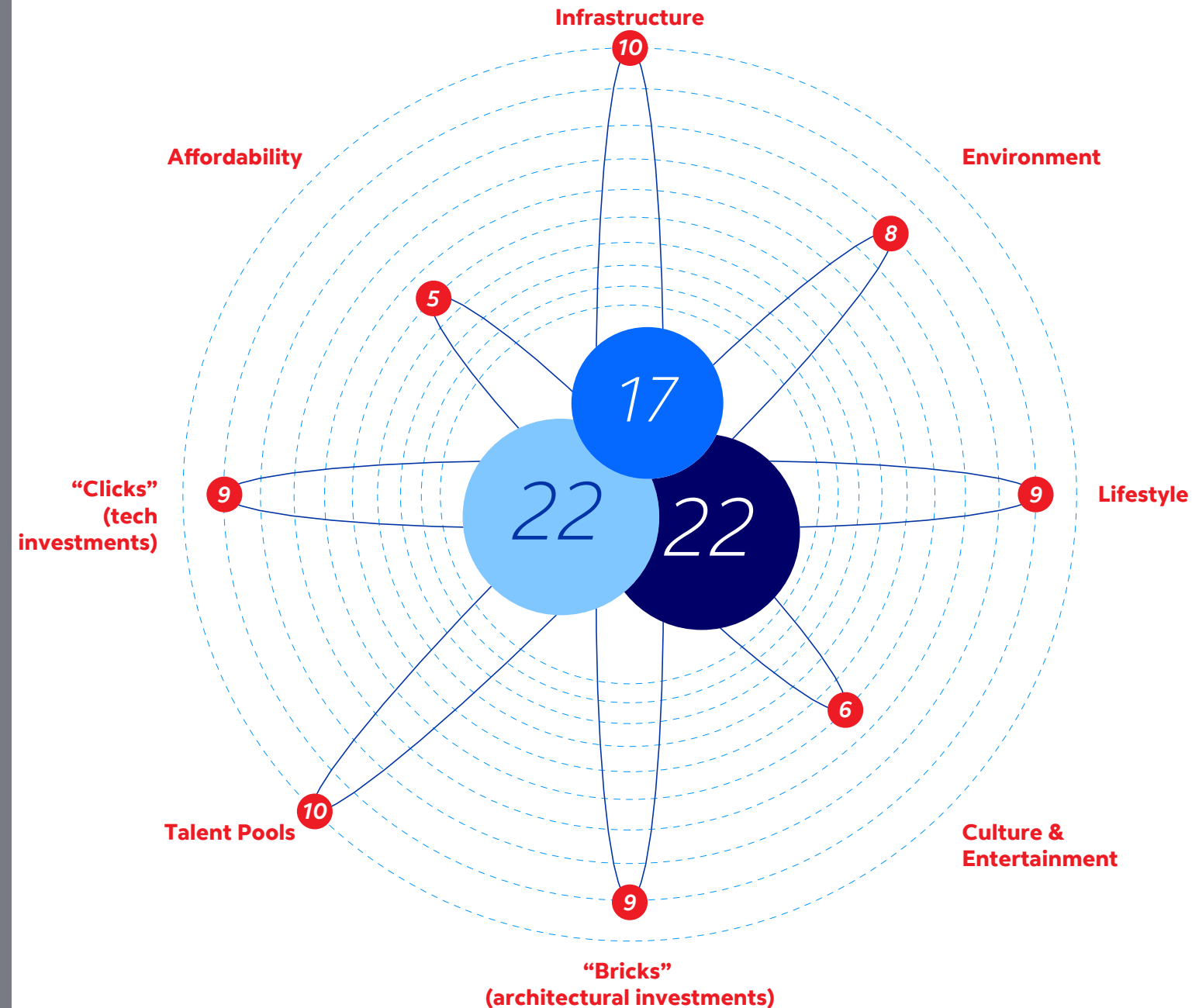
THE NUCLEUS

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THE ELECTRONS

- (Scale of 1–10)



What Dundee can teach other places readying for the Fourth Industrial Revolution

When one door closes, another opens.

The Michelin Scotland Innovation Parc was created to mitigate the impact of a major employer leaving the city. It includes a new skills center and a national hydrogen center to support a city-wide hydrogen transport economy.

An electrifying vision.

Dundee is a city with sustainability in mind – especially when it comes to electric vehicles. It currently has 130 electric taxis, and any new taxi must be electric. EV-only taxi ranks are being built across the city to make sustainable transport a clear and easy choice.

Reputations aren't forever.

Dundee's reputation for design, culture and technological and scientific innovation was hard-won. It's taken grit to overcome decades of ridicule that encouraged generations to move out to better-known cities like Glasgow or Edinburgh. Through sheer determination and ambition, it's now a city to be reckoned with.

Haidian Qu

BEIJING, CHINA



A “place of the present” for Baidu, Xiaomi, Lenovo and ByteDance (creators of TikTok), which might be a “place of the future” for the rest of us.

Perhaps it’s a stretch to call part of a city of 21 million a place of the future. But Beijing’s Haidian District (aka “*Haidian Qu*” in Chinese), where TikTok is headquartered, is a big part of a big city of a big country with a big future, but yet is almost entirely unknown to most people around the world.

Haidian’s rise exemplifies the atom-based “formula of the future” that runs throughout this report – i.e., growth is unleashed when tech talent and capital tightly interlock. Within a few square kilometers, many of China’s best educational institutions (Peking University, Beijing Institute of Technology, University of Science and Technology Beijing and Tsinghua University) congregate with emerging tech powerhouses. Thirty years ago, Haidian was a university district best known for the Old Summer Palace; today, after a generation of Chinese and Western venture capital, it’s where the Tik is Toking.

Since 2017, ByteDance’s TikTok has built on Chinese tech momentum and exploded as the most popular app in the world. It’s the first wave of Chinese “soft power” – an alternative to the West’s movies and music of Hollywood and Memphis, the theater of London, the opera of Bayreuth that have been as important to the dominance of the G7 these last 70 years as NATO, the UN and the IMF.

In the first waves of globalization, many local people in India or Nigeria or Mexico fell in love with Shakespeare, Cervantes and W.G. Grace and longed to visit Stratford-upon-Avon, the Prado or Lord’s, as a result. The rise of Pax Americana in the 20th century had as much to do with global swooning at Frank Sinatra and Elvis Presley as it did with the Normandy landings. After WWII, England lost an empire but found a new role as a fountainhead of cool – the Beatles, the Stones, punk rock, David Beckham – which kept the tills of Carnaby Street and Harrods ringing long after it had lost its place atop Pax Britannica. While hard power ruled the head, soft power ruled hearts. Young people in foggy London dreamed of California, and young people in foggy San Francisco dreamed of Liverpool.

An infusion of soft power

Few, so far, have dreamed of Haidian Qu. But that could change, and as the coronavirus lockdown eases, the streets around ByteDance’s HQ are bound to see more Westerners curious to check out what’s going on. Initially, it will be an avant-garde, analogous to Christopher Isherwood in Santa Monica in the 1950s. But as swelling numbers of next-gen coders and hipsters move back and forth between Beijing Capital International Airport and Heathrow and JFK and LAX and CDG, China’s soft power will expand

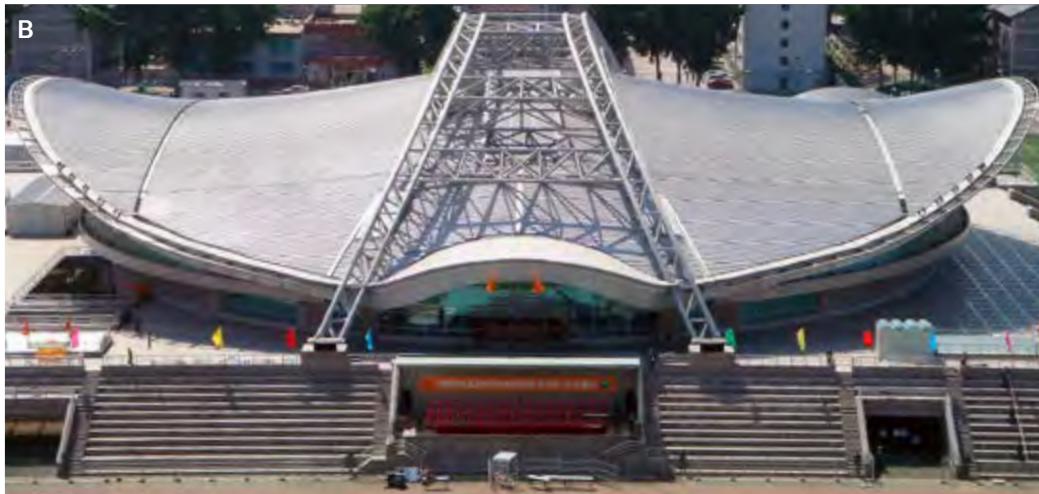


Haidian Qu, Beijing, China

and migrate and infuse its way into the bloodstream of the world.

What will happen then? Who knows. The norms of TikTok – being developed by Chinese engineers using AI in ways most Western businesses are entirely unaware of – could, in time, become the norms of work in London and NYC and San Francisco in the years to come. By then, Chinese hard power will undoubtedly be harder, but its soft power will be key to its future. And yours. And to a future of work that, one hopes, works.





A) Ancient and modern

Built over 200 years (and destroyed in a few days by the Brits and the French in the Second Opium War), the Old Summer Palace was the main residence of the Qianlong Emperor, the fifth emperor of the Qing dynasty. Nowadays, it's a nice place to imagine the code-born dynasty that's about to begin ...

B) The future of workouts

All work and no play makes Zhang Wei a dull boy. Beijing Institute of Technology's gymnasium, built for the 2008 Olympic Games, is a top-of-the-line facility bang in the middle of campus. No excuses not to be fit for the future.

C) The power of soft power

Your 16-year-old daughter has never heard of Zhang Yiming (aged 38, net worth \$22 billion) but she's singing his song. TikTok has made lip syncing, practiced alone by teenagers in front of bathroom mirrors for generations, a shared sensation around the world. Except in China, where it's banned.

D) All propaganda is a lie, even when it's telling the truth

In an age of cyber war and fake information, the place to discover what's shaking is aptly named. (No, it's not La Bamba). At this nightclub in the university district, secrets are shared and alliances struck (of the romantic kind) to 150 beats per minute. But the main lies on offer are that you're very good looking and an excellent dancer.

E) Accelerating into the (hopefully cool) future

Bicycles outnumber cars 10 to 1 in Beijing. Revisit this scene (outside Wudaokou train station in Haidai) in 10 years – the ratio will likely have reversed. Hopefully, those cars will be electric (over 400 electric automobile manufacturers are active in China currently); otherwise, the world will have no chance of meeting the UN's climate goals.

The fountainhead of Pax Sinica

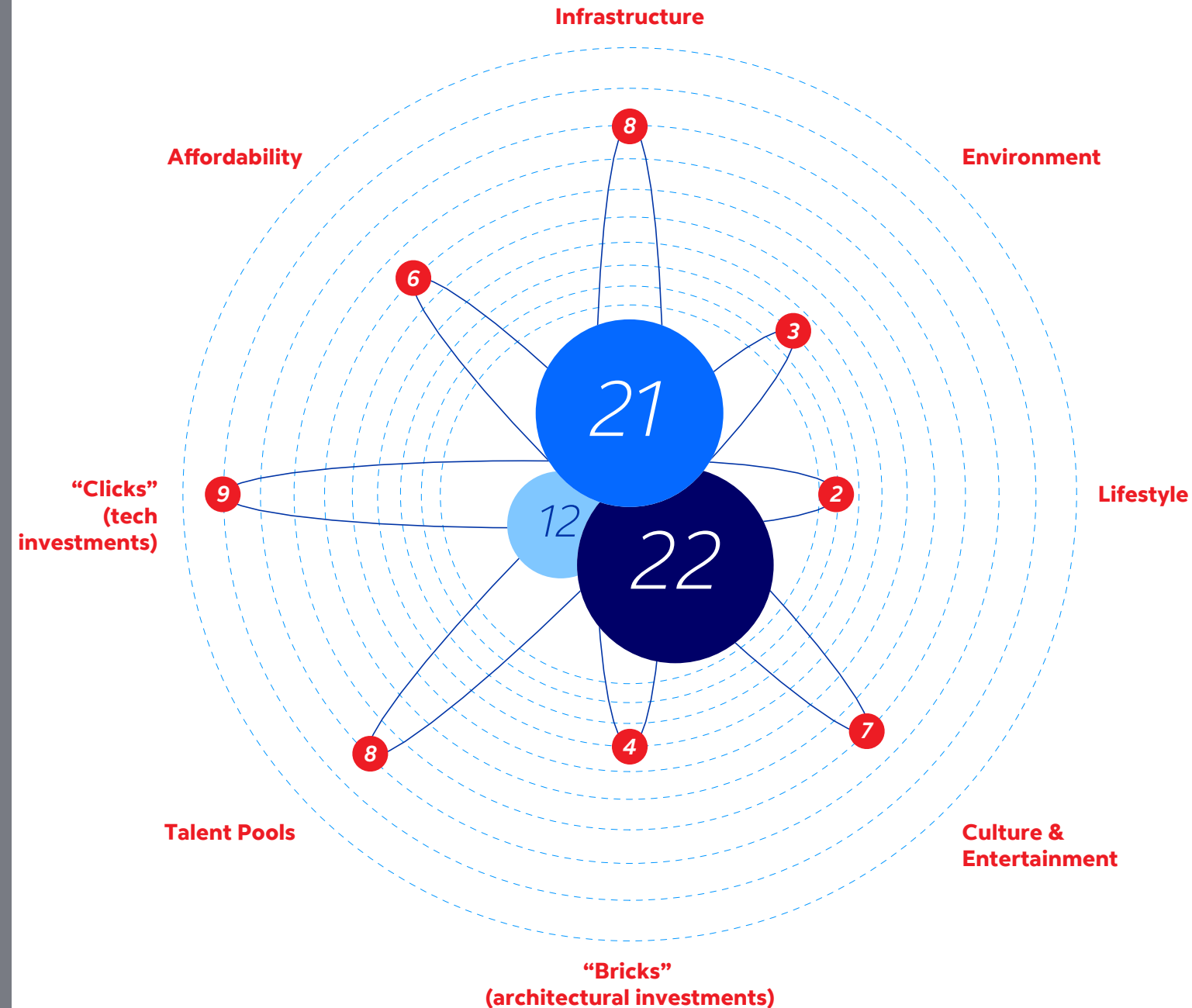
THE NUCLEUS

(Scale of 1–25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

(Scale of 1–10)



What Haidian Qu can teach other places readying for the Fourth Industrial Revolution

Talent at scale is hard to stop.

There are close to a million students at colleges in Haidian, a majority studying STEM subjects. Based simply on probability, the next Steve Jobs, Mark Zuckerberg (or Zhang Yiming) is more likely to emerge in Haidian than in Cambridge, England (21,000 students) or Cambridge, Massachusetts (35,000).

Talent attracts talent.

Silicon Valley has long attracted young people keen to be the next McNealy, the next Andreessen, the next Sandberg. Jeff Bezos moved to Seattle 30 years ago, hoping some of Bill Gates' gold dust would blow his way. Now, Chinese kids are flocking to Haidian, sure they're the next Yiming.

Haidian is hungry.

For some, sadly, literally; for others, metaphorically. Haidian Qu is full of young people who want to make it – like China itself: to right perceived wrongs of the past, to reclaim past glories and to generate new stories to be told for a thousand years. As the world grows more interconnected, global platforms will increasingly come from "far-away places of which we know nothing." Before long, Haidian's hunger will make it a household name – even in yours.

Kochi

KERALA, INDIA



While well-known tech cities in India are bursting at the seams, a mellow place where green space, sustainability and quality of life go hand-in-hand is poised to inherit its measure of the future of work.

[WATCH THE KOCHI MOVIE](#) (11:00 running time)



Picture this: A commuter in Bangalore, the Indian tech metropolis, confronts a five-hour one-way drive into work. Literally and figuratively, the journey isn't pretty, with no glimpse of natural beauty in sight.

Now picture Kochi, a city in the southwestern Indian state of Kerala: You've arrived at a place of the future. Soon, you'll get around the city on a solar-paneled water metro (after leaving the solar-powered airport), taking in the beautiful sights of its "backwaters" en route to the office.

These two scenarios offer exceedingly different experiences for Indian tech hubs in the future of work. If it's a contest on quality of life alone, Kochi wins hands-down. The question is whether the city could become the next Bali, today's quintessential digital nomad hangout. A blissful lifestyle and connectivity are all it takes, and Kochi offers both.

The global movement of Malayali (people from Kerala) has left a unique imprint here. Kochi's central location on the Spice Route around the 16th century spawned the diverse community and surroundings found there today, including a beautiful mix of Portuguese, British and Indian architecture, as well as temples, mosques and churches. It's tantalizing to imagine a similar array of multi-talented and multi-cultural knowledge workers turning the city into a

diverse and innovative technology ecosystem – not unlike a massively scaled-down version of Bali.

Kerala has earned praise for its quick and effective approach to tackling COVID-19, centered around aggressive testing, contact tracing, hospital preparation and help for those in need. Its Minister of Health, K. K. Shailaja, affectionately nicknamed "the Coronavirus Slayer," was prepared in advance to adopt the World Health Organization's test-trace-isolate-support protocol, resulting in a fast flattening of the curve and low death rate. While the city has endured a few spikes since then, its death rate has remained well below 1%.

Kerala's approach is unique to India because its communist state model is, too. Instead of measuring growth on GDP alone, it has for the past 50 years focused on education, healthcare and life expectancy – collectively known as "the Kerala Model." The city has a 96% [literacy rate](#) vs. the national average of 78%, according to the National Statistical Office. Average [life expectancy](#) is 75 years, compared with 69 across India, according to the Census and Registrar General.

Growing and retaining talent

As India pivots from mere order-taking tech services to a vision of entrepreneurship, venture funding and



Kochi, Kerala, India

tech innovation, the Kerala Model could invigorate an ecosystem fit for the future of work. But while top talent has grown in Kochi, it also leaves Kochi, where processing remittances is the city's primary source of income. The "Kerala Gulf Diaspora" – Malayalis now living in the Persian Gulf – is estimated at more than 2.1 million people.

To retain Kerala's highly-skilled homegrown talent, Kochi is building out a massive technology ecosystem in the Special Economic Zone (SEZ). Home to large organizations and a rapidly growing startup ecosystem, the SEZ will catalyze Kochi's

burgeoning technology prowess and help it retain and scale creative knowledge workers.

Kochi also has a lot to teach India – and the world at large – about human-centric, sustainable growth. At a time when new generations of employees are rejecting the idea of driving long hours to nondescript office buildings, young Indians of the future may wonder why this was ever appealing. Its antidote is something Kerala mastered 50 years ago – and continues to embrace – and it can be found in Kochi.



A) “Backwater” takes on new meaning
The backwaters that run through Kochi and Kerala are currently home to the area’s top tourist attraction: an overnight stay on a houseboat. The solar-paneled water metro system will connect not just Kochi but also all of Kerala in a brilliantly sustainable way.

B) Sugar and spice and everything nice
The tourism board in Kerala plans to recreate the Spice Route as a major tourist attraction. With UNESCO backing and collaboration across 31 countries, it’s set to be big.

C) Soaring with solar
Kochi’s airport is the first in the world to be powered solely by solar energy, showing a clear commitment to sustainability.

D) A European church that reflects society’s mix
St Francis Church in Fort Kochi is one of the oldest European churches in India, originally built in 1503. It’s a testament to the diverse mix of people, cultures and religions that can be found in Kochi.

E) “The Coronavirus Slayer,” Minister of Health, Social Justice and Woman and Child Development K. K. Shailaja
In a fine display of the Kerala Model at work, the state responded rapidly and effectively to COVID-19 by preparing for the WHO’s test-trace-isolate-support protocol before the first case even set foot in the state.

F) A very verdant Special Economic Zone
Note the green space at Kochi’s Infopark, one example of the city’s growing technology infrastructure, situated on over 100 acres of land, 80 of which have been classified as a Special Economic Zone. Around 47,000 people work here currently, and the number is expected to reach 80,000 on completion.

Sustainability and well-being central to the future of work

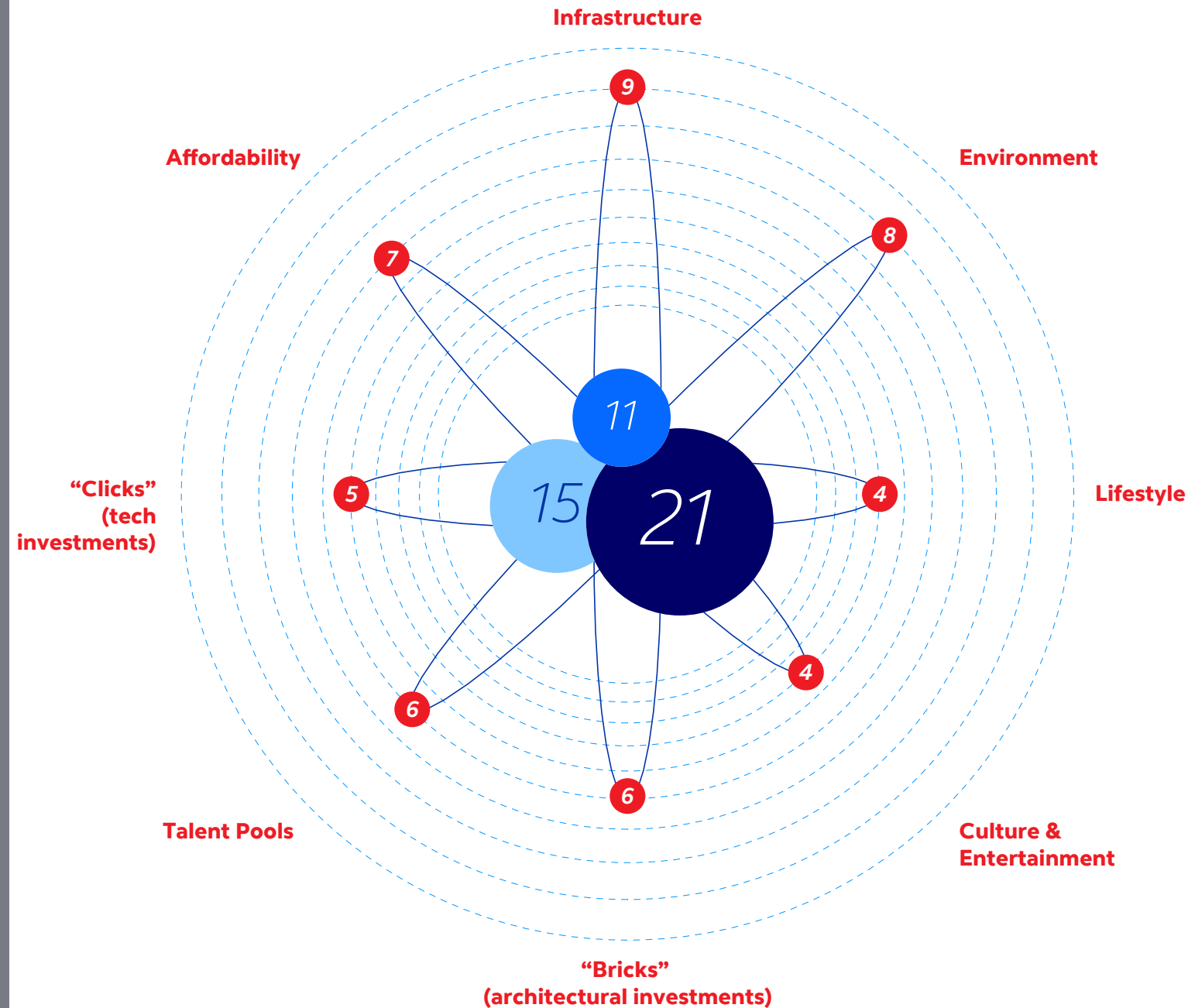
THE NUCLEUS

(Scale of 1-25)

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- Access to Private Capital

THE ELECTRONS

- (Scale of 1-10)



What Kochi can teach other places readying for the Fourth Industrial Revolution

Borrow from the Kerala Model.

Rather than just using GDP as a measure of growth, the future of work will employ additional measures, such as employee well-being, education and purpose. With its focus on human development indices, the Kerala Model expands the definition of growth and has propelled the state to higher levels of literacy and life expectancy.

Open space is good space.

The impact of city design on physiological health is no secret – but what about mental health? With its emphasis on sustainability and preservation of its lush, green countryside and palm-tree-lined beach, Kochi is the opposite of a congested, polluted jungle of petrol-guzzling commuters. Close your eyes and go to your happy place.

Going green? Get going!

Make the switch to renewable energy now. The technology is available, and it's not complicated. The green focus for Kochi's transport infrastructure should be an inspiration – and a kick in the backside – for every developed country that's falling behind in the green rush.

FROM HERE TO THERE IN THE FUTURE OF WORK

When we decided that the “21” brand from our “jobs” report was a good framework for our “places” report, we decided to weave much of the thinking from our 2019 “From/To” report into our analysis of the places we would feature.⁵ The from/to construct became even more compelling in the surreal time compression of the novel coronavirus: In weeks where decades happened, many of our ideas suddenly revealed not the future of work, but the now of work.

In that report, we distilled the essential ingredients of the future of work into 42 key ideas that are all the more relevant in the COVID reality. We grappled with issues like the way we work (how we do what we do), the aesthetics of work (what work looks like and how it feels) and the meaning of work (what gets us out of bed in the morning and gives us purpose). In our current report, we built on the from/to construct to isolate the DNA of what characterizes a place of the future and why certain places thrive while others wither.

The following from/to concepts were key to selecting the “places” that became core to this report:

- **From the suburb to the city.** Despite pundits proclaiming the “death of the city” post-COVID, and the suburbs rejuvenated by the many white-collar workers now working from home, cities will remain key to the future of new work. But for city centers to recapture the center of gravity, and for formerly desolate, downtown brownfield sites to attract innovation-minded workers, these urban cores will need a technology prescription of prediction, prevention and early detection via pervasive health screening (i.e., via a health agency that functions like the U.S. Transportation Security Administration established after 9/11).
- **From bricks to “clicks.”** Once-derelict factories, railyards and warehouses, left over from the industrial era, will act as a magnet for the digital in-crowd. With their exposed brick, steel and wood, and an eye for ergonomic design, these makerspaces, workshops and fabrication labs are increasingly seen as a human-scale reaction to the overwhelming digitization of our lives.
- **From the internet to the splinternet.** The 25-year-old firmament of the digital “global village” spawned from the World Wide Web is fracturing into three distinct regulatory frameworks: the U.S.’s, China’s and Europe’s. Because of this, “localization” is again extremely important.



- **From the West to the East.** Tech metropolis Shenzhen, once synonymous with cheap, low-quality products, is now a high-quality hub for startups from all over China. The whiz kids at TikTok in the Haidian District of Beijing are, in actuality, really building platforms for the future of work. Western economic dominance is fading as the “data era” begins. If it doesn’t look out, the West – which won the first three industrial revolutions – could be severely tested in the fourth one.

Lagos

NIGERIA



Despite its challenges, Lagos is emerging as a new economic powerhouse of Africa. This megacity was made by and for Africans, distilling the cultural and entrepreneurial essence of the continent.

With 21 million inhabitants and over 300 local tribes, Nigeria's most populous city blends the essence, optimism and spirit of Africa like no other. But the 2020s saw the city confront some painful challenges, too. On the one hand, Lagos (and Nigeria at large) reported fewer infection rates relative to nations of a similar economic status and dense city populations. Yet tragically, the city also saw 12 people gunned down by authorities in October 2020 for protesting police violence.

In the face of it all, the country's history has shown remarkable resilience: Lagos' tumultuous past, including its place in the slave trade, colonization by both the Portuguese and British, and a recent bloody civil war, stands as a testament to perseverance amid turbulence, spurring the city to its current position as the economic powerhouse of the African continent. Today, Nigeria is Africa's largest economy, and Lagos is the continent's fourth wealthiest city. Few cities in the world so purely epitomize the definition of the free market.

This capitalistic drive for personal improvement and wealth creation can be seen in all walks of life – from the high-flying execs on Victoria Island, with its supercars, top-flight hotels and luxury condominiums, to the eclectic mix of digital street traders in downtown's Computer Village, itself a \$2 billion industry. Lagos' citizens seem to be almost

single-minded in their pursuit of moving up the income ladder. This mindset is bearing fruit, spurring a burgeoning middle class in Africa, estimated by some to be the fastest growing in the world.

Given the entrepreneurial DNA of Lagos, it is small wonder that the city houses [over 40](#) of Nigeria's more than 85 tech startup hubs, according to a GSMA report, the most by country and city in Africa. The majority of these hubs rub shoulders with banking and educational institutions in the city's Yabacon Valley (aka Silicon Lagoon). These hubs are a blend of local and internationally funded investments, such as Facebook's FbStart accelerator and the U.S.-based Accion Venture Lab. A standout is the Co-Creation Hub (CCHUB), which recently bought the Nairobi-based tech incubator iHub.

These hubs foster a technology-based solution for African problems; for example, Printivo, started in 2013 with seed funding from EchoVC Partners, provides mobile-enabled printing solutions to small businesses and traders in Nigeria.

Lagos also boasts a wide range of cultural entertainment. Its multi-faceted music scene was led by a number of local pioneers, including Fela Kuti, the architect of Afrobeat music. Its movie industry, Nollywood, is garnering international attention, with local productions Lionheart and Chief Daddy bought by Netflix.



Lagos, Nigeria

Given its meteoric rise, Lagos has experienced growing pains, including numerous socioeconomic, infrastructural and bureaucratic issues. In addition to the protesters' murder, Lagos suffers from massive income inequality, congestion in the city center, corruption, difficulty for foreign nationals to obtain visas and a recent travel ban to the U.S. While the government continues to drag its feet, private enterprise is stepping in. Developments such as the privately funded satellite city Alaro City offer fresh opportunities for economic growth and an easing on Lagos' overburdened infrastructure.

The simple truth is, Lagos is under great pressure to succeed. Nigeria is set to overtake the U.S. by 2050 as the world's third most populous country, at a projected [400 million](#). Much rides on the success of this megacity to economically support this booming population. Its success will also stem a "brain-drain" of young talent, and further foster local talent development. The willingness from the private sector is there, in abundance; now it just needs the public sector to install Lagos as one of the world's leading cities in the future of work.



A) A distillation of African capitalism

Effervescent with opportunity, Computer Village epitomizes citizens' drive to succeed. Young people flock to the area from rural communities to learn a digital craft and carve out their niche of the Nigerian dream.

B) Entrepreneurialism is endemic to Lagos

Bosun Tijani, CEO and Co-founder of the Co-creation Hub (CchUB), is a Nigerian-British entrepreneur who typifies how staying focused on the dynamic changes of technology in Lago's crucible of innovation can help foster the digital future of Africa.

C) Welcome to Silicon Lagoon

Nigeria – and Lagos in particular – is the shining light of African technological innovation. Yabacon Valley is the center of this innovation powerhouse, combining educational institutions, tech hubs and financial companies that allow for cross-pollination of talent and idea creation.

D) Nollywood goes global

The Nigerian film industry (“Nollywood”) has long been defined by low-cost and unrefined productions. Recently however, local producers have benefited from increased international investments from the likes of Canal+ and Netflix, resulting in improved quality and increased international exposure.

E) Studying for the digital jobs of today and tomorrow

Founded in 1947, Yaba College of Technology was Nigeria's first higher ed institution. Today, it aims to be the preeminent center for tech-focused learning in Nigeria, and a catalyst for the country's socioeconomic future.

The place to be for African entrepreneurs

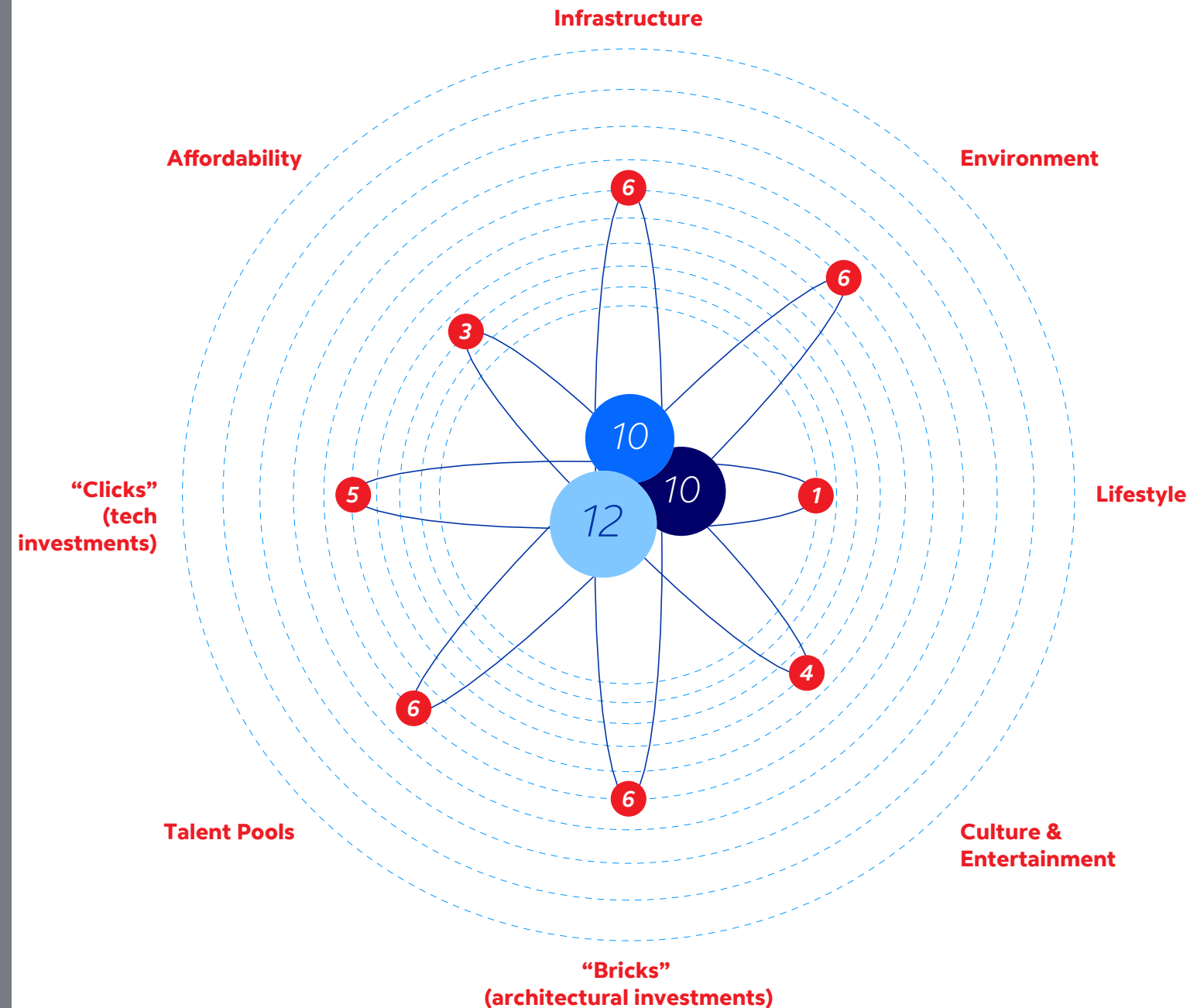
THE NUCLEUS

(Scale of 1–25)

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- Access to Private Capital

THE ELECTRONS

- (Scale of 1–10)



What Lagos can teach other places readying for the Fourth Industrial Revolution

Where there's a will, there's a one-way ticket to Lagos.

For many impoverished yet hard-working young people in Nigeria, the gravitational pull of Lagos means opportunity (akin to New York City in the U.S. for immigrants at the turn of the 20th century). This self-starter mentality is what defines Lagos and will continue to propel it forward in years to come.

Tech first, with an African twist.

Many U.S. and European tech companies simply don't work in large parts of Africa (Amazon being a "prime" example). The culprit? Limited infrastructure. Solving problems in – and for – the African context will fuel Lagos' future as it expands, and its homegrown Africa-oriented tech firms will be its lifeblood.

Nollywood's entertainment generates international attention (and investment).

With Nigerian-born films from Nollywood now featured on international streaming services, Lagos is coming right into the living rooms of potential investors. The likes of Facebook and Accion are making big bets on Nollywood that are generating big international attention – watch this space!

Lisbon

PORTUGAL



With its rich history, Mediterranean climate and status as a world “capital of cool,” Portugal’s largest city is at once an aspirational tech innovator and a must-live city for Europe’s young workforce.

From the ashes of the 2010 financial crisis, Lisbon has reinvented itself as a global hub of innovation and near-shore services for Continental Europe. A decade ago, unemployment was nearly 18% across Portugal and a staggering 40% among young people. The choices for what to do were stark. Leave? Or take matters into one’s own hands and start a business?

For the fate of Lisbon, it’s fortunate that many chose the latter, embracing the old saying, “necessity is the mother of invention.” Fast-forward to today, and, like Barcelona in Spain and Seoul in South Korea, Lisbon is one of the world’s capitals of cool.

While Lisbon, like the rest of the world, is fighting to control the pandemic, the fundamentals of the city remain the same.

So, what are the secrets of Lisbon’s *savoir faire*? Consider wearing shorts while the rest of Europe freezes or indulging in indoor/outdoor living. Imagine a culinary and locally-grown wine scene beyond reproach or the city’s preeminence as a surfing mecca. (The daredevils who ride mountains at nearby Nazaré put California’s Mavericks, Maui’s Pe’ahi and Tahiti’s Teahupo’o to shame.)

Culturally, the city tips its cap equally to the heritage and the modern. From the traditional Fado music found in the funky Bairro Alto quarter, to the stylish riverside club Lux Fragil (partly owned by actor John Malkovich and considered one of Europe’s best clubs), to the thriving theater industry, Lisbon is, as the locals would say, *fixe* (aka, “cool” in Portuguese, pronounced “feesh”).

The growth of the city’s tech scene has been astounding. Portugal’s startup ecosystem is growing [twice as fast](#) as the European average, according to Startup Europe Partnership, and Lisbon is now one of the biggest startup hubs in Europe. The city [is home to](#) over 30 incubators and accelerators and nearly 50 co-working spaces, according to Invest Lisboa. Witness successes like Virtuleap, a virtual reality brain-training platform, and Codacy, an automated code review tool.

Shedding bureaucracy, sowing talent

To live up to its promise, Lisbon needs to overcome structural issues stemming from previous governments, particularly its legacy bureaucracy. The city is striving to provide more public services through digital means and is investing in advanced technologies that support “digital by default” operations.

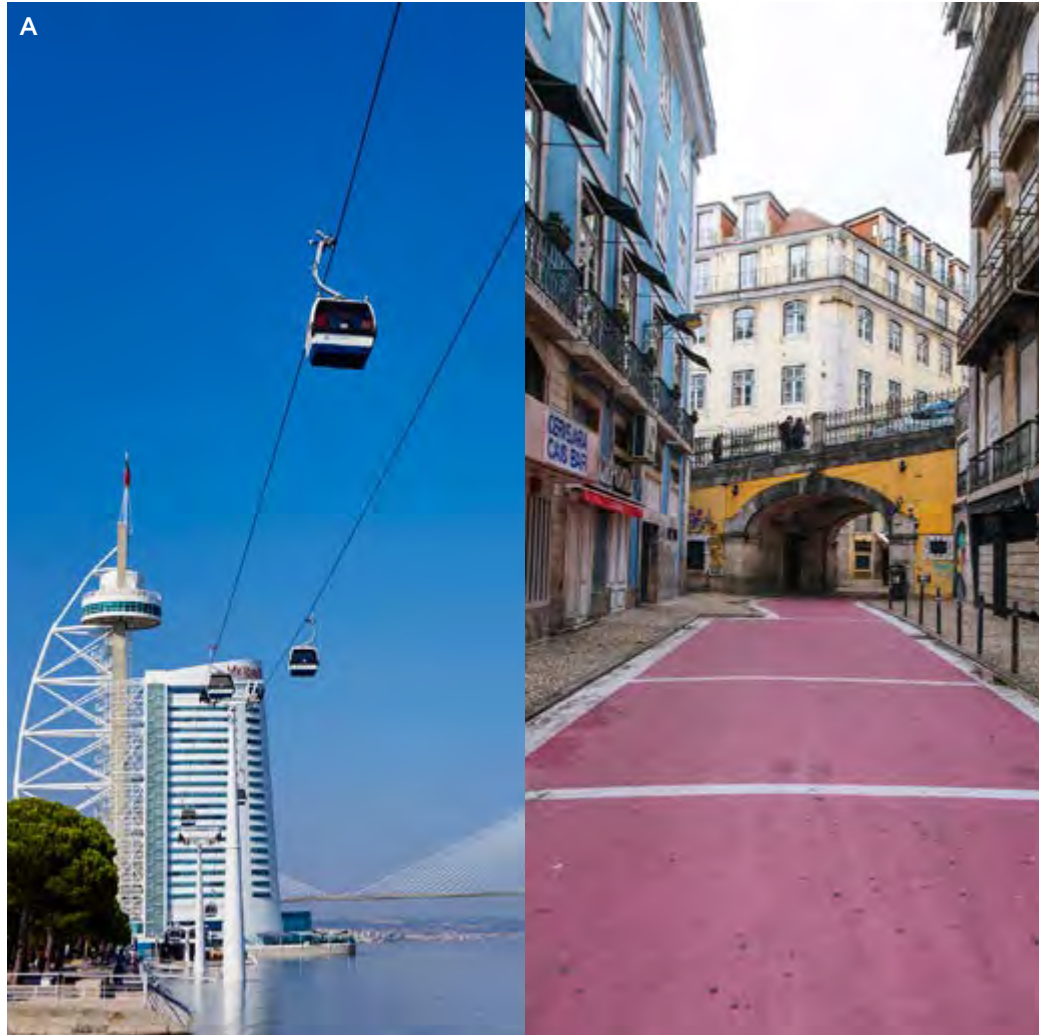


Lisbon, Portugal

As with other erstwhile hotspots, Lisbon is long on opportunity but short on available talent. However, its education system has responded. Each of Lisbon’s major universities includes a technical college, producing thousands of STEM graduates annually, from the Técnico and Instituto Politécnico, to the Nova School of Business and Economics’ new Carcavelos campus on the outskirts of the city. Many larger businesses are looking outside the city’s borders. For recruiters, it’s an easy sell to

entice young professionals to leave Europe’s colder climates and set up camp in one of the world’s most attractive cities.

With its unmatched quality of life, and its dedication to augmenting the quality and quantity of creative and digital talent, Lisbon promises to become a leader in the future of work for Europe – and the world.



A) From red lights and oil to cable cars and bars

Regeneration rules in Lisbon. From a previous oil refinery and eyesore on the edge of the city, Parque das Nações (left) has emerged as a cosmopolitan area to live and work. The city's previous red-light district has been reinvented into The Pink Street (right), filled with cafes and a mecca for Instagrammers.

B) Welcome to Lisbon's technicolor tech scene

Lisbon's many red-hot startups underpin the city's status as a serious, emergent innovation and tech player in the global market.

C) From global exploration to global destination

Lisbon's rich and varied history is memorialized throughout the city, celebrating its Age of Exploration heroes like Vasco da Gama and Pedro Álvares Cabral. The larger-than-life ubiquity of these explorers serve as an inspiration to young digital explorers and pioneers in today's thriving tech scene.

D) It's easy to suffer from "tens mais olhos do que barriga" (aka, your eyes are larger than your stomach)

The sheer scope and variety of Lisbon's culinary scene isn't constrained to local delicacies. Whether explaining the nuances of a *pasa de nata* or introducing a carnivore to a mind-blowing vegan burger, the proprietors of these establishments take major pride in their food.

Work to live in Europe's capital of cool

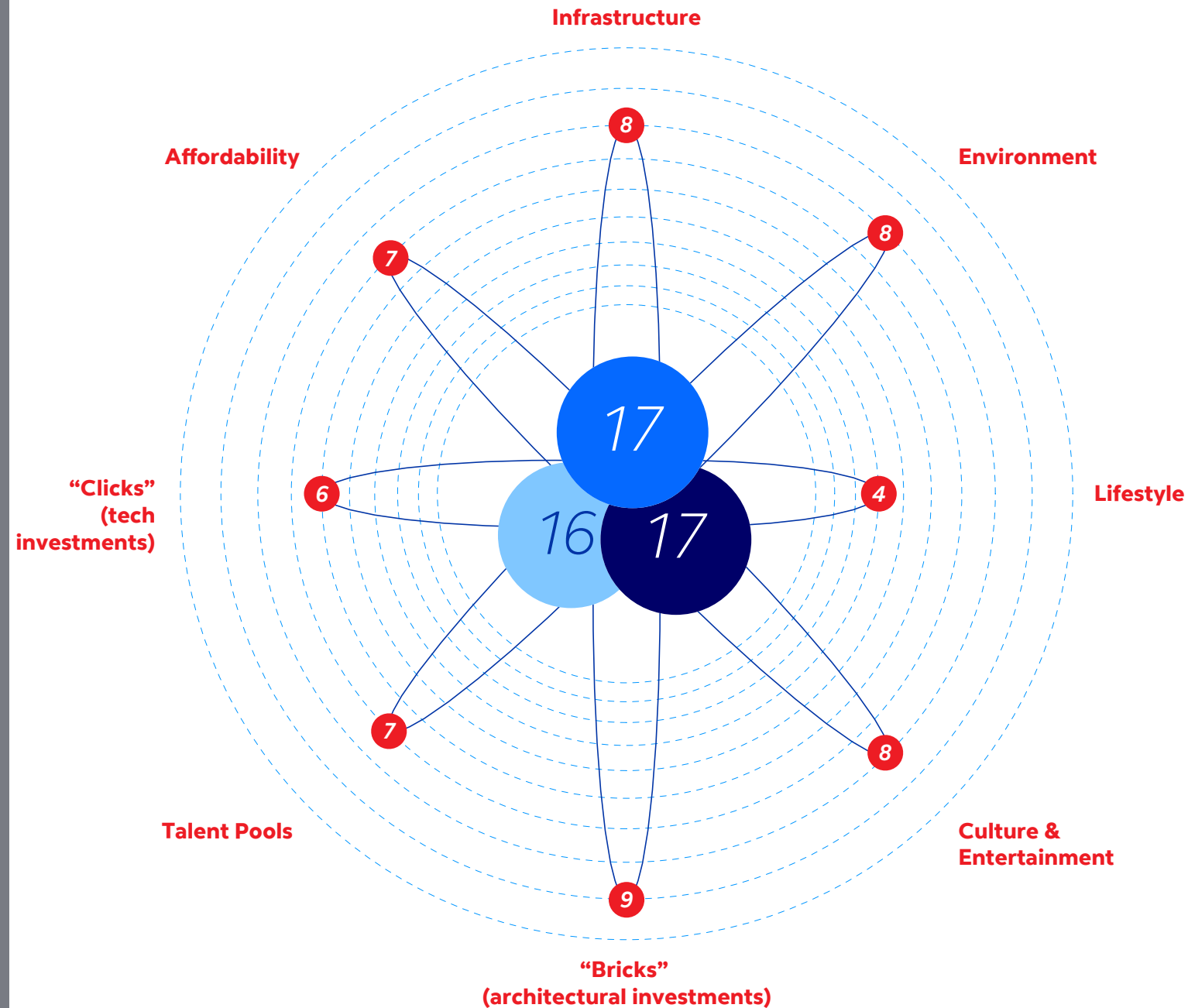
THE NUCLEUS

(Scale of 1-25)

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THE ELECTRONS

- (Scale of 1-10)



What Lisbon can teach other places readying for the Fourth Industrial Revolution

Look globally for talent.

Walk around Bairro Alto, and you'll hear people speaking a mix of Italian, Spanish, Greek, Tagalog and Dutch. Meanwhile, Portuguese expats are lured back with generous income tax cuts and relocation allowances.

Alert the world to your strengths.

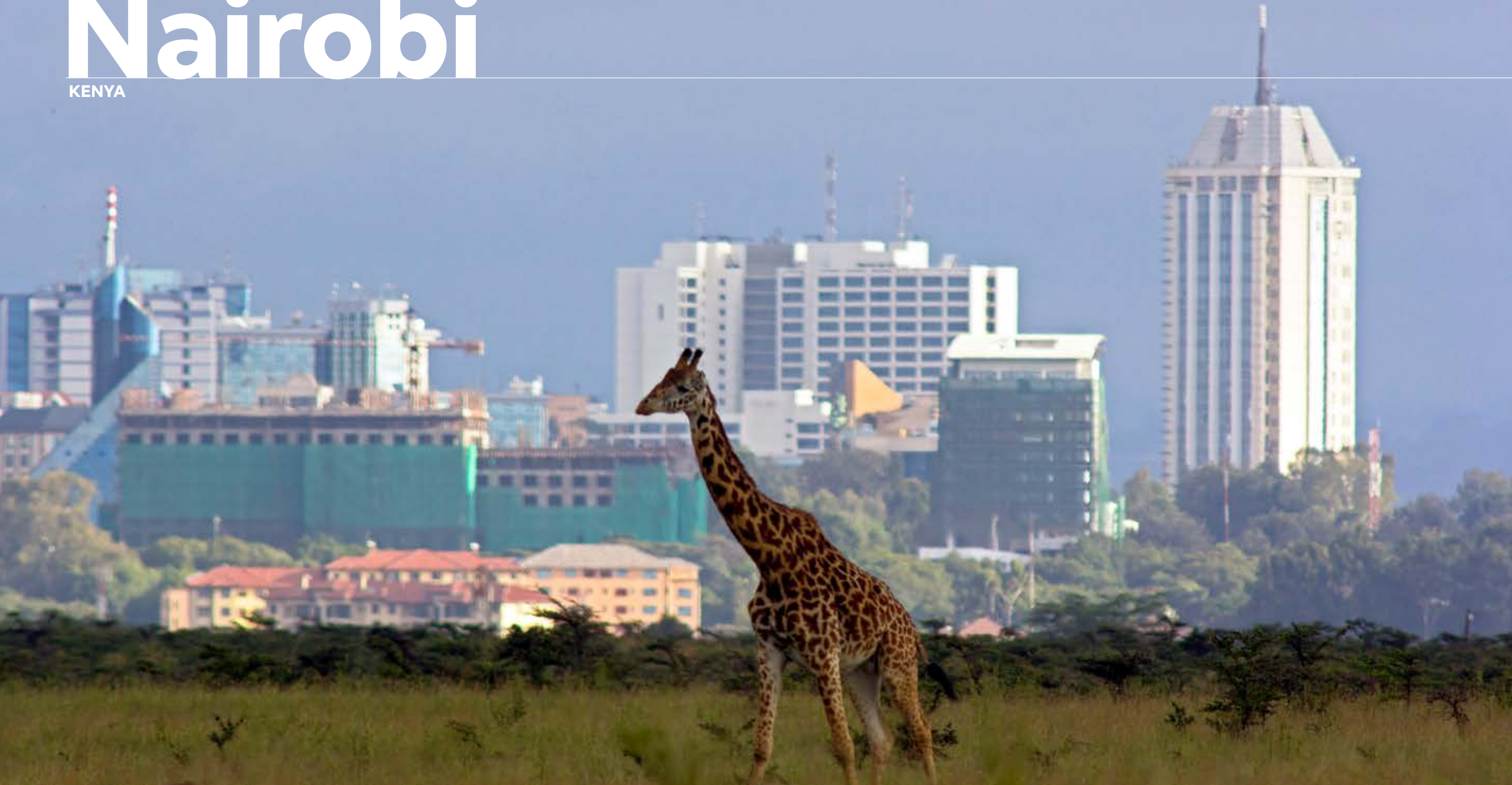
Foreign investment in Lisbon is booming, and it shows. Not only are [house prices](#) rising – 11% between 2018 and 2019, according to the Global Property Guide – but the city is also winning accolades as the [third-safest](#) city in the world (Global Peace Index), the [third best](#) city for expats (InterNations) and the [European Green Capital 2020](#) (European Commission).

Banish the red tape.

Startups can't thrive amid bureaucracy. Fortunately, Lisbon (unlike other European cities) is addressing its bureaucratic past. Today, it's possible to incorporate a company in 45 minutes, with no fees for commercial licensing – online.

Nairobi

KENYA



The economic center of gravity in Africa is shifting from the south to the north. Nairobi is emerging as a hub of innovation and culture on the African continent.

[WATCH THE NAIROBI MOVIE](#) (10:00 running time)



The Kenyan capital of Nairobi is a future African superpower. This vibrant city is shaking off its colonial past and reinventing itself as a highly adaptable technology and financial services metropolis.

The crisis wrought by the coronavirus has served to highlight its adaptability; local authorities were quick to act, initially through severely-enforced lockdown measures and then with mandatory mask-wearing. Local manufacturers quickly pivoted to the production of personal protective equipment. As in all places, time will tell the tale of Nairobi's ascent after the virus, but in terms of COVID-inflicted fatalities, it has weathered the storm admirably, with significantly fewer deaths than other countries.

Nairobi's standing on the global stage is best portrayed by the amount of investment it's received. While foreign direct investment (FDI) is dropping globally because of the pandemic, Kenya is still one of the [largest recipients](#) of FDI in Africa, according to the UN, due largely to its technology initiatives. This matters: The UN expects the African population to double by 2050 to 2.4 billion. To support this growth, Africa needs economic powerhouses that are recognized on the world stage.

Young Kenyans are flocking to Nairobi, and they're infusing it with optimism, entrepreneurship and

a drive to succeed. In part, this can be seen in the city's over [144 tech startups](#), according to Crunchbase, but it goes deeper than that. The vast majority of the population, regardless of income status, has a side hustle, and many of the city's infrastructural shortcomings have been ameliorated by a thriving private sector.

Business has burst out of the original central business district. Witness the Upper Hill neighborhood, with a skyline featuring the second tallest building in Africa, Britam Tower. The city's innovative and bustling ecosystem includes both established brands and tech startup incubators such as iHub and Nairobi Garage. More cars equal more traffic, so privately funded satellite cities are popping up around Nairobi, most notably Tatu City and Konza Technopolis. Tatu City in particular is eschewing "boomtown sprawl," with plans to provide an environmentally sustainable, holistic living-and-working alternative outside the hustle and bustle of Nairobi's core.

Rising economic stature

To make the city work in the long term, Nairobi's macro-economic stability has to be secure; so far, signs are good. Distribution of income and the empowerment of women in the poorest communities have improved significantly, in part



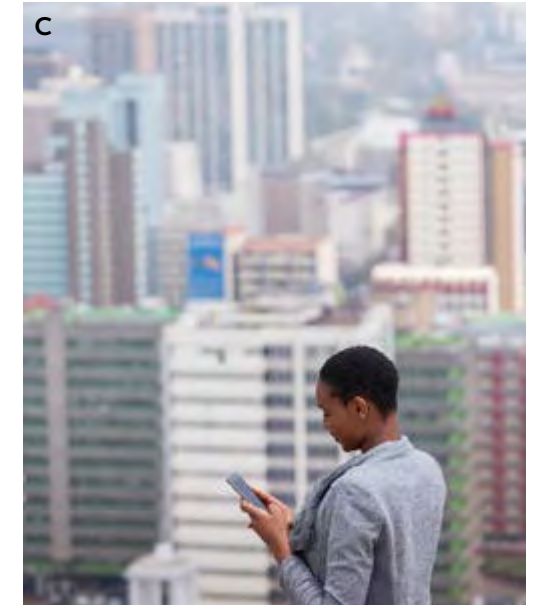
Nairobi, Kenya

due to short-term lending and mobile money access from locally born technological innovations such as M-Shwari and M-Pesa. [According to at least one study](#), such technologies have lifted 2% of Kenyan households out of extreme poverty and enabled roughly 185,000 women to move from subsistence farming into business or sales occupations.

Other signs of Nairobi's booming middle class are everywhere. High-end malls are increasingly popular. Huge colonial-era plots and houses in affluent areas such as Riverside are being torn

down and replaced with luxury condominiums and apartments.

In the short term, COVID-19 may deal a body blow to the growth of the city's middle class, by stunting wages and amplifying unemployment. But with its rapid expansion, both from a commercial and residential perspective, Nairobi has its eyes fixed on the future. Its vibrant cultural, business and social scene is transcending the historical tribal and colonial differences in the region, turning the city into "the" place to live and be seen, not only in Kenya but also in East Africa as a whole.



A) Forget “bean-to-cup;” here, it’s “cherry-to-cup”

The coffee business is still big business in Nairobi. While it’s widely considered as one of the premier regions in the world to grow coffee, most of the region’s produce has been exported. Recently, however, an artisan coffee scene has emerged, showcasing some of the area’s best coffee producers.

B) The rise of a Silicon Savannah

Nairobi is among the top three cities for tech startups in Africa, along with Lagos and Cape Town, according to Startupblink. Accelerator hubs such as Nairobi Garage are helping to create some of the region’s future digital unicorns.

C) Closing the gap

Fintech platforms in Nairobi are the driving forces of the emerging innovation economy. And those platforms are also closing the gap between men and women in the workforce. The time saved using fintech services allows women to spend more time on business endeavors or other economic participation.

D) Nairobi’s future is looking evergreen

A mix of solar, wind, hydro and geothermal energy covers 93% of Kenya’s energy needs, according to Africa Oil & Power, and the country aims to boost that to 100% by 2030. With the 2019 launch of Africa’s largest wind farm (at Lake Turkana), Kenya is well on its way to reaching its green target.

Silicon Savannah today, Africa's superpower tomorrow?

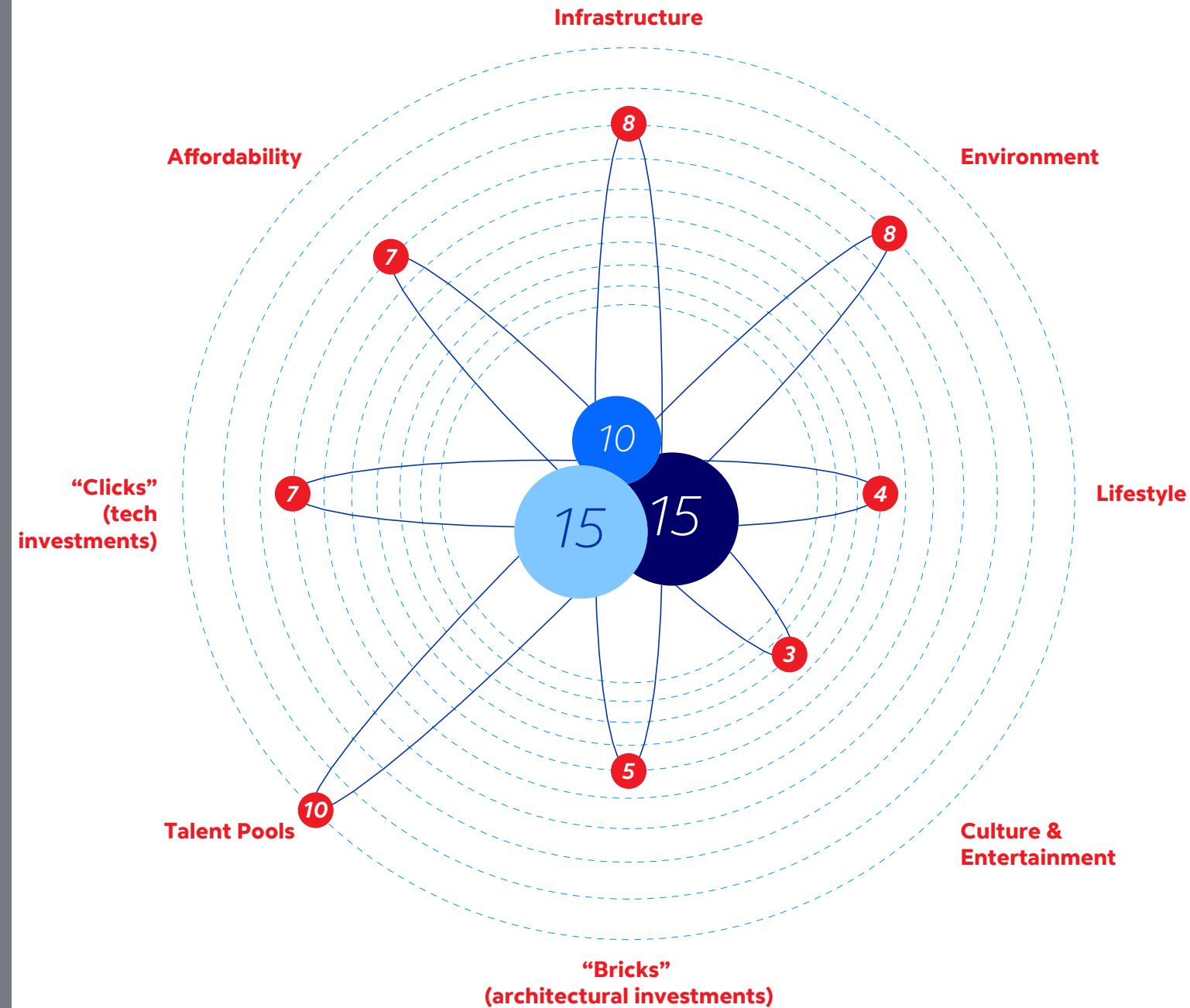
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THE ELECTRONS

● (Scale of 1-10)



What Nairobi can teach other places readying for the Fourth Industrial Revolution

Everyday I'm hustling.

No matter what their job, every resident of Nairobi seems to have some type of side hustle. From bankers owning barber shops, to petrol attendants with shares in a street vendor, entrepreneurship seems to be part of this city's DNA.

Making the West green with (sustainability) envy.

The only thing more astounding than Nairobi's green ambitions are its green achievements. Its figures for geothermal, hydro, solar and wind put many major Western cities to shame, and could well provide a blueprint on how to tackle sustainable power needs.

Build it, and the talent will come.

Scores of young Kenyans and other Africans are flocking to Nairobi. The booming tech scene and its burgeoning culture for art are making the city a beacon for the ambitious and daring to try to slice out their portion of the African dream.

Nova Hanseatica



COVID-19 revealed that nation-states can be too big to solve small problems and too small to solve big problems. Like the Hanseatic League of old, places of mutual affiliation and interest are an answer.

In 1159, Henry the Lion, Duke of Saxony and Bavaria, seized the northern German trading town of Lubeck, and then dispatched envoys up and down the Baltic and North Seas, extending trading privileges and soothing rattled nerves.

At its peak, *Der Hanse* (“the convoy” in Old German) spurred economies of 200 municipalities – stretching from Novgorod, Russia, in the east to Hafnarfjörður, Iceland, in the west – collectively known as the Hanseatic League.

If past is prologue, look at what’s happening all around you, right now: “Nova Hanseatica” is emerging as a place of the future. New kinds of economic “zones” are emerging, taking authority from national governments (or in the case of China, bolstering aspirations to superpower). But instead of the ships of old linking Hanseatic trade, Nova Hanseatica’s ties are based on digital code.

Why is this happening? Seemingly every municipality or region is coping with the speed, intensity and breadth of change spawned by the last decade of technology onslaught. When the inability to cope is compromised, situational improvement and resilience are, too. And when businesses, societies or individuals aren’t resilient, you get “disruptions” and even outright chaos.

Around the world

In the U.S., the coronavirus has added fuel to this trend. From the Western States Pact, in which five states in the region pooled resources and policies to combat the virus, to the multi-state alliance on the East Coast, the common thread of a [new federalism](#) happened at a time when political sclerosis in national government proved ineffective in the country’s hour of need.

Meanwhile, as America’s prairies empty out, rural areas are becoming more conservative, and cities more liberal. Red states across the U.S. have “blue city” enclaves within them (like Austin, TX, Nashville, TN or Boise, ID); all are part of the so-called “big sort” of Americans increasingly agglomerating with those of similar socioeconomic profiles and politics. Even before the pandemic, California had already gone its own way, regardless of Washington’s policy posture, on meeting its commitments to climate change (and cannabis consumption). Meanwhile, a [coalition of mayors](#) across the U.S. announced pilot programs for Universal Basic Income.

In Britain, Scotland could be primed to launch an independence referendum in the wake of Brexit that would realign Edinburgh with Brussels (not London). By the end of this decade, could we see Scotland, Northern Ireland (and even Wales) leave England – with the concept of “the United Kingdom” (much

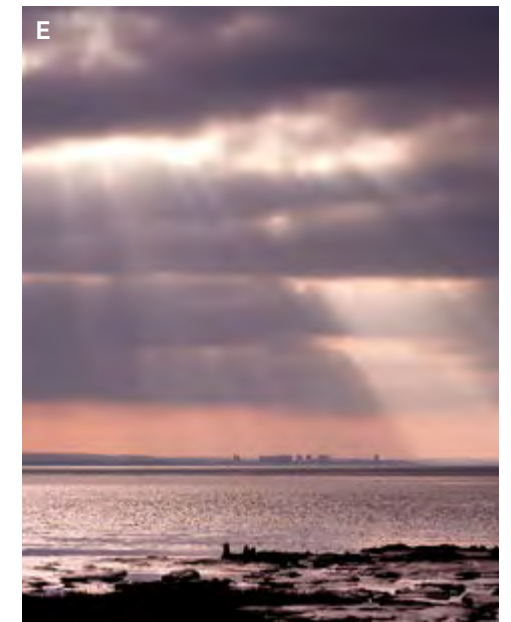
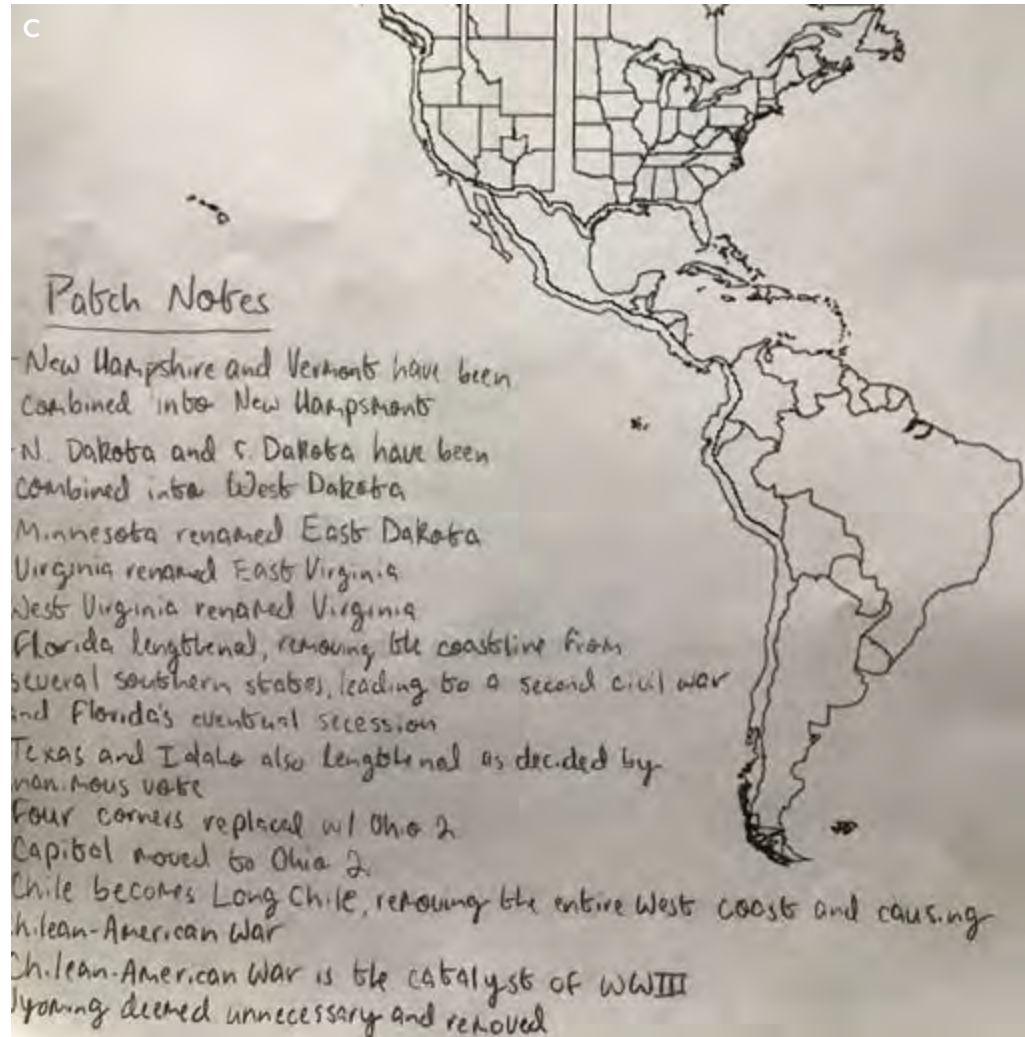
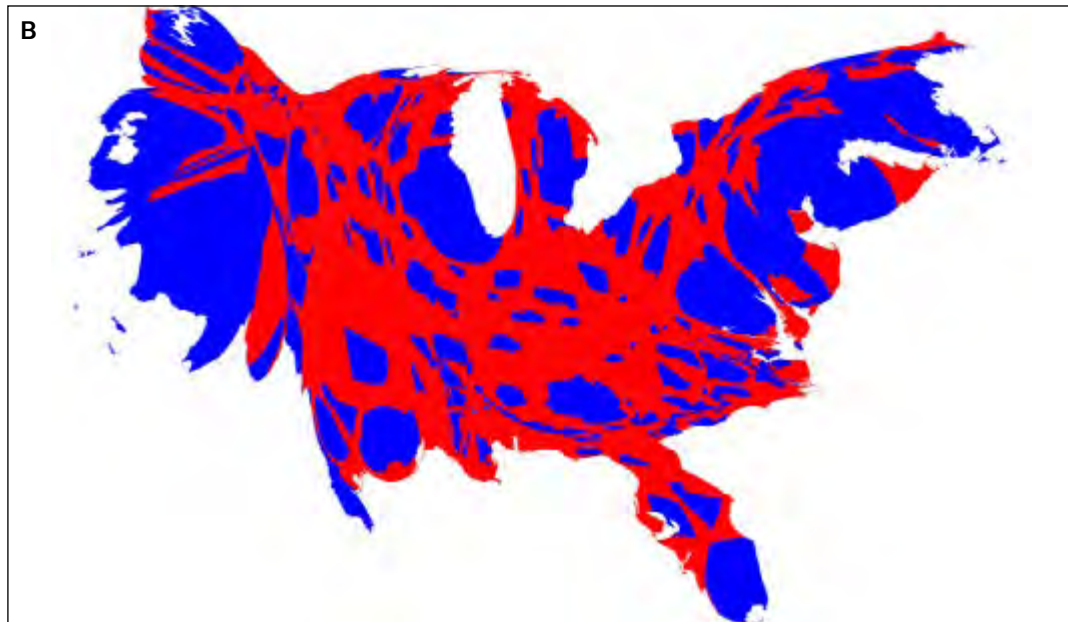


Nova Hanseatica

like the British Empire before it) blowing in the wind? Meanwhile, the [added tensions](#) of the coronavirus are straining it even further.

In late 2019, the mayors of Budapest, Prague, Warsaw and Bratislava signed a “Pact of Free Cities” to support their pro-EU electorate against socially conservative national governments and in favor of green policies. And looming far larger is China’s Belt and Road Initiative, a looming new physical and digital infrastructure project, extending from the Far East through Europe, and suffused with intelligent and Internet of Things technologies.

Like the pieces on a board game of “Risk,” the combination and recombination of places, politics and principles have always been in flux, throughout history. Nova Hanseatica represents a post-nation-state organizational structure for the future of work that’s re-manifested in precepts of the Hanseatic League of old. With each passing year, while more places might not be physically connected or even part of the same nation, their affinity for working toward mutual interests will increasingly be amplified by the use of digital technologies.



(A) Past is prologue: 14th century, meet the 21st century

The autonomy of Hanseatic League cities afforded them greater control of pooled mutual interest, and hastened proto-democratic liberties. Its legacy has endured in places both obvious and obscure; witness the name of Germany's national airline – "Lufthansa" literally means "Hansa of the skies".

(B) Land doesn't vote; people do

Cartograms like those from University of Michigan professor Mark Newman show the democratic power of affiliated American urban centers. Case in point: During the onslaught of the coronavirus, many municipal and state leaders – red and blue alike – forged new alliances for coordination and control while U.S. federal leadership floundered.

(C) The Earth abides; maps (can) change

Throughout history, maps reflect alignment of trade, commerce, affinity and work. As Nova Hanseatica proliferates, what changes might we see? Reunification of the Koreas? Greater California (Alta and Baja)? British Columbia, Washington State and Oregon clubbing together into a greater "Cascadia"? Or, as seen here in a clever thought experiment from teenage map lover Anna Calcaterra, "Long Chile"?

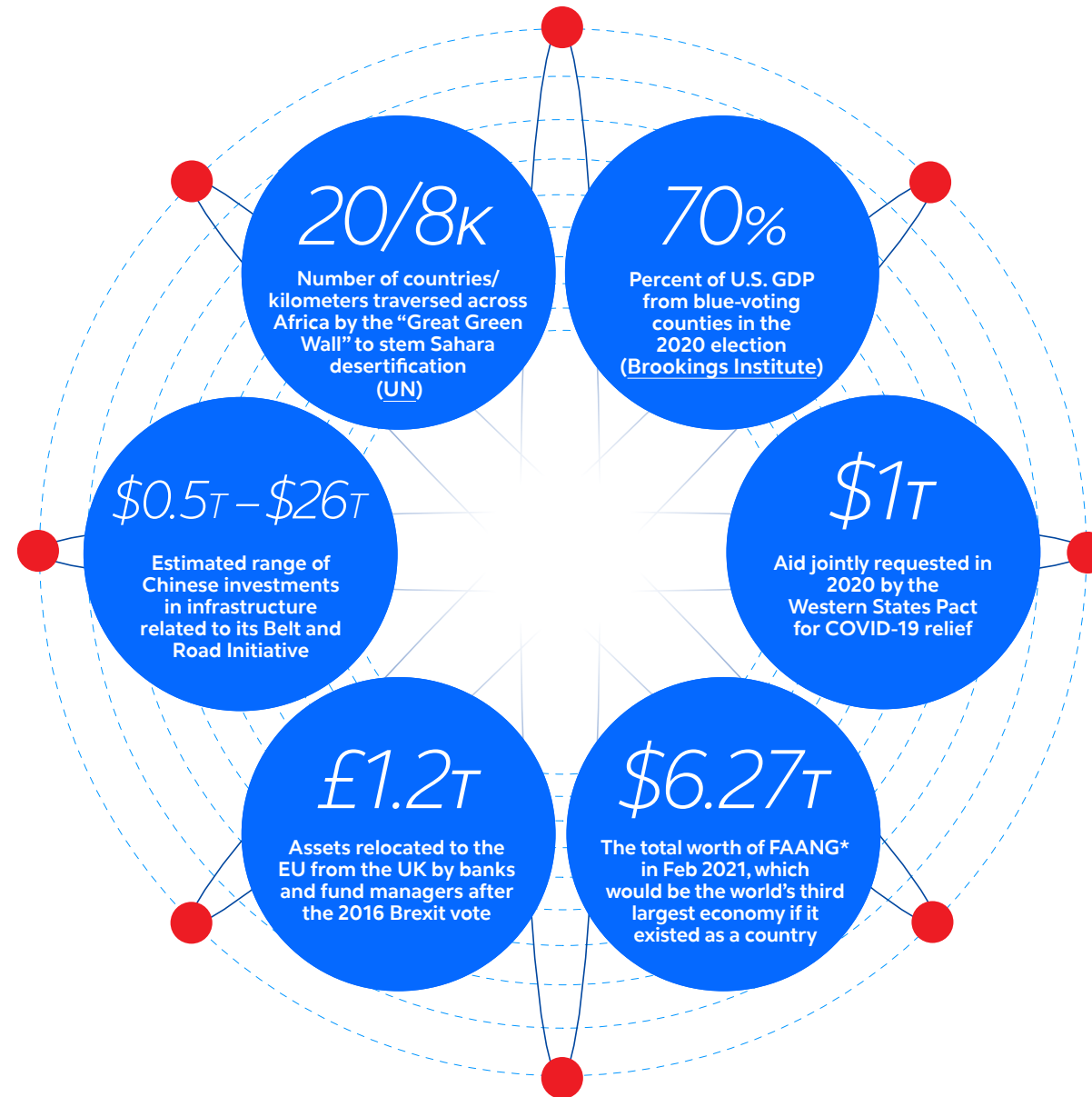
(D) "New Hanseatica" is real

In a global era of border walls and Brexit, the allure of Nova Hanseatica as a counter-reaction only seems to be growing, potentially changing economics – and the future of work – for billions. In 2018, eight nations, including the Netherlands, Ireland, Nordic and Baltic countries, signed a pact literally proclaiming a "New Hanseatica based on mutual trade and trust."

(E) Ports in a political storm

In the wake of Brexit, the UK government is planning to create up to 10 free ports (including the post-industrial casualty of Grimsby in Lincolnshire, England, pictured here) that will let firms import goods and then re-export them outside normal tax and customs rules. Grimsby is reviving again as it becomes a hub of wind power development in the North Sea.

Countries: too big for small problems, too small for big problems?



* Facebook, Amazon, Apple, Netflix and Google

What Nova Hanseatica can teach other places readying for the Fourth Industrial Revolution

Putting splints on a splintered world.

Accelerated by COVID-19, the idea of global villages resting on a global network has fractured into "the splinternet." The emergence of Nova Hanseatica will require critical new networks of common interest at a time when "Here First!" becomes more prevalent.

Urban & rural, shareholder & stakeholder.

The concept of devolving political decision-making to the lowest possible unitary level (aka "subsidiarization" in EU parlance, or "states' rights" in the U.S.) requires both discipline and responsibility. Without them, Nova Hanseatica's new federalism risks pitting rural hinterlands against perceived "money-making exploits" of urban elites.

Potential antidote to the digital age's polarization.

Decentralization – whether expressions of free will, hope, trust, trade – makes liberal democracies work. Without it, confidence in commerce (and the digital economy of the future) will fall apart. Fostering the affiliations of Nova Hanseatica – done right – could help heal polarizing political disruption of the digital age.

Outer Space



The idea of space as a place of the future may seem far-fetched, but in truth, a new age of exploration is upon us. The “final frontier” is finally getting closer.

When Neil Armstrong stepped on the Moon in 1969, people watching black-and-white TVs channeled Capt. James T. Kirk, and thought they'd soon be “boldly going where no man has gone before.” Seen from 50 years later though, outer space exploration remains in its infancy; Armstrong’s “giant leap” was indeed a small first step.

That’s set to change. Welcome to the roaring ‘20s: Space is a new frontier of exploration and innovation of “new worlds” that will rival the Age of Exploration in the 15th and 16th centuries. And just as *terra nova* in America, Africa and Asia morphed over time into places like New York, Cape Town and Hong Kong, so too will the Moon, Mars, space stations and space hotels become “places” of the 21st century. COVID-19 may be another factor encouraging some to seek pastures new.

The (embryonic) space industry is already worth over [\\$400 billion](#), according to the U.S. Federal Aviation Administration. Morgan Stanley forecasts [\\$1 trillion worldwide](#) by 2040. China wants an Earth-Moon space economic zone to generate \$10 trillion in annual services by 2050. In 2019, the U.S. established the first new military service in over 70 years – the Space Force.

Other signs of the outer space odyssey of the future:

- **Commercial space travel and transportation.** Richard Branson’s Virgin Galactic is charging \$250,000 for trips to the boundary of Earth’s atmosphere. Elon Musk’s SpaceX Starship will purportedly carry 100 metric tons of cargo into orbit, for as little as \$2 million per launch. Billions around the world watched the recent Falcon mission and marveled as Musk’s bravado paid off.
- **Expansion and commercialization of a permanent space station program.** The U.S. National Aeronautics and Space Administration is beginning to offer berths aboard the International Space Station to the general public. For \$35,000 a night, you’ll probably be disappointed by the room service, but the view will be ... heavenly.
- **Creation of space lodging.** Speaking of room service, the first luxury hotel in low Earth orbit – Von Braun Station – is under development by an organization called the Gateway Foundation. (Of course, Kubrick fans will know this only comes a couple decades after Hilton established its Space Station 5, in 2001.)
- **Establishment of a permanent Moon base.** The U.S., China and Europe all have plans to develop permanently habitable buildings on the



Outer Space

Moon. Private companies, like Jeff Bezos’ Blue Origin, are similarly focused on creating the infrastructure for a human lunar colony.

- **Destination: Mars.** Seeing Moon initiatives as too plebian, Elon Musk plans on sending a crewed mission to Mars by 2026, as an advance party for the settlement of the Red Planet. As Musk has famously said, he’d like to die on Mars – just not on impact.

The Age of Exploration of the last millennium was bankrolled by European kings and queens. Outer space is no different. Our modern royalty – Bezos, Musk, Branson, etc. – see the opportunity and are investing heavily. The U.S. Chamber of Commerce wrote recently, “It is not speculation to suggest that the future development of space will see the creation of new markets, new industries and new sources of innovation.” Or, as Jeff Bezos put it, “big things start small” – Armstrong-size small.



A) Starman ... waiting in the sky

Accompanied by the shimmering soundtrack of David Bowie as it was live-streamed across planet Earth, Elon Musk's SpaceX Falcon Heavy launch of "Starman" into orbit is helping establish new pathways to the Moon, Mars and the stars (the Tesla Roadster is optional...).

B) The Hilton Hotel's Space Station 5

The actual shots of its hotel lobby and reception area were a set on a movie lot in Borehamwood, Hertfordshire, England, 1968, for Stanley Kubrick's 2001: A Space Odyssey.

C) Fortunes from tech beget fortunes in outer space

Like the mother countries that launched the explorers of old, is Mother Earth a "mother planet," or do Musk, Bezos, *et al.* see their efforts as a planetary hedge? As Blue Origin's webpage says, "Earth, in all its beauty, is just our starting place."

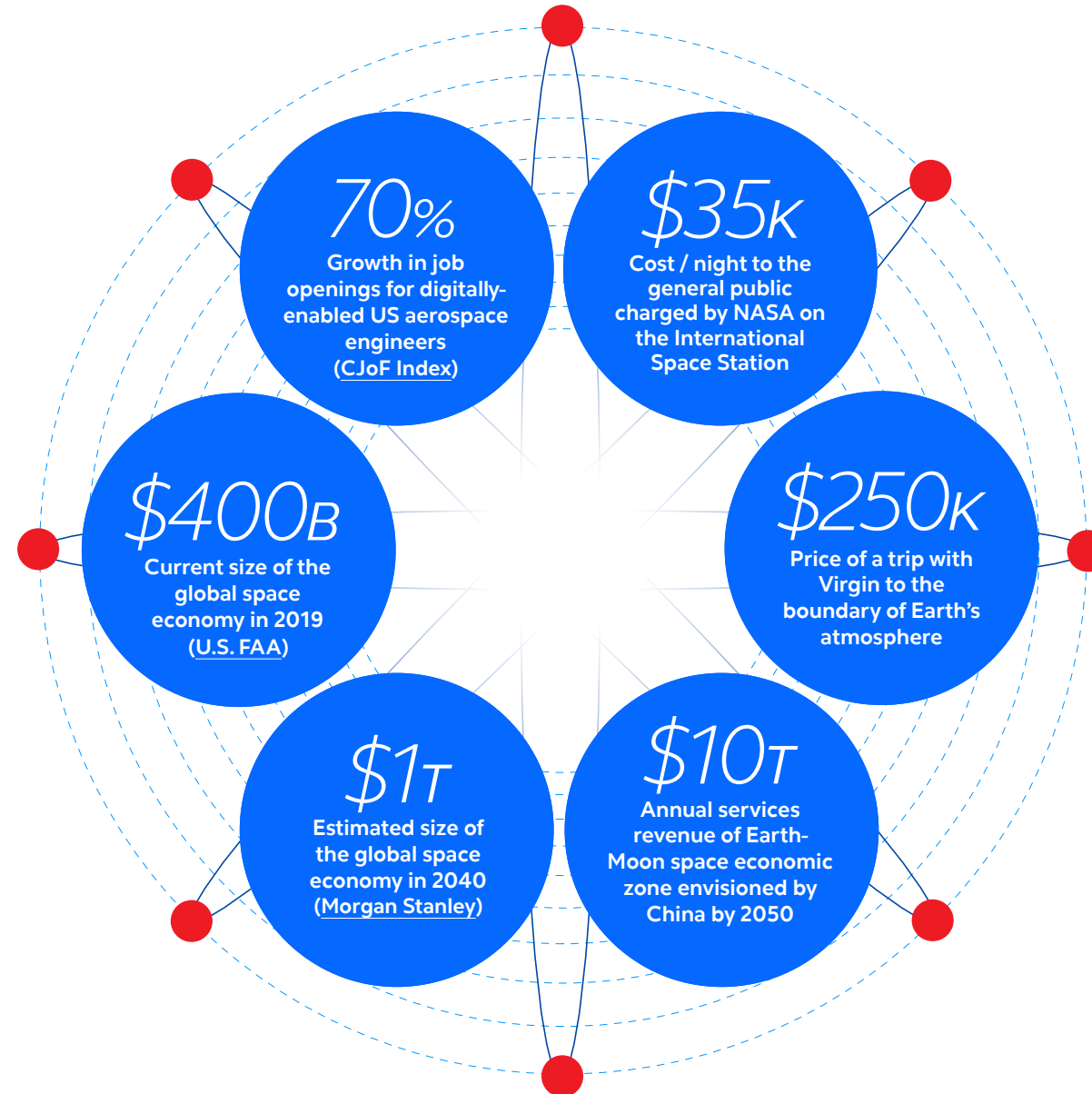
D) A new type of transportation, to a new type of place

SpaceX has 8,000 employees already (and hundreds of new job openings) focused on enabling people to live on other planets. Building lovely cars is simply a way to fund the movement of people to where there's less traffic.

E) A mother lode not of Mother Earth

A major future of work lies ahead for space mining, which involves people working in tandem with robots. (Senator Ted Cruz said in 2018 that the world's first trillionaire will make his or her fortune in space). Pictured is an artist's conception of a mining settlement on double-asteroid 90 Antiope.

“Space is big, and only getting bigger.”
– Einstein



What outer space can teach other places readying for the Fourth Industrial Revolution

Dreams matter.

JFK's 1962 challenge to reach the Moon by decades' end rallied millions of young people to work in science, and led to an explosion of broad tech innovation. In a world grown weary and cynical, today's dreams of outer space exploration will again act as a catalyst of inspiration.

Billionaires' dreams really matter.

Check out the job openings at Blue Origin. Enough said. The enthusiasm of billionaires is your opportunity. Kings of the new frontier, they're underwriting the dreams (and risks) of the new explorers of the new, new world – and the places that help them get there. In early 2021, Jeff Bezos stepped down as CEO of Amazon to spend more time directly involved with Blue Origin. “If you like the earth, you might also like the moon ...”

Success won't come on a manageable schedule.

Developing new spaces (or redeveloping old ones) can't be managed in an overly planned way. We can't know what the Moon will be like in 50 years – that's arrogance. Yet without small steps to build future places, they'll never be built at all. As U.S. President Eisenhower said, “Plans are useless, but planning is indispensable.”

Portland

MAINE, U.S.



Offering affordability and quality of life, “the other Portland” could catch up with its larger, better known namesake on North America’s Left Coast. Time to make the “wrong” Portland the right one.

When someone hears the name Portland, invariably they think of bearded hipsters drinking bottomless cups of espresso, taking Bikram yoga classes on Hawthorne Boulevard and writing Perl in the Pearl District – in essence, an episode of *Portlandia*. Fewer think of its namesake, 3,187 miles to the east, Portland, *Maine*, a place where affordability, short commutes and a world-class outdoor playroom reign supreme.

As a perfect storm of rising rents, clogged traffic and diminished quality of life (given huge new impetus by the coronavirus) drives the next generation of East Coast digital talent out of pricey behemoths like Boston, New York and Washington D.C., the “other” Portland is becoming probably ... promisingly ... positively ... an American place of the future.

First things first. Portland is still small, still rough around the edges and still a work in progress. Its potential has been heralded many times before, a fact reflected in its flag and city seal showing a Phoenix rising from the ashes and the Latin word *resurgam* – “I shall rise again.” Some may think, “True then, true now.” And yet, Portland has many of the underlying elements to usher in a real, sustained and lasting renaissance through the 21st century.

Downtown apartments are plentiful, full of character and cheap – typically half of what you’d pay for a smaller place on the distant outskirts of Brooklyn (New York) or Jamaica Plain (Boston). Pre-COVID-19, the social scene was on fire: The city was named the 2018 Restaurant City of the Year by *Bon Appetit* and the best city in the world for [craft beer](#) by The Matador Network. The overall vibe is youthfully “chill:” GQ called it one of the “[coolest small cities](#) in America,” *Outside* [proclaimed it](#) the “best adventure town in the East,” and [research](#) from Gary Gates, a demographer at UCLA’s Williams Institute, dubbed it the third gayest city in the nation.

Tech pockets on the rise

Tech innovation is also palpable. Maine’s biggest tech company, Covetrus, has improbably driven tech-fueled disruption into the staid and sleepy (but large, at [\\$96 billion](#)) world of pet care and veterinary services. Pika Energy is riding the “green wave” of solar energy plus storage to national prominence. And WEX, Inc., a global leader in corporate payment solutions, is a magnet for fintech startups. A groundswell of new sources of capital like Maine Angels, Maine Venture Fund and SeedInvest are now active, alongside institutions such as Maine Technology Institute, Maine Center for Entrepreneurs and Maine Accelerates Growth.



[Portland, Maine, U.S.](#)

What could hinder its placement on a map of the future is the city’s local education infrastructure, which so far seems unattuned to the explosion of tech opportunity. The University of Maine is 150 miles away in Bangor, while prestigious nearby colleges Bowdoin, Bates and Colby have shown little interest in aligning their curricula with tech (although Colby has added a \$30 million AI institute). At the same time, as its West Coast compadre found, all it takes is one or two successful hit startups (i.e., Intel and Nike) to get the city on its way to rivaling its more famous cousin to the west.





A) Fomenting fermentation among the faithful

Novare Res Bier Café is a Lourdes for craft beer lovers – a place anyone with the religion should visit once in a lifetime. On just about every list from every source of pub intel, Nov Res will knock you over (sometimes literally) with 33 different draught beers and 400 types of bottled beer.

B) Local shops for local people

Washington Street is chockfull of artisanal goods, services and experiences – shoes (made locally), florists, smoothies, high-end shucking and Reiki – with nary a traditional point-of-sale machine in sight. Square and Shopify rule amid the pre-digital atmosphere.

C) America, the beautiful, from sea to shining sea

Cape Elizabeth hugs the shore of Casco Bay and is Instagram central for Sunday morning sunrises (on the way home from Novare Res); it is also where movie director John Ford was born. Mile after mile of running trails make gym membership redundant. Sailing is *de rigueur* through the sweet summer months (or, given the cool climate, month).

D) The right mix of “bricks” and “clicks”

Downtown is full of buildings just waiting to be filled with coders who want to work in cool places. Living on a street like this in Manhattan or London would set you back a gazillion dollars; in Portland, it’s still within reach.

E) There are modern office buildings, too

WEX, Inc. has just made a huge investment in Portland, building out its headquarters and acting as a magnet for fintech startups.

F) A proud heritage of American art (and architecture)

Best known for his painting of a New York diner, famed American artist Edward Hopper is also closely associated with Portland (and Maine more generally). This is The Libby House, painted in 1927.

Quintessentially American, poised to rise again

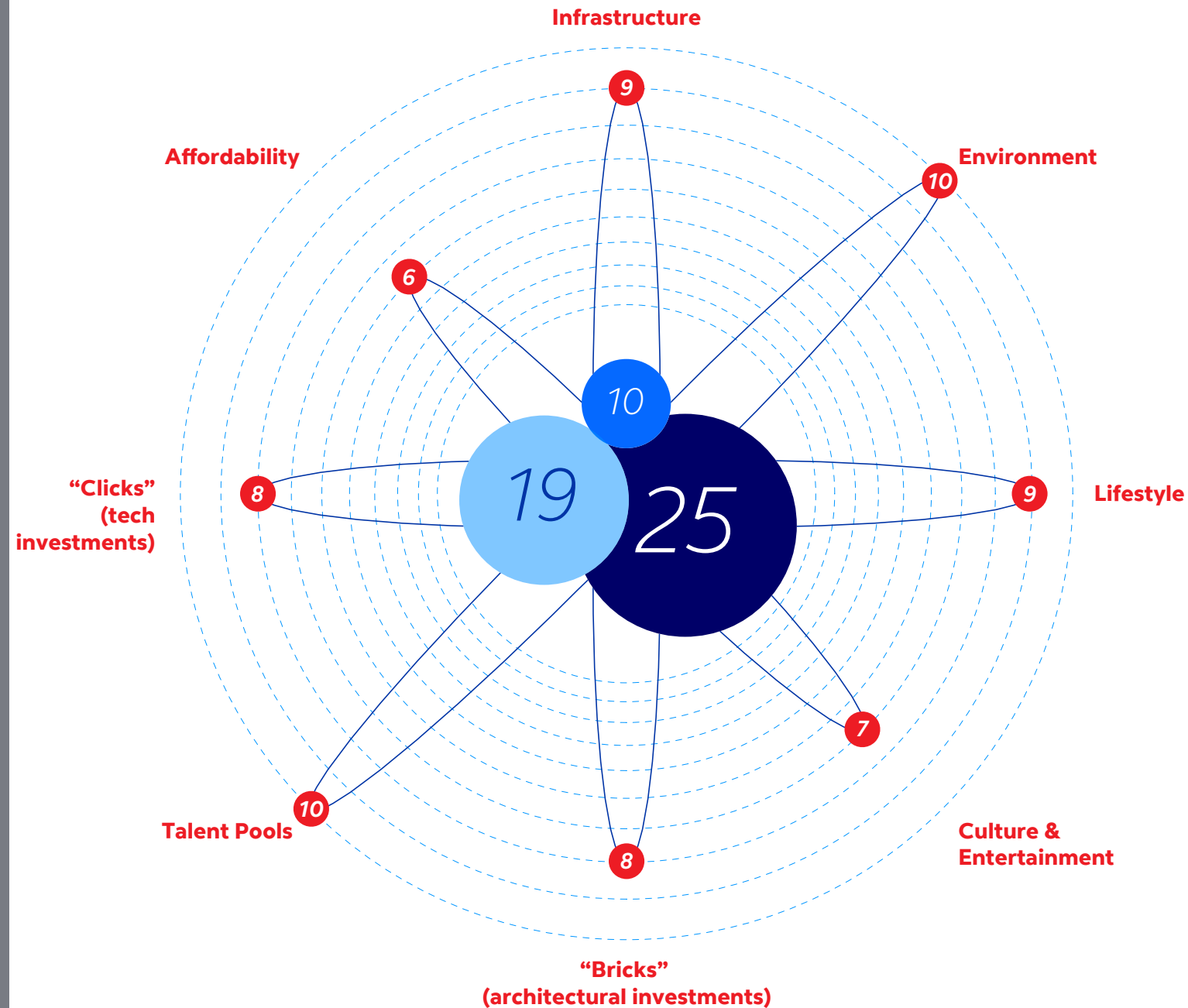
THE NUCLEUS

(Scale of 1-25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

(Scale of 1-10)



What Portland, Maine, can teach other places readying for the Fourth Industrial Revolution

Affordability matters.

Big (and midrange) cities are pricing out the next generation of talent. Attracting young people loaded with college debt is Job One for municipal developers, be they from a civic or commercial background. Portland is leveraging its extensive tourist marketing into a “come for a vacation, stay forever” message. *Wicked smahht.*

Quality of life matters.

Coders work hard, but even the most intense want to kick back and have fun. Full of cool, one-off bars and restaurants, Portland is a place to be young and have a good time – rather than be young and full of angst like the 90% of young people feeling overleveraged in high-priced cities like San Francisco, New York and London.

Buying low, selling high matters.

Buying an apartment in NYC’s Tribeca in 1973, when it was a crime-ridden, no-go area, would have cost you \$30,000. Today, it would be worth \$5 million. No place can guarantee such a spectacular run over the next 40 years, but Portland – with its many advantages – has a good argument to make.

Remotopia



From the cubicle to the couch to a cabana in Cartagena. The office of the future isn't on any map, but it is everywhere you can imagine.

[WATCH THE REMOTOPIA MOVIE](#) (5:00 running time)



We've identified locations all over the world to highlight in this report. Yet, the most futuristic of them all is represented by no place at all. Or every place, depending on whom you ask. The future of work is increasingly accessible from anywhere with internet connectivity and enterprise communication apps like Slack or Microsoft Teams. The COVID-19 pandemic turned this from a futuristic possibility in the margins to a present reality of the majority. We call this "place" Remotopia.

While it feels sudden, this moment is at least 30 years in the making. French economist Jacques Attali predicted a future in which rich elites would embrace a nomadic lifestyle of traveling around the world for work opportunities. Today, that vision extends beyond the wealthy: Imagine hunter-gatherers updated with iPads and helipads.

But while the digital nomad concept usually conjures up images of young tech workers gallivanting across the globe, submitting IT or UX assignments from exotic locales, it's not just the beaches of Bali or Phuket attracting workers untethered by geographical bounds. Some have chosen to take their talents to small towns, where life moves more slowly, and earnings stretch further. Others remain in bustling cities, where they can enjoy cosmopolitan

amenities while avoiding the draining daily hassle of a commute.

Proliferation of WiFi availability and the rise of the smartphone gave us instant and near ubiquitous connectivity. Offshoring of labor set the precedent for companies to accept that workers can be productive outside of the traditional office space. As digitization transformed the way we shop and play, it was only a matter of time before the way we work joined the fray. And remote work looks to be here to stay given the announcements by several major tech companies that their employees will be allowed to work from home even after the pandemic subsides.

The human connection

Such a wholesale change to the way we work is not without its growing pains. Gone are the opportunities to fraternize around the watercooler. And text-based communication hasn't yet captured the nuances of facial expressions and vocal inflections. With the blending of the "first place" (home) and "second place" (work), the need for a "third place," as coined by sociologist Ray Oldenburg, has also become integral. These are the coffee shops, libraries and bars of a neighborhood – community anchors where visitors can see familiar faces and make new acquaintances. It will become



Remotopia

paramount to recreate the third place for a growing contingent of remote workers so they can foster relationships and make empathetic and creative connections.

Despite concerns about isolation or loneliness, the data overwhelmingly suggests that people working from home are happier and more productive. Companies lagging behind on work-from-home policies and support structures risk losing the arms race of talent acquisition in the future of work. The

co-working spaces that have sprouted up across bustling tech hubs in recent years shed light on how larger organizations can remodel their culture and HR practices to accommodate the workforce they wish to court. Workers should be able to leave the proverbial nest when it suits them but always feel welcomed when they return to HQ for those key in-person engagements. Welcome to Remotopia, the most productive place on Earth.



A) Empty farms

The farm served as the primary workplace for millennia and only relatively recently became supplanted by the office. Now, cubicle farms face the same extinction-level event as agricultural farms did. Most of the tasks done by office workers can be accomplished remotely, from anywhere with an internet connection and computing device. As workers transition away from commuting to dense business districts, the entire urban geography is set to change.

B) Neither home nor workplace

People spend more time at work than just about anywhere else, making it ground zero for social interactions. That social catalyst is lost with remote working. Communities must adapt with the proliferation of what sociologist Ray Oldenburg dubbed “the great good place”: public gathering spots that serve as the foundation of public discourse.

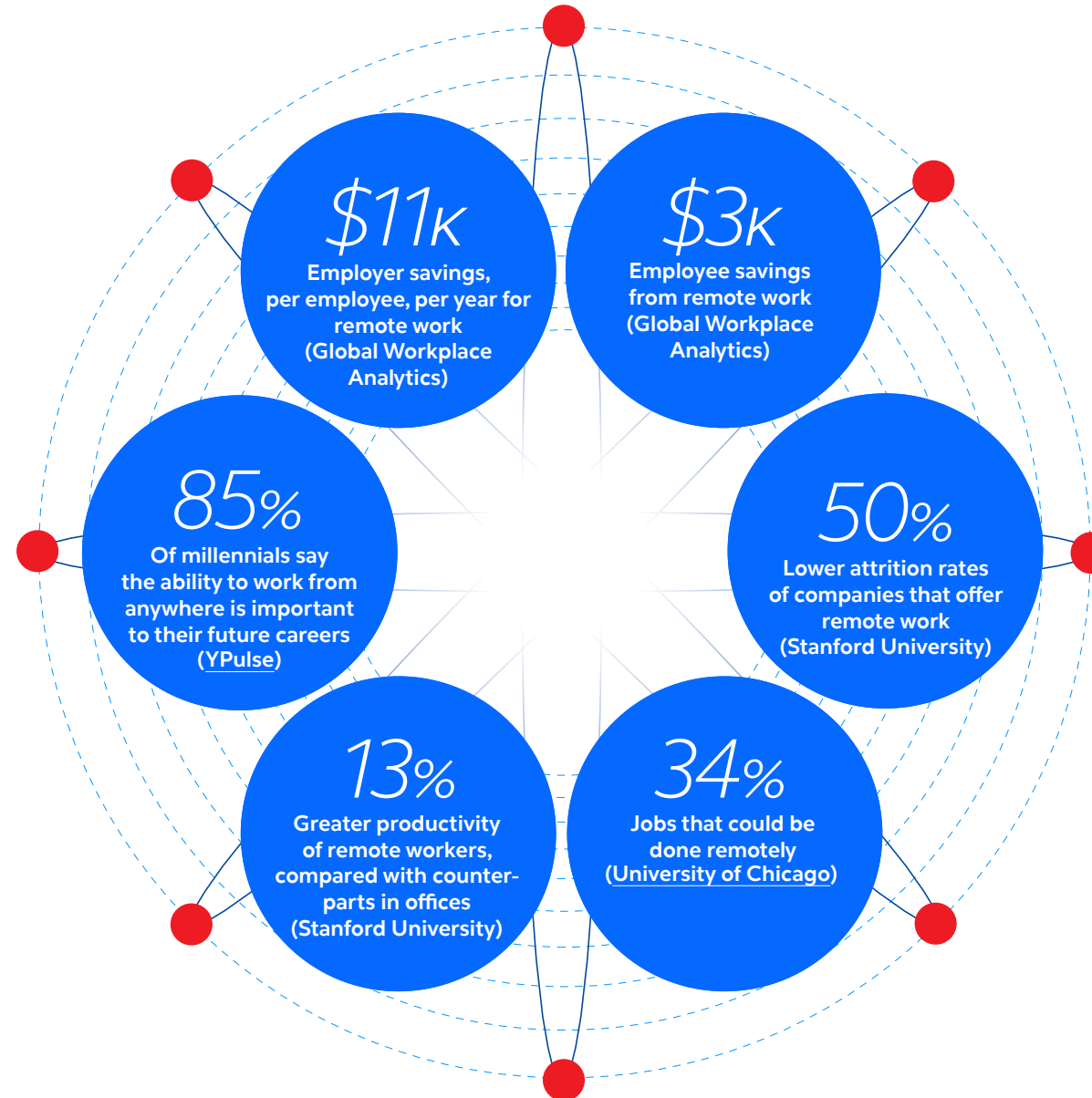
C) The nest

While studies reveal that many workers would prefer working from home full-time, most employers have yet to catch up. And some projects still require in-person interaction. The hybrid approach of two to three days of teleworking provides a balance. As such, workplaces must accommodate more dynamic workers who may not show up every day but still want to feel welcomed at HQ.

D) From cubicle to couch

Prior to the pandemic, only a small minority of employees regularly worked remotely. By the end of Q1 2020, that number surged [to over 60%](#). Most employers say at least some of their workforces will retain that status. Leaders who embrace it now have more time to perfect the implementation of remote work and reap all of the competitive advantages that go along with it.

The best place on Earth to live, work and play



What Remotopia can teach other places readying for the Fourth Industrial Revolution

Cost savings for workers and employers.

Remote working arrangements can save employers up to \$11,000 per employee per year, [according to](#) Global Workplace Analytics, while workers stand to save \$3,000 by lowering wardrobe, transportation and childcare costs. And taking millions of commuters off the road significantly reduces greenhouse gases.

Attracting and retaining talent.

Even before the pandemic, remote work had become so attractive a perk that [one-third of workers](#) would switch jobs to get it, according to a LiveCareer study. Now companies outside of the tech industry must embrace remote work as Silicon Valley employers begin encroaching on their talent pools via recruiting remote talent. Catering to digital nomads will be essential in the future of work's fight for talent.

More present, more productive.

Despite less direct oversight (or perhaps because of it), remote workers were found in a Stanford University study to be [13% more productive](#) than counterparts at the office and 50% less likely to quit. They also take fewer sick days. The time gained from eliminating a commute allows workers to be more present with their family and community outside of work.

THE IMPORTANCE OF PROVENANCE

Places are fundamental to us. We greet each other by asking, “Where are you from? Where do you work? Where are you going on vacation?”

But lately, from Main Street USA, to High Street UK, to Shanghai’s Nanjing Road, change is afoot. As author Thomas Friedman astutely observed, we live in “an age of accelerations;”⁶ in the context of technology and place, we’re just at the beginning-of-the-beginning of what this means for the future. COVID-19 is the mother of all accelerators as the future of work becomes the present of work.

What will be the fallout of this time compression on the places where we currently live and work? Some towns that were hot years ago have faded. (“*The K-mart’s been a closed empty box for 10 years; I wonder who’s next?*” “*When did this neighborhood get so bad?*” “*Sorry I’m late for work; the seawall on the coast road crumbled – again.*”)

But other towns – maybe even yours – are rising, exhibiting signposts of the future (“*The old train tracks are a new park!*” “*The mall became a safe space for VR immersion – and its algorithms keep participants two meters apart at all times.*” “*The old bank building is now a super-trendy brewery.*” “*Our street first closed for outside dining during social distancing – it’s as charming as an Italian piazza now.*”)



Like the maxim “location, location, location” in real estate, timing, too, is everything. No sooner do we admonish a friend, “*Why did you move there – that neighborhood’s sketchy!*” only to later lament, “*I wish we’d bought a flat in this neighborhood when Jane did – we’d have made a fortune.*”

In a world surrounded by constant innovation in technology and work, it’s logical that an acceleration – a renaissance – of places of the future will follow in their wake.

Sacramento

CALIFORNIA, U.S.



When San Francisco couldn't scale itself, the cool kids started moving inland, especially in the wake of the virus. As they continue to do so, Silicon Valley's center of gravity will move indefatigably up the I-80 corridor – and beyond.

By the 2010s, most analysts, media and technology experts would have agreed that the technological heart of California, and thus the world, had re-centered itself northward, up from Silicon Valley proper to settle squarely in the 7x7 square miles of San Francisco. But a curious thing happened in the last 10 years: Keep squeezing the pricing, lack of homes and traffic congestion of the Bay Area like a Panic Pete stress toy, and the center of gravity of Silicon Valley will stretch outward along its transit corridors like Interstate 80 that connect it to provinces beyond – most notably Sacramento.

Imagine that: Silicon Valley – arguably *the* place of the future – proved, in reality, to be a place that just couldn't scale itself. The coronavirus was only an accelerant of trends already underway.

California's political power is centered – literally and figuratively – in Sacramento. During the First Industrial Revolution, the city was famous for its namesake river, which, at its confluence with the American River, formed the westernmost terminus of the Transcontinental Railroad and the Pony Express, and launched a thousand ships upstream to the mining camps of the Gold Rush in 1849.

But history and politics aren't Sacramento's only forte. Filled with charming turn-of-the-century buildings (and boasting North America's densest deciduous tree canopy over its street grids – which help tame its midsummer heat), the city has undergone a renaissance that could propel it and its environs well into the future. With its leading-edge green-energy infrastructure from its community-owned utility district, reenergized connectivity with the University of California at Davis, a thriving pre-pandemic food scene (billing itself as the farm-to-table capital of the world) and a revitalized downtown core – when the contagion abates, Sacramento will flourish once again.

An economic anchor

Sacramento is also poised to break out of the shadow of the Bay Area and SoCal in the long term, and become the third municipal prong anchoring the future of California, the world's fifth largest economy. But more than anything, the biggest force in play could be the "invisible hand": economics. As California entered the 2020s, it was a tale of two states. For all its talk of scale and "inclusion," the simple fact is that costs, especially for housing, meant the Bay Area – and to a lesser extent LA – had become increasingly unaffordable. As Silicon Valley tech giants extended pandemic-driven timelines for



Sacramento, California, U.S.

remote work – with some proclaiming employees could work from home “forever” – Sacramento beckoned to many who were in no hurry to leave California.

Other inland places may also draft on Sacramento's challenger status. Chief among them is Stockton, home to former Mayor Michael Tubbs' Universal Basic Income initiative, or Bakersfield, home of one of country music's most distinctive sounds, halfway between SF and LA, and on the doorstep of Sequoia National Park.

But for any young person in California today who is looking to settle amid charm, culture, a beer and culinary scene beyond reproach and a decently easy escape to natural beauty (Hello Sierra!), it'd be a failure of imagination to not include Sacramento. Regardless of what dissenting Angelenos and San Franciscans may think, it's the true capital of California, today and – by all evidence – even more so tomorrow.



(A) SMUD'S green energy

The Sacramento Municipal Utilities District's innovations are helping California cut greenhouse gas emissions to 40% below 1990 levels by 2030.

(B) Art, art everywhere

All walls are now a canvas here, including this stories-high mural of the Man in Black (Johnny Cash) by renowned street artist Shepard Fairey (of POTUS 44's iconic "HOPE" poster).

(C) Farm-to-fork capital & canning factory

The fertile fields surrounding Sacramento lend themselves to excellent cuisine. The Food Factory aims to turn an old trucking depot into a dedicated makerspace for food entrepreneurs who want to launch and scale their brands, from home picklers to amateur charcutiers.

(D) Tying town & gown together at Aggie Square

UC Davis (the "Aggies") on the outskirts of Sacramento is California's preeminent ag school (wanna be one of California's great winemakers? Go there.). But brand-new innovation hub Aggie Square will be sited in the heart of Sacramento, spurring economic growth by bringing Davis' powerful network from the periphery to the city center.

(E) Sacramento Railyards

Adjacent to the gleaming new home of the NBA's Sacramento Kings and eight times larger than New York's Hudson Yards, this vast, mixed-use central site has long remained a post-industrial wasteland, an expanse of rail lines and brick buildings that was once the western terminus of the Transcontinental Railroad.

(F) Protecting heritage farmlands

Smart land use and zoning zealously guard an agricultural heritage. This is the opposite of the sprawling developments that characterized late 20th century California.

(G) Yesterday and today – a killer beer scene

For when the workin' day is done, the more that things change, the more they stay the same, especially at the Ruhstaller Taproom.

California's capital; Silicon Valley's future?

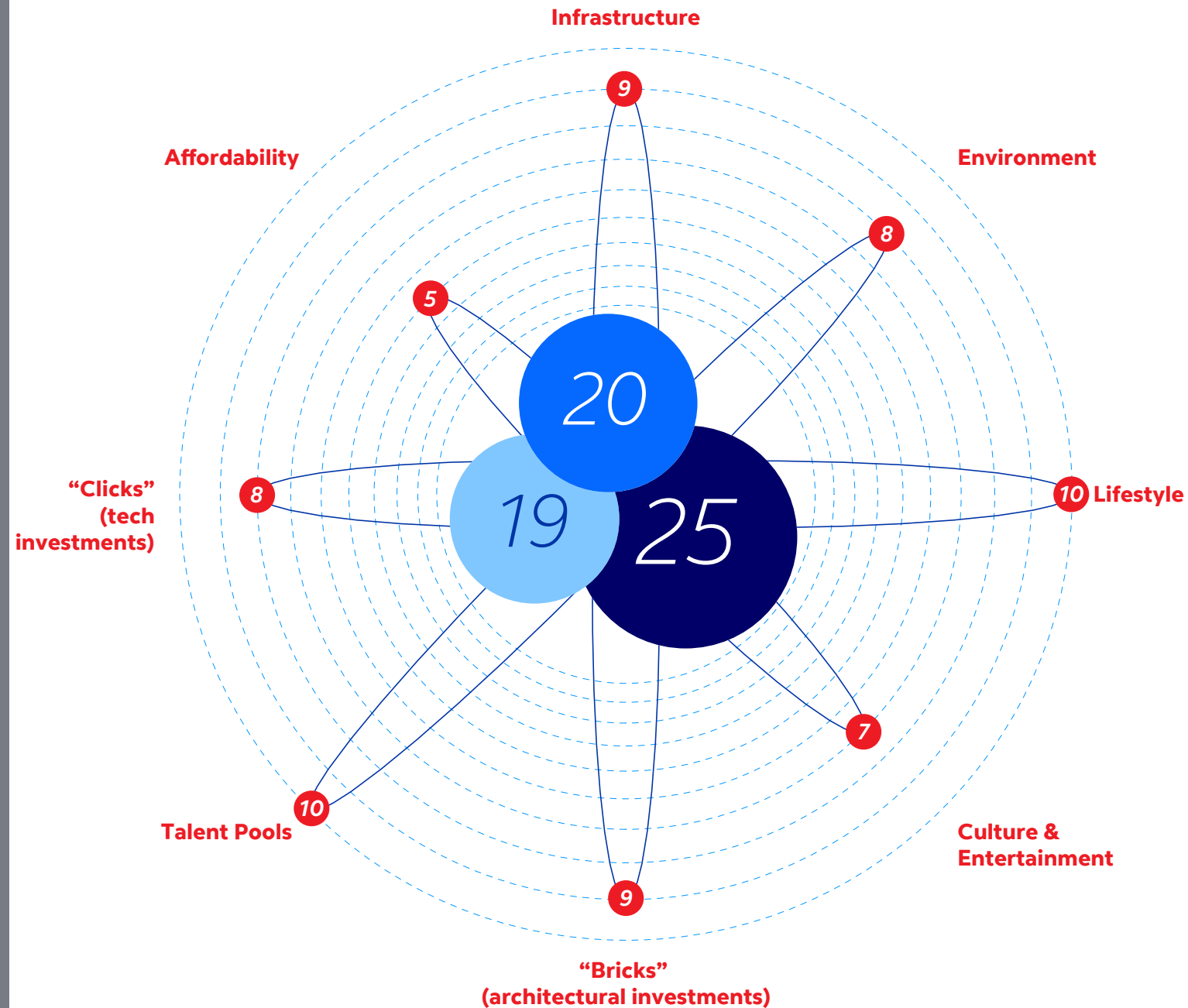
THE NUCLEUS

(Scale of 1-25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

- (Scale of 1-10)



What Sacramento can teach other places readying for the Fourth Industrial Revolution

Sacto getting high (scores) on bricks & clicks.

While its status as one of America's capital cities affords it a strong nucleus, Sacramento's ability to politically energize and couple its architectural heritage with state-of-the-art technologies (thus attracting talent) positions it strongly as a place of the future.

Jumping into the talent pool.

Yes, it's a furnace in the summer (vs. foggy SF). But Sacramento is even hotter with the cool kids of the educated and creative class. Statistics bear this out: Apartment listings website Zumper's data shows California's capital region – the Sacramento area plus Stockton and Modesto – was the biggest draw by far for Bay Area residents in 2020.

The tech scene is thriving.

Belying its reputation as a government-only town, [a new analysis](#) from CommercialCafe ranks Sacramento as the 11th best area in the country for startup companies, especially for young workers and businesses who find Bay Area rents and real estate tough on fledgling businesses.

São Paulo

BRAZIL



“In São Paulo, every day is a Monday. But every night is a Friday.” This ethos is the engine driving this cosmopolitan colossus into the future of work.

For many, Brazil conjures images of caipirinhas by the beach and dizzying displays on the soccer pitch. But while that may tell the story of nights and weekends, by day, Paulistanos (as locals self-identify) work just as hard as they play. São Paulo leads all of Brazil in GDP, scientific production, number of expatriates and artistic output. These factors have contributed to its status as the leading business hub in Latin America.

And as the factors combine to spark its startup and innovation scene, São Paulo is primed to become a global leader in that arena, as well. But to reach that status, the city will need to shake its current reputation as an epicenter for the COVID-19 pandemic. As the cases and deaths continue to climb, global partners have begun to lose faith in Brazilian leadership. A continuation of the poor pandemic management could alienate foreign business travelers.

However, the past 10 years in São Paulo have seen the opening of new offices for Google, Facebook, Airbnb and every other tech company looking to do business in Latin America. The creative and entrepreneurial talent cultivated at those offices has been a galvanizing force in São Paulo’s startup scene. As entrepreneurs leave the big-tech companies, they take with them the institutional

knowledge, relationships and skills to build their own. A number of accelerators, incubators and co-working spaces have opened in recent years to accommodate all the startup activity. As a result, Loft, Nubank, 99 and a handful of other startups have all reached unicorn status in the past two years alone.

About the only thing that isn’t progressing at breakneck speed in São Paulo is the traffic. But Paulistanos answered the call of car congestion by taking to the skies with the largest fleet of helicopters in the world. And now that ingenuity has given the city a leg up in the future of transportation. Designers are hard at work just outside the city limits at Embraer as they race to commercialize the first autonomous flying vehicles for personal transport.

Bureaucracy also moves at a sluggish pace, and the red tape involved with starting and managing businesses has slowed the flow of new business opportunities. As with the COVID-19 crisis, leaders will have to continue the work of convincing tech investors that São Paulo can and will handle problems of this magnitude much better in the future.

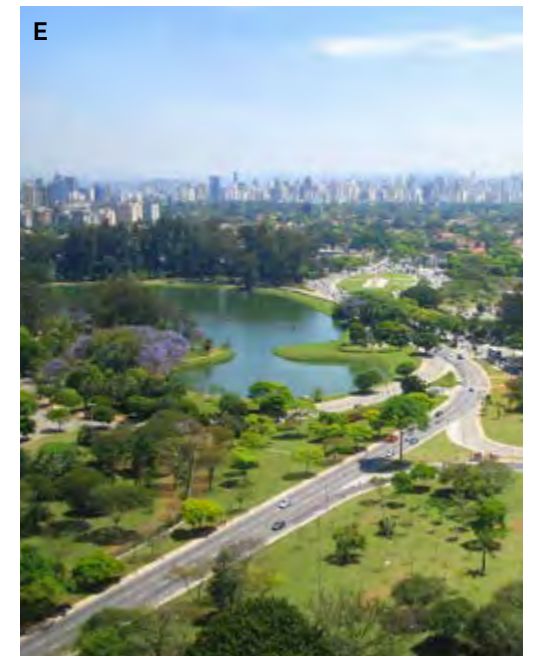


São Paulo, Brazil

Arts and culture prevail

The art and culture of São Paulo are just as integral to the future of the city as technology and business are. Street artists like Mag Magrela and Eduardo Kobra hone their craft on city walls, then share their talents all over the world. The artist community continues to churn out new stars while inspiring others to create as marketers, filmmakers and designers. After delighting diners in São Paulo for decades, culinary star Alex Atala has now turned his focus to creating new models for sustainable foods, particularly of importance in such a massive city.

São Paulo’s standing as a banking and commerce hub has provided the capital needed to sustain its startup investment infrastructure. Its global footprint, with expatriates from over 200 countries, makes the city a reflection of the ever more cosmopolitan world in which we live and fertile ground for any company seeking a global audience. But the arts and culture scene is the true driving force, serving as inspiration to the people working to create the city’s future.



A) Incubating innovation

Because office space in São Paulo remains pricey, accelerators, incubators and co-working spaces like inovaBra Habitat fill a much-needed gap for startups that can't yet afford traditional rental expenses. These spaces also provide forums for collaboration and discovery among startups.

B) Instagram alley

It's not quite the neighborhood that Instagram built (we've got bohemian artists and intrepid college students to thank for that), but the social network certainly put Vila Madalena's colorful murals on the global stage. Home to some of the finest galleries, studios and street art in the city, this neighborhood inspires creativity by day and entertains by night as a popular destination for young professionals seeking after-hours interactions.

C) Diversity to drive a global future

With residents from all over the world, São Paulo is the perfect place to launch global-serving companies. Local businesses also benefit from a cosmopolitan workforce that brings a unique variety of experiences and ideas to the workplace. While the global population of São Paulo made it more susceptible to the spread of the coronavirus, diversity remains a key strength for the future of the city.

D) Fleets of the future

Over 500 helicopters take to the skies per day as the business class looks to avoid wasting precious productive hours slogging through congested roadways. With that infrastructure already in place, it's no surprise that Brazilian aeronautics company Embraer has taken an early lead in the nascent air taxi industry. The company has collaborated with Uber on designs for flying autonomous vehicles.

E) A green escape

Ibirapuera Park is a green oasis in an otherwise vast expanse of concrete, steel and glass. In addition to a full slate of cultural programming, Ibirapuera provides residents with lush greenery to escape and recharge.

Test the global market, all in one city

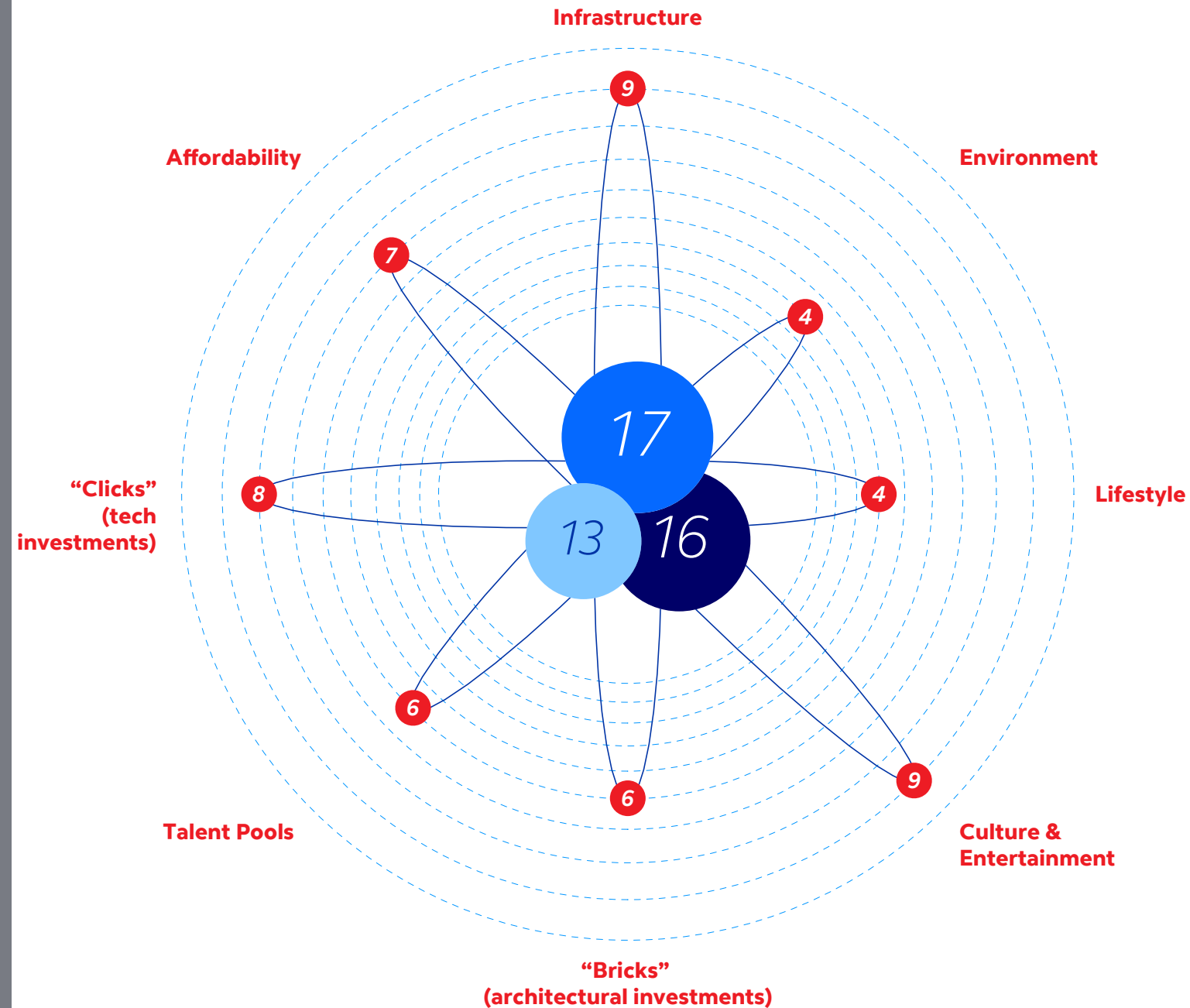
THE NUCLEUS

(Scale of 1–25)

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- Access to Private Capital

THE ELECTRONS

(Scale of 1–10)



What São Paulo can teach other places readying for the Fourth Industrial Revolution

Keep costs low.

Aside from office rents (to which co-working spaces provide cheaper alternatives), São Paulo remains a relatively inexpensive place to do business. This lowers the cost of entry and allows even more entrepreneurs to enter the marketplace of innovation.

Culture cultivates creativity.

Art permeates the city. Dazzling outdoor murals, exceptional architecture and a host of homegrown musicians all combine to spark creative thinking among residents. And São Paulo's first-rate food and drink scene provides its creative class with the fuel it needs.

Tech levels the playing field.

Fintech is at the heart of São Paulo's burgeoning tech scene. The intermingling of the banking and tech sectors builds confidence for financial institutions that may otherwise miss out on funding tech innovations due to a lack of familiarity.

Shenzhen

CHINA



Who says fish can't be lucky? Shenzhen – a once sleepy fishing village adjacent to Hong Kong and now China's 21st century, high-tech dream – is rapidly transitioning from the world's factory to the world's laboratory.

If your mobile phone, drone, electric scooter or other gadgets say “Made in China,” chances are they're from Shenzhen. You can land in Hong Kong, take a high-speed rail line and, in just 15 minutes, be in the city that manufactures an estimated 90% of the world's electronics, earning a reputation as China's Silicon Valley of hardware.

Amplified by hundreds of thousands of engineers, rapid prototyping, supply chain flexibility and sheer scale, Shenzhen is now the go-to city for global businesses building robots, drones, smart sensors and wearable technology. It's no surprise that [two-thirds](#) of the world's top 500 enterprises have branches here. Shenzhen's rapid economic development has been spurred on by its proximity to Hong Kong's access to foreign capital and talent.

After an impressive transition over the last four decades, the city is now transforming itself from a global center of cheap manufacturing to a world-renowned innovation hub. The change is exemplified by BYD Co., which started out making batteries for telephones and cameras in the mid-1990s but today manufactures electric buses, cars, trucks, rechargeable batteries and other products. Shenzhen is gradually moving from “Made in China” to “Designed in China” – a place that doesn't just copy and mass-produce, but also innovates and ideates.

Shenzhen's economy surpassed Hong Kong's for the first time in 2018. And now the high-tech metropolis has been given a new role – that of a model city showcasing the socialist vision of urbanization at the highest level. China's State Council recently outlined an ambitious plan to make Shenzhen a trailblazer of entrepreneurship and creativity by focusing on R&D, emerging industries, public services and sustainability. Shenzhen's [investment](#) of tens of billions of dollars in R&D puts its spending on par with South Korea and Israel as a percent of GDP.

In the wake of the pandemic, life mostly continued as usual in Shenzhen – testimony to the city's prevention and control measures. Although the government quickly built a new 1,000-bed hospital, it was hardly used thanks to its rapid response system, first developed after the SARS epidemic in 2003.

Forward to the future

With its goal to build more skyscrapers than any other country, Shenzhen seems in a hurry to get to the future. Motorcyclists ride through the streets delivering orders, past old buildings coexisting with improvised businesses, and through a thriving art and design culture.

With an average age of just over 30, Shenzhen is a city of young immigrants who contribute to a vibrant maker culture. According to Shenzhen's federation



Shenzhen, China

of industry and commerce, the city ranks [first in the country](#) in entrepreneurship density. With its open-source ecosystem, collaborative culture and abundantly cheap electronic parts, everyone has access to the know-how of building new prototypes.

AI and robotics startups that can both support economic recovery and help prevent the spread of infection will define the future tech scene in Shenzhen. Whether they build automated checkout terminals in retail stores or parcel-sorting robots, tech companies that can help contain the virus will potentially transform Shenzhen's tech image globally.

The crusade to ban Huawei and other Chinese tech companies in a number of countries will certainly have an impact, but it won't kill the dream of Shenzhen. Chinese tech and startup companies will find innovative ways to emerge stronger than ever before.

Ultimately, the city could become something Silicon Valley has never quite achieved: a technology hub with products available for every country and almost any budget.



(A) Art with coffee

Once an industrial area, OCT Loft has become a base for creatives, with many artists in residence in this very hip, leafy, peaceful space.

(B) Science fiction to science fact

A stroll through the Huaqiangbei electronics market is a techie's dream, where every circuit, game, phone or part can be found. This is where the founder of DJI, the world's biggest consumer drone maker, purchased the parts to make his first drone.

(C) Time and space dissolved

The Shenzhen Bay Culture Park encompasses two transcendental scales of time – the ancient and the future – through the setting of an ethereal urban landscape. (And the CFoW's Manish Bahl traveled there to immerse himself in it.)

(D) 15 minutes to spare?

The trip from the center of Hong Kong to the center of Shenzhen now takes just 15 minutes on a bullet train. Shenzhen's underground train network will become the longest in the world over the next decade.

(E) Skyscrapers as the norm

Shenzhen builds more skyscrapers each year than the entire U.S. The tallest building in China is already in the making.

(F) A car-free district

Chinese tech giant Tencent plans to radically redevelop a 132-hectare stretch of docklands, creating an area known as Net City that will be almost entirely free of cars. The new area will prioritize pedestrians, green spaces and autonomous vehicles instead.

From cheap goods maker to innovation hub

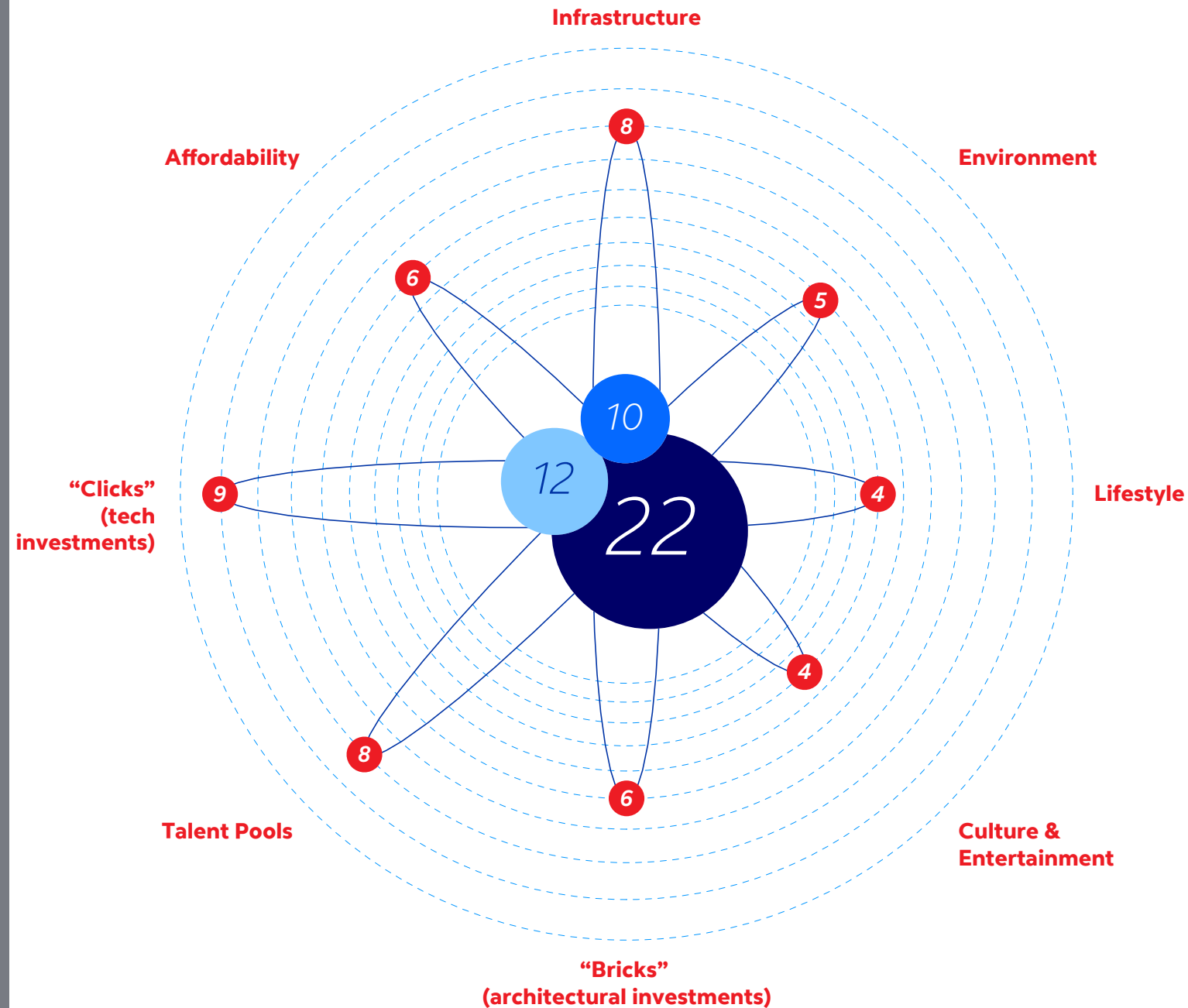
THE NUCLEUS

(Scale of 1–25)

- Local Government
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- Access to Private Capital

THE ELECTRONS

- (Scale of 1–10)



What Shenzhen can teach other places readying for the Fourth Industrial Revolution

Speed!

It's speed that makes the technology scene in Shenzhen unique. Here, getting a product from design to market can happen in a matter of weeks instead of months or years. This mindset originates in part from "shanzhai" – a Chinese phenomenon of copying and modifying original products, giving a new definition to innovation. If you want to do business here, do it with Shenzhen speed.

Modern infrastructure meets nature.

Shenzhen is a shining model for how to grow the economy while cleaning the air. It recently became the first city in the world to have a 100% electric bus fleet. The sky above Shenzhen is often blue, in contrast with many polluted Chinese megacities.

Attracting talent that matters.

Shenzhen has become a magnet for educated, ambitious young people. It offers all the conditions to realize their dreams: an abundance of leading technology firms, venture capital funds, lenient regulation and a collaborative culture. Shenzhen welcomes everyone with open arms, posting billboards with the message: "You've arrived in Shenzhen, you're a Shenzhenian!" The Shenzhen Bay Super Headquarters Base is all set to attract the talent of tomorrow.

Silicon Wadi

ISRAEL



Making the most of ongoing Israeli conflict, Tel Aviv is the nexus of an innovation culture and ecosystem on the vanguard of cyber defense. Welcome to Silicon Wadi.

Israel is a melting pot of ancient and modern, traditional and progressive, East and West.

Encompassing these dichotomies are the two distinctly diverse names attributed to the country: “The Holy Land” and “Silicon Wadi” (“*Wadi*” meaning “Valley” in Arabic). And especially when it comes to cybersecurity, the original Silicon Valley faces fierce competition from the Eastern Mediterranean. For while the entire world struggles with cyber threats, Israel is light years ahead.

So, with apologies to Apple, the fine print on our devices might soon read, “Designed in California (or Copenhagen or Calgary). Secured in Silicon Wadi.”

The growth of the cybersecurity sector is already well-established and has been hugely successful here (and definitely perceived as a “job of the now”). Bred from necessity, cyber innovation stems from Israel’s existential heritage of – and requirement for – both physical and geopolitical security. Notably, it was also used – initially – to protect Israelis from the spread of COVID-19. Sophisticated track-and-trace technology was used to access the location data of millions of mobile phone users and trace those who had been in proximity to confirmed patients. However, unbarred access to mobile data was revoked due to protests from civil rights organizations and protestors.

Extending beyond cyber, entrepreneurs in Tel Aviv are addressing a global audience in arenas like med-tech, sustainable food production and talent marketplace platforms for the future of work.

Multinational tech heavyweights have also set up shop here: Amazon, Microsoft, PayPal, IBM – the list goes on. Intel invested \$11 billion in its Israeli operations in 2019 alone. What’s interesting is a lot of these organizations find their way here through acquisition, establishing a hub specifically in Silicon Wadi because Israeli talent is so unique. It’s the same reason the R&D sector here is thriving.

Look to the talent

A few stark statistics really stand out: At \$414, Israel has the highest per-capita rate of venture capital spending, according to [Statista](#), about 47% higher than in the U.S. It also has the highest density of startups in the world.

While these figures are impressive, we believe it’s the makeup of talent here that really makes this place fit to lead in the future of work. Students are raised in Silicon Wadi to be ambitious, self-starting, tenacious and – above all – agile. Young Israelis learn responsibility, social awareness and failure as they undertake compulsory military service.

[WATCH THE SILICON WADI MOVIE](#) (15:00 running time)



Silicon Wadi, Israel

Optional (but popular) programs teach leadership skills, encourage volunteering and embed a social consciousness in pupils. By 21, Israelis are made of strong stuff.

The result may be encapsulated in one word echoed by all in Tel Aviv: “*chutzpah*.” A thriving hub of entrepreneurs leverages equal parts confidence, ambition and an ability to take on the challenges of the world by quite simply finding new and better ways to get things done.

Just as the health and security sectors converged during the country’s COVID-19 response – with Israel’s former health minister Yaakov Litzman working closely with Yossi Cohen, director of Mossad, Israel’s fabled spy service – we anticipate vastly more fluid movement of talent across industries, driven by malleable skillsets like cybersecurity, entrepreneurialism and well-connected “wirearchies.” Silicon Wadi has much of the formula it needs to be a place of the future.



A) Take a break from tech

Israel is known as “Startup Nation,” but its natural offerings are also abundant. Visitors willing to brave the desert heat should try a hike through Wadi Arugot in Ein Gedi.

B) A melting pot of tradition and progress

Israel is an equal blend of old and new. People have come to live here from all over the world, creating a very diverse mix of people. The marriage of ancient cities like Jerusalem with high-tech, liberal cities like Tel Aviv is a constant reminder of the history the country is fighting for and the future it is creating.

C) Attention! to skills and responsibility

One reason the Israeli tech talent pool is so impressive – and so highly sought after – is its compulsory military service of around two years for men and one year for women. Israelis are conscripted at the age of 17 and are very quickly challenged with high levels of responsibility.

D) Proudly LGBTQ+ in Tel Aviv

Tel Aviv has been hailed as the Gay Capital of the World. The founder of the Israel Gay Youth organization put it simply: How can a country be hung up on identity, sexual preference and gender when its very existence is hanging in the balance?

E) Sleepless on Shabbat

Friday night Shabbat dinner is a religious formality in the Jewish community. But that doesn't mean everyone stays at home. Until COVID-19 hit, the nightlife buzzed around cities like Tel Aviv into early Saturday morning. In an especially restrictive move, lawmakers ordered a temporary three-day travel ban and mandated that Israelis stay within 100 m (330 ft) of their home on the night of Passover Seder.

The cyber world's secure in Silicon Wadi

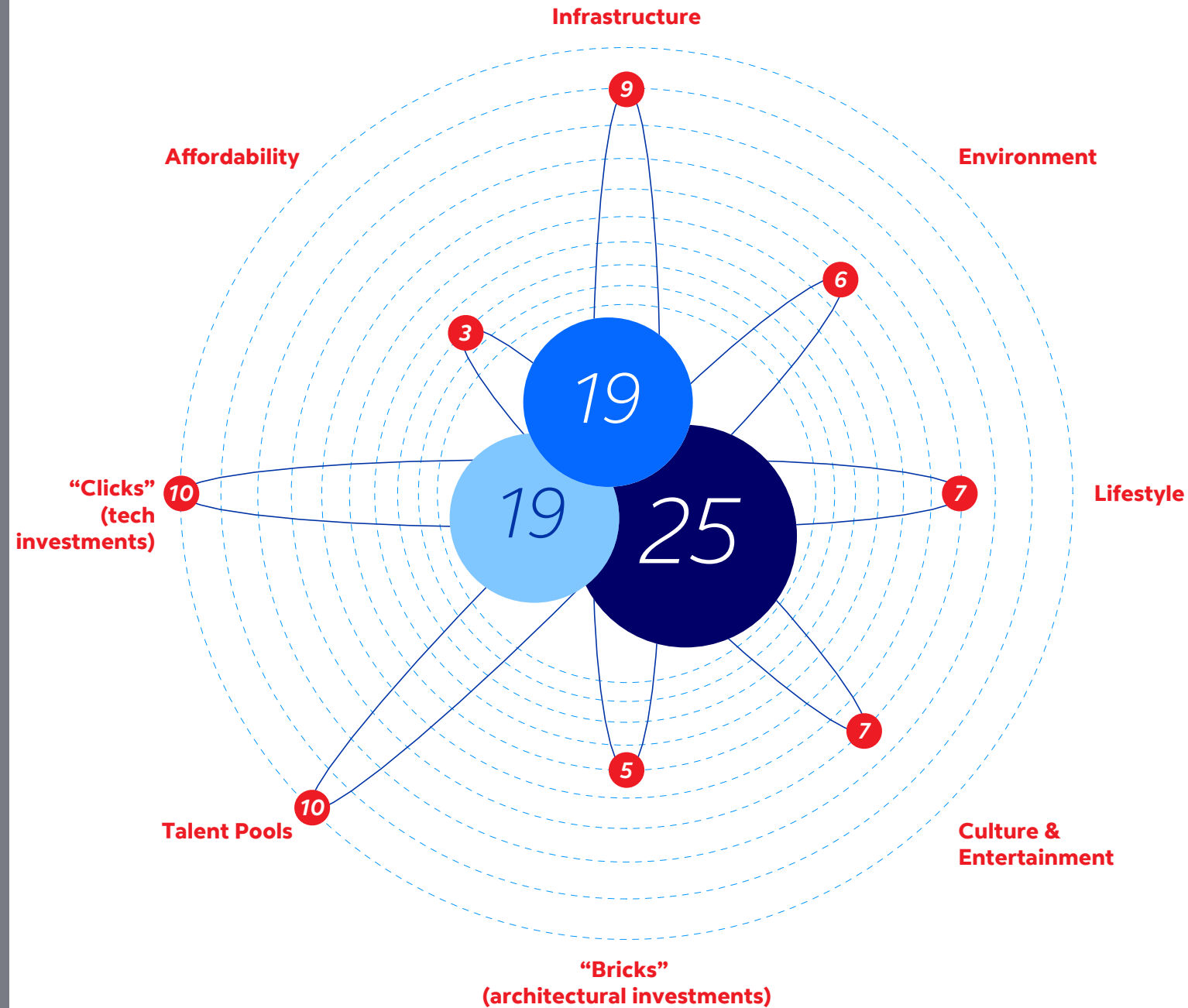
THE NUCLEUS

(Scale of 1–25)

- Local Government
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THE ELECTRONS

- (Scale of 1–10)



What Silicon Wadi can teach other places readying for the Fourth Industrial Revolution

Fear of failure? Not here.

When Israel's space exploration center SpacelL failed to meet its target of landing on the moon, one of its founders, Yariv Bash, nonchalantly wrote on Facebook, "Another day at the office ...". His reaction perfectly embodies the Israeli embrace of failure as a way to successfully learn.

Draft everyone for public service.

While Israel is focused on its armed forces, "public service" can also include programs for charity work, experience abroad or in government to promote vital skills for the future of work, like responsibility, social awareness and a global mindset.

Talent should challenge, not follow.

R&D hubs have a reputation for challenging the status quo in Israel. It was here, for example, that Intel invented a chip that didn't abide by the rule of more power = more value. Once Intel accepted this sharp pivot, it was a runaway success. The lesson: Encourage hubs of talent to challenge the norm.

Songdo

SOUTH KOREA



Writing its own chapter of what a future city should be, Songdo faces down its challenges to teach the world in profound ways what it means to hurry, and build and learn fast.

Have you heard of Songdo? Even if you haven't, you've likely seen it in the backdrop of the world-famous music video "Gangnam Style." Built from scratch over the past two decades on 1,500 acres of reclaimed tidal flats on the Yellow Sea, the city was designed as the world's first "smart city," with ubiquitous sensors driving efficiencies and quality of life, lots of green space and an emphasis on sustainability. An outcome of the country's "*pali-pali*" culture ("hurry-hurry" in Korean), Songdo is just a 15-minute drive from Incheon International Airport and a 40-minute drive from Seoul.

Given that it's one of the most efficient, green and tech-enabled cities in the world, Songdo already feels like a place of the future. Consider a typical day-in-the-life: With all the convenience of Seoul minus the capital's congestion, people live in energy- and environmentally-certified buildings. Garbage is automatically sucked away through underground pipes and recycled. Elevators can spot people exhibiting symptoms of an illness and inform residents accordingly. Smartphone alerts offer personalized updates on whether individuals are reaching their ambitious energy-saving goals set by the local government. Living in Songdo is made comfortable through the use of smart technologies, facilitating the seamless flow of products and services when needed. The Korean government wants to

replicate the Songdo story across the nation, with its recent announcement of [\\$8.8 billion](#) in "smart cities" by 2025.

In actuality, though, Songdo is still a work in progress (originally slated for completion in 2015, the finished project is now expected in 2022). At 130,000 residents, it's well short of its target population of 300,000, marring its cultural aspirations.

At the same time, Songdo offers a fix for South Korea's need for an influx of people and talent. With one of the lowest fertility rates in the world, South Korea needs immigrants, and Songdo already has several international schools and foreign medical facilities. It will take time for its culture to evolve, but Songdo is learning – fast.

Songdo's design takes inspiration from several global cities. Its Central Park is much like New York's, its convention center is modeled on Sydney's Opera House, and its canals are much like Venice's. By providing more open space for people to meet and communicate, it naturally follows the social distancing norms of today and tomorrow. Everything is built to be within a 12-minute walk from a bus or subway stop or from the canals that provide water taxis throughout the city. Forty percent of urban space is reserved for green parks, with paths for cycling and walking, and electric car charging stations are everywhere.



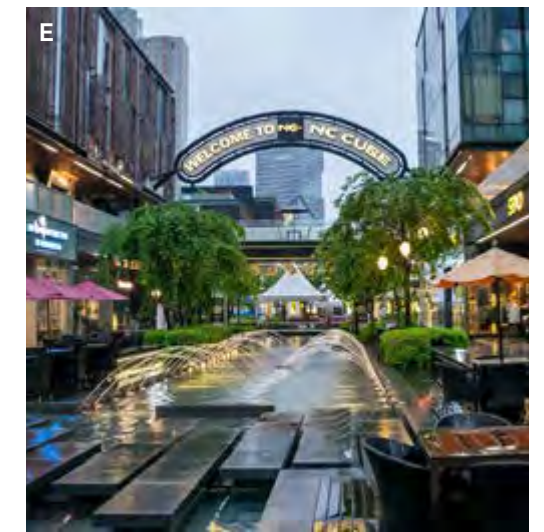
[Songdo, South Korea](#)

Survival of the quickest

Moreover, South Korea's strictly enforced health protocols, stringent contact tracing and tight surveillance all underscore the importance of technology-driven infrastructure for public health during a crisis. Songdo met its moment in the pandemic and emerged stronger than ever, exemplifying how a truly smart city can combat epidemiological contagion and save lives. To revitalize domestic spending, the government issued discount coupons for travel, restaurants and lodging around the country.

Government policies to attract talent and foreign investment to turn Songdo into "the world's biotech hub" appear to be paying off: Samsung Biologics announced a \$1.4 billion investment to build the world's largest eco-friendly biopharmaceutical plant there, and Sartorius, a German life sciences company, plans to spend \$100 million on a manufacturing facility in the city.

With continuous learning and refinement, Songdo could become a model city for others on many, many levels.



A) A high-rise city

The Northeast Asia Trade Tower, the tallest building in South Korea, pierces the sky, surrounded by several smaller buildings throughout to create a stunning visual cityscape.

B) A city oasis

Songdo Central Park (inspired by New York City's famed park) is the centerpiece of the city's green-space plan. The 101-acre space offers many outdoor activities, from biking, to boating, to strolling, to camping in the park's forested area. Park visitors can visit the Tri-Bowl cultural center and admire the sculptures and art along the walkways.

C) Sky, sea and land

A highlight of Central Park is the man-made seawater canal that refreshes itself every 24 hours, powered by wind turbines. There are many ways to get out onto the water, including canoes, water taxis and cruise boats.

D) Old meets new

Michuhol Park creates an ambiance where the futuristic Songdo city meets old traditions.

E) Canals running through buildings

The NC Cube Canal Walk is a European-style shopping arcade featuring architectural aesthetics as well as dynamic cultural elements.

Built from scratch for the future

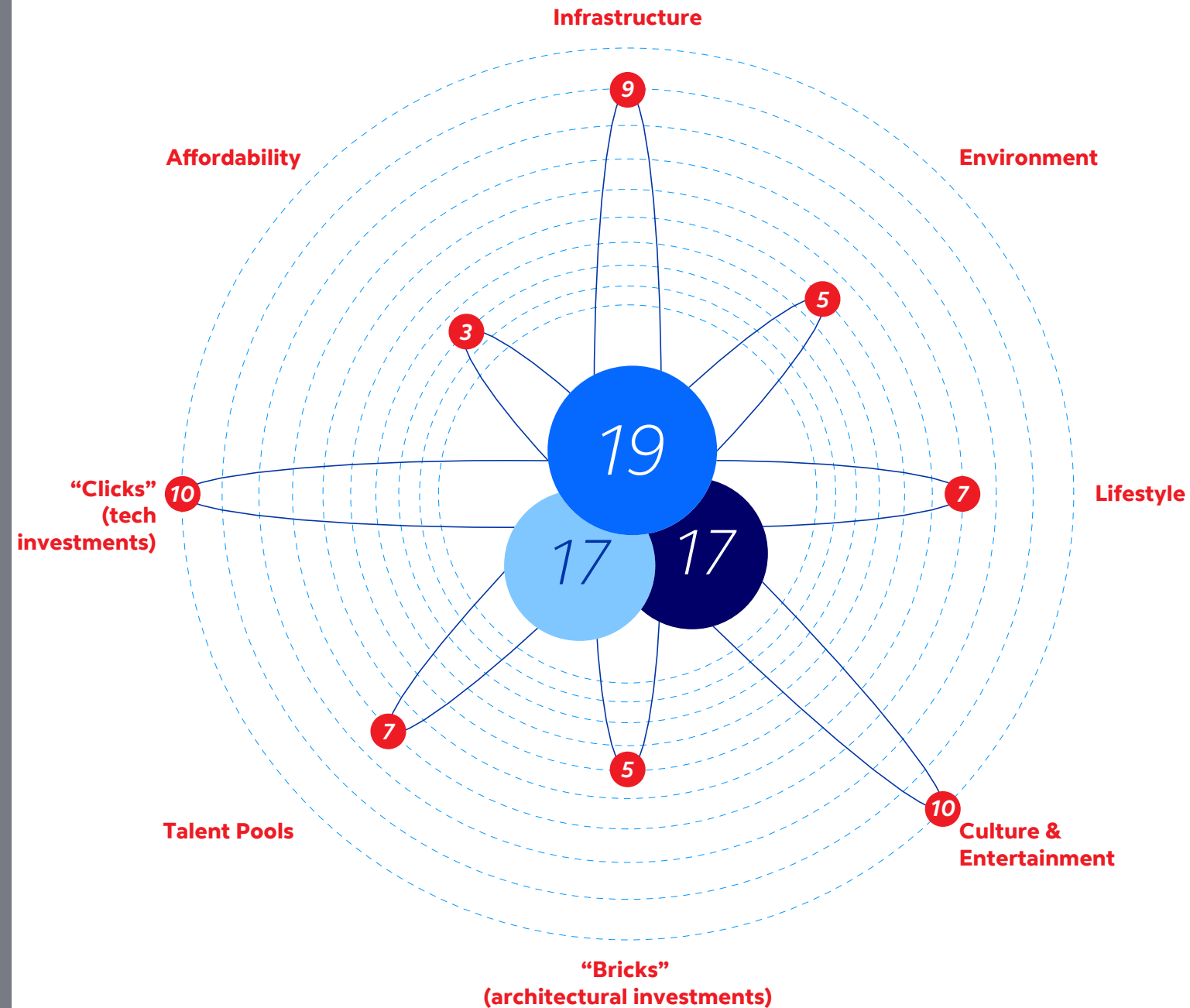
THE NUCLEUS

(Scale of 1–25)

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THE ELECTRONS

(Scale of 1–10)



What Songdo can teach other places readying for the Fourth Industrial Revolution

Resilience takes time.

Urban planning from the foundation up requires time, money, commitment, vision and relentless effort. Cities that plan to become “smart” globally should learn that building a resilient future is not something that can be rushed.

Circular economy is the new economy.

A focus on extracting maximum value from waste is the future of sustainable and economically independent cities. The movement toward a circular economy requires a rethinking of infrastructure, resources and value creation. Businesses that support the circular economy will be the new-age winners.

Data efficiency helps save lives.

Songdo’s objective is to become 30% more efficient than any other city by analyzing data coming from its smart infrastructure. Moreover, these leading-edge capabilities helped with requesting, obtaining and confirming data about coronavirus cases, facilitating contact tracing to avoid rampant outbreaks.

Tallinn

ESTONIA



Despite its obscure language and unenviable weather, this former Hanseatic city’s enthusiastic embrace of digital-first makes it one of Europe’s most successful startup states.

We’re all familiar with Skype, ordering a cab from Bolt or making an international money transfer with Transferwise. But did you know they all hail from Tallinn, a.k.a., the Silicon Valley of the Baltic? Tallinn, world-famous in certain circles for its singing festival and marzipan, is also the capital city of Estonia, which ranks among the top three countries in Europe in terms of the [number of startups](#) per capita, according to Funderbeam.

Separating “why Tallinn” and “why Estonia” is tricky because Estonia is one of the smallest countries in Europe (it’s about half the size of Austria and the Republic of Ireland). The country’s mindset, forged during the years of brutal Soviet occupation in the 20th century, assigns little value to maintaining the traditions of a system and government on the point of collapse.

With exquisite timing in 1991, Estonia won its independence just when the internet burst into life. The country’s youthful president and a newly installed dynamic government moved quickly to digitize a society that badly needed to change. Internet access is now enshrined as a fundamental human right, and school kids are taught to code. Locals can use blockchain-backed mobile IDs to vote, obtain prescriptions from doctors, sign

documents using smart devices and access any public service (basically the stuff you queue for anywhere else in the world). Fast-forward to 2020 and the COVID pandemic, and the brilliance of this digital infrastructure gleams even brighter. The absence of bureaucratic inefficiencies has made leading-edge digital governments like Estonia’s the envy of the world.

Trust, transparency and Tallinn

Tallinn has rebuilt itself as a “digital-first” city, moving with a speed and flexibility that many other places lack. With Estonia’s 6-year-old e-residency scheme, anyone can access the country’s online platforms without being physically present. International entrepreneurs can start a business, process payments and sign documents from anywhere, reflecting a nation entranced by technology and the power of startups. In fact, some see Tallinn’s tech scene and the Estonian government as a little too close: Digital utopianism does infect government policy, resulting in cracks forming in the digital facade. The country’s top banks have been closing the accounts of some e-residents, triggered by a wave of money-laundering accusations.

But for now, trust between the state and its people runs high: Take the 200,000 Estonians who have



Tallinn, Estonia

submitted their DNA into the national database to obtain free (free!) analysis and health advice based on the results. The state is exceptionally transparent on how it uses personal data, and every citizen can see who’s accessed their data and why. The government has enacted laws that severely punish unauthorized data access either by the state, individuals or companies.

Tallinn has done an excellent job marketing itself as a “startup hub.” The government’s pathway to the world’s first digital society is paved by a sophisticated

technology infrastructure that powers innovation and attracts entrepreneurs. Although some COVID restrictions apply, Estonia also recently launched the first official visa for “digital nomads,” which includes 365 days of residency in Tallinn and 90 days of travel in the Schengen area (therefore attracting the upwardly mobile from Asia and the Americas to its shores). Attractive to innovative digital talent, it’s no wonder Tallinn is a startup hub for Europe and, increasingly, the world.



A) Telliskivi: the beating heart of Tallinn’s creative quarter

Once home to the imposing Soviet-era Kalinin electronics factory, the rejuvenated industrial area hosts over 250 companies, an arcade of independent shops and the recently opened Fotografiska Tallinn, the first franchise of Stockholm’s coolest art center. Nearly 600 cultural events take place here annually, and locals love the flea market that opens every Saturday.

B) Yesterday’s USSR bricks stand ready to house tomorrow’s clicks

Tallinn’s Soviet-era architecture serves more as a draw than a turn-off. When Russia hosted the 1980 Olympics, it left behind a vast concrete amphitheater revealing Soviet architecture in all its bombastic glory. The iconic Linnahall is also featured in the opening scene of Christopher Nolan’s latest movie “Tenet.” Ultimately, the building may be turned into a conference center that includes a passenger harbor, hotel and shopping center.

C) Noblessner: new life in an old shipyard

In the early 20th century, the Noblessner submarine shipyard was set aside for the Russian Tsar Peter the Great’s European war harbor. Although the original plans were never completed, a massive antique submarine shipyard now occupies the area. Noblessner also hosts the most famous museum in Estonia (Lennusadam Seaplane Harbour), an art center, Japanese food court, speakeasy and bakery.

D) Getting around Old Town

UNESCO listed Tallinn’s medieval Old Town as a world heritage site soon after Estonia won its independence. Once home to wealthy Hanseatic merchants, Old Town is the best-preserved medieval city in Northern Europe, boasting Gothic spires, winding cobblestone streets and enchanting architecture. Public transport is now entirely free for residents of Tallinn anywhere in the capital.

E) Location, location, location

Tallinn’s proximity to Finland, Sweden, Denmark and Russia made the city a strategic and sought-after territory for business and commerce. Today, the same proximity to the sophisticated Nordic technology markets serves to attract talent from across Europe, while NATO has chosen the city for its global cyber-defense center of excellence, with a close eye on Estonia’s neighbor, Russia.

A digital powerhouse for Europe

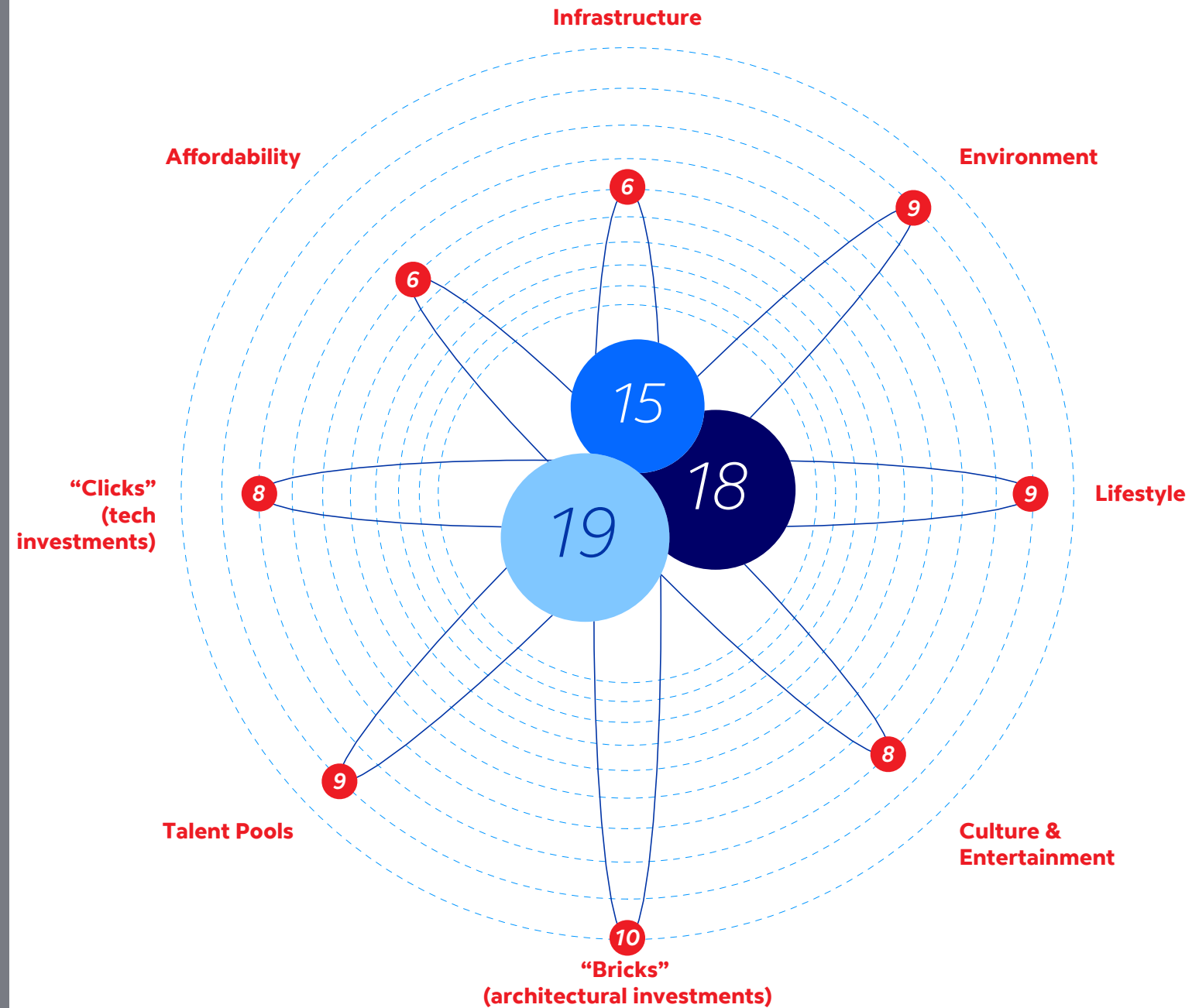
THE NUCLEUS

(Scale of 1–25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

- (Scale of 1–10)



What Tallinn can teach other places readying for the Fourth Industrial Revolution

Provide a world-class secure digital infrastructure.

This goes way beyond Tallinn's free WiFi offering. Every night, the entire country gets backed up just like a computer, in secure locations around the world. The state has plans for a radical collection of "data embassies" to keep its digital infrastructure safe and secure, along with all corporate records and data.

Be a magnet for world-wide innovation.

Entrepreneurs from inside and outside the European Union can register a new business in Tallinn online in a matter of minutes. While many praise Estonia's flat tax, the lack of arrangements for stock options (a favored tool for attracting talent) is something that local regulations needed to address.

International from the core.

Tallinn benefits from Estonia's small size, agility and global mentality. The country's newly launched digital nomad visa and space-age digital infrastructure will make Tallinn even more attractive to location-independent workers. This focus could well be the future of urban employment in a connected world where ecosystems and collaboration are rife.

Toronto

CANADA



A beautiful (but cold) lakeside city continuously swells with a diverse population driving hot innovation and a tech backlash that will change the course of new smart city initiatives.

As Canada's largest city, Toronto's size isn't what sets it apart but rather the rainbow of diversity found among its citizens. A widescreen view of Toronto reveals it's really an amalgam of many cities absorbed over time, most notably during the "megacity" push of 1998. But zoom in at street level, and it's the multi-ethnic neighborhoods, like Chinatown, Kensington Market and the AGO art district, each with its own style, vibe and scene, that make the city hum. Chic wine bars, modern shops, craft breweries and public art installations are growing at a fast pace, just like the number of new buildings under construction.

With Toronto's status as the [fastest growing city](#) in North America, according to Ryerson University, it will be crucial to manage all this growth for smart and sustainable urban planning. While other countries closed their borders to immigrants and entry through work visas even before the pandemic, Toronto's workforce is one of the most highly-educated and multicultural in the world. Representing more than 230 countries, half of Torontonians speak more than two languages, giving it a future advantage for multinational corporations facing the challenge of not only finding but hiring global talent.

Already, MaRS, formed through The University of Toronto, is North America's largest urban innovation hub, occupying more than 1.5 million square feet. The innovation engine supports more than 1,200 science and tech companies, and the tech talent is thriving. Evergreen Brick Works is another education center and small-business workspace focused on creating sustainable and healthy urban environments in schools, public spaces, housing, transit systems and communities.

A new definition for smart cities

The year 2020 brought challenges to Toronto's doorstep. At the outset of the COVID-19 pandemic, despite Canada's enviable nationalized healthcare system, hospital capacity surged, resulting in cries for redoubled investment in public health. Then, in May, Sidewalk Labs (now owned by Google's parent Alphabet) abandoned the Quayside smart cities project it had been pursuing with Toronto since 2015. While the project would have arguably made Toronto an exemplar of smart cities innovation, the city was also walking a fine line to avoid gentrification and retain the very people who helped make it cool. Moreover, Torontonians were understandably worried about the privacy implications of ubiquitous sensors collecting data and wondering if their neighborhoods would fundamentally be based on models of surveillance.



Toronto, Canada

These issues, plus the financial pressures of commercial real estate in a time of contagion, and unanswered questions of how a U.S.-headquartered technology company should oversee the physical, digital, governance and data infrastructure of Canada's biggest city, ultimately scuttled the project. Sunsetting Quayside shows that collaboration, innovation and conscientiously listening to citizens' concerns will be Toronto's guide.

History is littered with the best-laid plans for what "tomorrow" looks like among the world's great cities:

Le Corbusier's abandoned Plan Voisin to knock down central Paris and the unrealized Burnham Plan to remake San Francisco's greenways. The future of Toronto is inextricably tied to the ethical and sustainable use of technology and other resources in order to support its diverse and changing population. This comes at a time when the world is facing a health, economic and racial equity crisis. With its particularly diverse citizenry and appetite for innovation, Toronto has a lot to teach the rest of the world about what it means to be a truly smart city.



A) Where jobs of the future come to life

OverActive Media has planned a \$500 million, 7,000-seat e-sports arena at Toronto's historic Exhibition Place. The project's entertainment venue and hotel complex exemplify a real-world example of jobs of the future like e-sports arena builders.



B) Toronto is for everyone

Two dozen neighborhoods in downtown Toronto highlight the city's culture, inclusion and great shopping. Toronto's Chinatown and Kensington Market have become exemplary microcosms of the cultural diversity of Toronto (this Kensington Market sign perfectly sums up this sentiment).



C) Something from nothing at Evergreen Brick Works

This business and community hub, built in 2010, transformed 16 deteriorating heritage buildings into a global showcase for green design and award-winning public space that connects citizens, business, academia and government to shape cities of the future.



D) Get your green on at Steam Whistle Brewing

Steam Whistle Brewing – exemplified by its environmental awareness and earth-friendly initiatives – is one of Canada's greenest employers. All packaging, in addition to being colored green, actually is green. Cardboard cartons, broken glass, old bottle caps, aluminum cans, scrap metal and even shrink wrap are compacted to be recycled into new packaging materials.



E) Museums are us

There are more than 65 museums in the Greater Toronto area. The Art Gallery of Ontario recently showcased Full Moon Omega Leap by Carl Beam, a pioneering Canadian contemporary artist of indigenous ancestry, an example of Toronto's work to reconcile with its First Nations and indigenous citizens.

Head north in North America to find the future

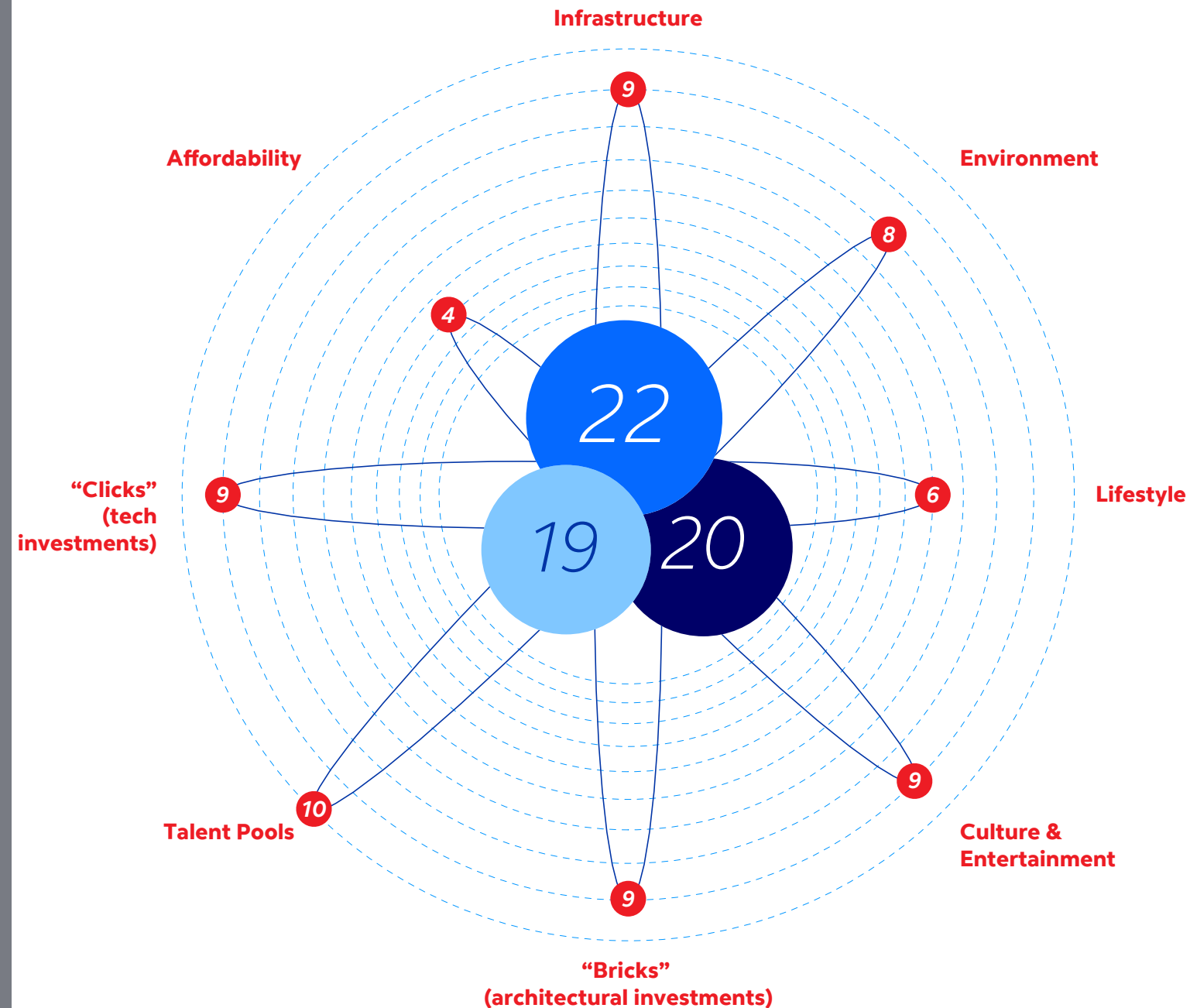
THE NUCLEUS

(Scale of 1–25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

● (Scale of 1–10)



What Toronto can teach other places readying for the Fourth Industrial Revolution

Find a new approach for inclusive growth.

With a population expected to surge from about 6.8 million today to 8 million by 2030, Toronto has an opportunity to shape its future and provide a global model for inclusive urban growth.

Balance innovation and gentrification.

Toronto is finding a way to build innovative communities while balancing the needs of its immigrant population. Smart-city learnings will help to create quality of life for its citizens while leveraging ethical uses of technology.

Look to public-private collaboration.

Think tanks, hubs and innovation centers from the public and private sectors are addressing challenges across technology, healthcare, urban planning and economic policies. Toronto earns high marks for how it creates collaborative communities.

Virtual Space



Real reality getting you down? An immersive manifest destiny awaits in cyberspace – for the future of work, play and everything in between.

[WATCH THE VIRTUAL SPACE MOVIE](#) (7:00 running time)



Nearly two decades ago, innovators at Linden Lab imagined millions of people arriving in a virtual place. Its name? “Second Life.” No sooner had it peaked, however, than “Second Life” collapsed under the weight of its own lofty expectations. But its legacy remains a point of light for those moving forward to a new manifest destiny: [Virtual Space](#).

While gamers, engineers, product designers and equipment maintenance experts have reveled in this freely immersive environment for years, never has Virtual Space been more appealing to “the rest of us” than in the pandemic-induced reality of the 2020s. In short, many of us are ready to “rip a hole in real reality” and step into a virtual one.

Made possible with the increasingly sophisticated technologies of virtual reality (VR), augmented reality (AR), mixed reality (XR) and artificial intelligence (AI), Virtual Space enables us to live and work in a simulated universe that looks and feels like our physical world but without the earthly restrictions of time and space. The result? Better work, collaboration, creativity and self-actualization through more immersive, more valuable and more virtually genuine experiences.

In Virtual Space, remote work – indeed places of the future like [Remotopia](#) – will reach stratospheric new heights, replicating (virtually) everything from the shop floor to the classroom to the conference room. Imagine *Star Trek*’s holodeck or the Jedi Council of *Star Wars* that bring all parties into close physical proximity for collaboration – but in mixed reality. Beyond work or school, moments like these will also crop up in our personal lives. You will be – most simply, “virtually” and literally – in another world.

Virtual ups and downs

What could possibly go wrong? Given the mixed track record of digital ethics in, say, social media to date, worries about coercion and exploitation in Virtual Space are a concern. Matty Healy of pop group The 1975 (creators of the cutting-edge VR experience “Mindshower,” about digital detox), [openly worries](#): “I think we’re going to essentially create a digital world where you won’t be able to tell the difference between reality and non-reality.”

Addiction is another concern. Imagine a virtual world so fine-tuned to your personal preferences that you never want to leave. (The Japanese call this subculture “*hikikomori*,” which in English roughly translates into “pulling inward.”) Like whiskey, too



Virtual Space

much of a good thing can be a bad thing. Making time for breaks (like taking digital sabbaths or entering WiFi-free zones) as part of our weekly routines will be needed to give our addled brains a break from Virtual Space.

Privacy also needs to be ensured. As the saying goes, the eyes are the windows into the soul. VR users need to feel safe when they’re using it, so guardrails of use are necessary, proper and essential.

Forget the hype. If you think glimmers like “Pokémon Go!” or “Second Life” were a joke, remember: People thought the same thing about cloud computing in 2000. Indeed, the most surprising possibility about “Second Life” may be that it offered us an electrifying future exemplar of Virtual Space, a new manifest destiny for the future that’s already on the horizon today.



(A) Immersion into the mind-blowingly experiential

How about a travel agency for holograms of your virtual self? Meow Wolf repurposed an old bowling alley in New Mexico into a safe space for immersion. The artists are passionate about creating blended spaces where the technology isn't as important as its contribution to the holistic experience.

(B) “What was the address where you raised your children?”

In the future, personal memory curators will use Virtual Space – with the help of an “advance directive” memory statement – to facilitate images, sounds and other sensations that simulate a familiar time or environment from the past. Pilots are already under way in senior centers to help the elderly with pre-onset dementia or Alzheimer’s disease.

(C) Minecraft makes makers

Gen Z kids have found a workbench to hone building and making skills in the blocky and fun virtual worlds of “Minecraft.” It teaches creativity, problem solving and teamwork – all skills necessary for the future of work.

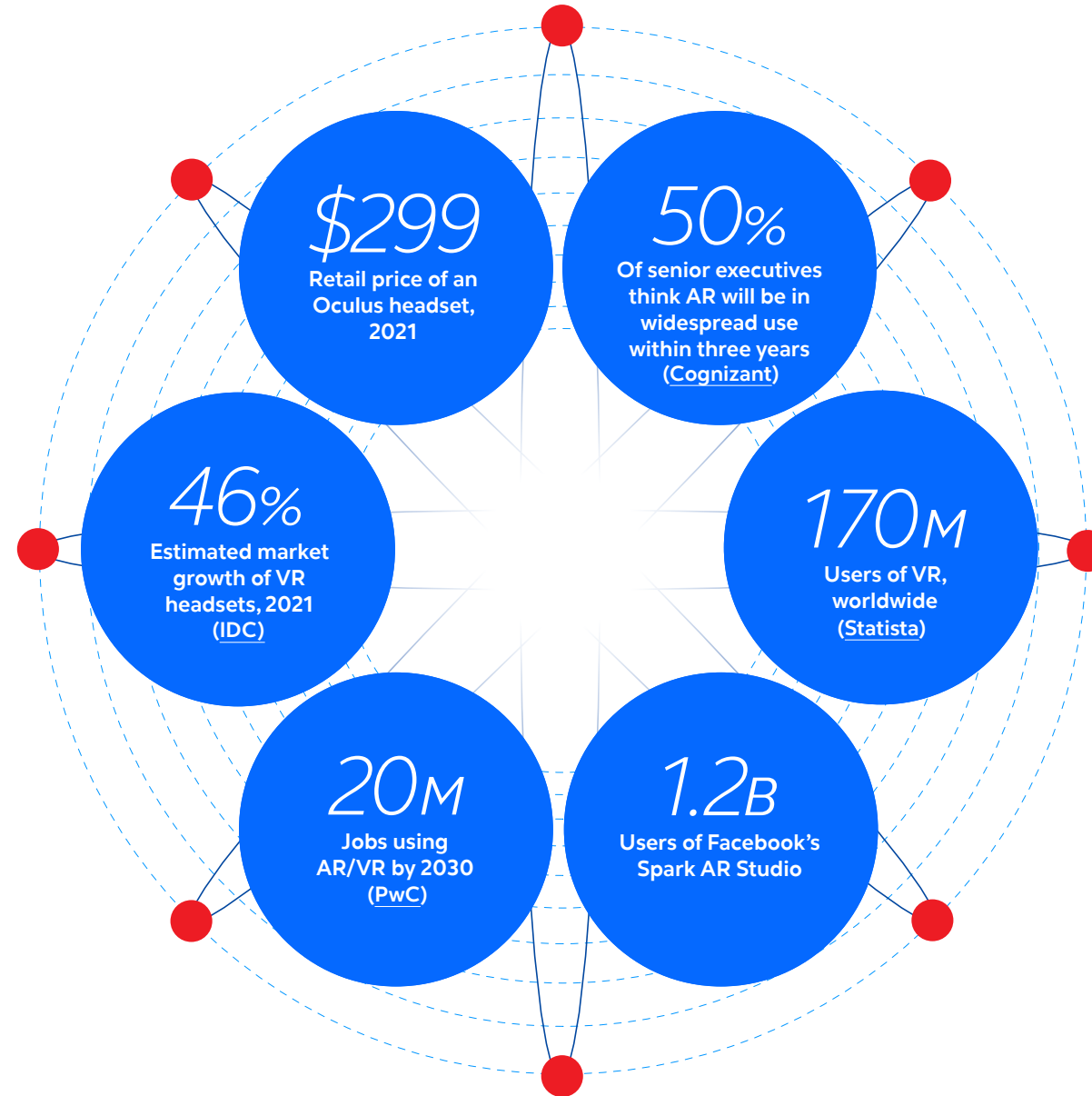
(D) A second life for “Second Life”?

The OG platform for Virtual Space is a learning ground for all the positives and (deeply, profoundly) negatives the medium could spawn. Owner Linden Lab recently sold Sansar, its social virtual reality platform, to San Francisco-based Wookey Project Corp.

(E) USC School of Cinematic Arts

Want to be a VR journey builder? It’s all happening here in the state-of-the art immersion labs at the USC School of Cinematic Arts, funded by entertainment luminaries like Steven Spielberg and George Lucas.

Seeing your future (of work) in mixed reality



What Virtual Space can teach other places readying for the Fourth Industrial Revolution

Try, train, transcend!

During the COVID-19 crisis and beyond, many individuals, companies and schools will turn to Virtual Space to transcend the need for a physical presence and design meaningful experiences in a socially distant world. Just try on a head-mounted device for a 15-minute flight into Virtual Space. (It won't break the bank; Facebook's new Oculus is now less than \$300.) You'll likely want to abandon your Zoom Room forever.

Don't become "uncomfortably numb."

VR gives you the ability to simulate actions that would be dangerous in the real world or would have serious repercussions. But it can also "numb" users and prevent them from thinking critically about their whereabouts, work and well-being. Careful consideration to flow, pacing and (for businesses) organizational change management are of huge importance.

Privacy is essential.

Virtual Space offers plenty of benefits to business and society, but it goes against all privacy protocols to track people's individual data without consent. It will be essential to align with established norms, standards and (current or future) privacy laws.

Wellington

NEW ZEALAND



New Zealand was Earth’s last major landmass to be settled by humans. Now, in its capital, the 21st century creatives that respawned Middle Earth have anchored a new frontier in the “experience economy.”

Go to the corner of Camperdown Road and Weta Lane in the Miramar neighborhood of Wellington, New Zealand. There, in the country’s capital city, you’ll see a low-slung, tan bungalow that wouldn’t be out of place in San Francisco’s Sunset District in California. But spin around 180 degrees, and look across the street – there, you’ll see a hobbit door and a three-meter troll. You’ve arrived at the Weta Cave, a tourist attraction that could be considered an epicenter of the “experience economy.”

Founded by Richard Taylor and Tania Rodger in 1987, the Weta Workshop – under the direction of Sir Peter Jackson – brought *The Lord of the Rings* to life (reaping an armload of Oscars and BAFTAs in the process). The entire Miramar neighborhood is now the epicenter of other new builders of the experience economy, including Weta Digital and, of course, Sir Peter’s WingNut films.

This isn’t Hollywood or Skywalker Ranch in California. It’s far across the Pacific Ocean, anchoring what is collectively known as Wellywood. Like its California counterparts, Wellington has experienced seismic episodes that have literally shaken its foundations, time and time again. But tectonic shifts in tech, work and place have poised Wellington as a place of the future that’s going to be very, very big.

Anchored by its status as New Zealand’s capital, Wellington has a booming tech startup scene that’s also propelled by an innovative approach to smart cities, grids and green infrastructure that have been politically energized and activated. Most recently, it showed extraordinary resilience through its sustained efforts to crush COVID-19; on June 8, 2020, Prime Minister Jacinda Arden declared the country coronavirus-free, and any outbreaks since then have been quickly stamped out.

Modern yet human; compact yet vast

Anthropologists believe the Māori first arrived on the shores of Aotearoa (the native name for New Zealand) as recently as 800 years ago. It’s believed the country was the last major landmass on the planet to be populated (remarkable when you consider that neighboring Australia’s history of humankind is at least 50,000 years old), and relatively speaking, it’s about the same size as the UK or the U.S. state of Oregon. And like them, Wellington’s food and beer scenes are a “beaut” (as is nearby wine country in Martinborough), providing all the ingredients to foster a hipster’s paradise. But at under five million residents, New Zealand gives the impression of what it must have been like to have been in California 120 years ago, when its population was at a similar level.



Wellington, New Zealand

Wellington’s simultaneous compactness and vastness are striking. Hemmed in by its bay and perimeter hills, the city’s Capital Business District (CBD) is exceedingly human-scale. It feels as if every business meeting, lunch date or post-work drink is a 15-minute walk to anywhere else (or a delightful ride to the high ground of suburban Kelburn on its state-of-the-art funicular). But take a ride out to the bedroom communities in the Upper Hutt and Lower Hutt valleys, and there’s room – lots of it – for smart growth to proceed with the same eminently livable scale that derives from the CBD. While the country

as a whole still has a way to go on sustainability, nature park Zealandia in the heart of Wellington is believed to be the first predator-free sanctuary of its kind in the world.

But back to the visionaries out in Miramar. To build the experience economy, you have to dream it – and not just in Hollywood or at Industrial Light & Magic in San Francisco’s Presidio. It’s also happening in Wellington, a place of the future you can see today, at the corner of Camperdown Road – and the world.



A) “A long white cloud – ao tea roa!”

Seemingly all of New Zealand is contained inside Te Papa, the National Museum in the heart of Wellington’s Waterfront. Aotearoa – the country’s Māori name, means “a long white cloud,” stemming from the eureka moment of discovery by Polynesian explorers.

B) Go downtown (literally) by cable car

Wellington’s cable car connects its downtown to the tony hilltop neighborhood of Kelburn.

C) The world’s first VR-gamified city

Download “WellTown” to your VR headset and visit the creative heart of Wellington. Its early investment in creating a digital twin sped rebuilding efforts following the 7.8 magnitude Kaikoura earthquake in 2016.

D) Building the experience economy at the Weta Workshop

There’s an entire outlet of the burgeoning experience economy happening in Wellington’s Miramar neighborhood – and beyond. This ranges from state-of-the-art 3D printing, to bleeding-edge materials science for modeling compounds at Weta Workshop, to VFX at Weta Digital. As Gollum might say: “It’s precious.”

E) Cross over the rainbow on Cuba Street

The LGBTQ+ capital of the city can be found on Cuba Street. Its rainbow crosswalk pays homage to the sincere respect the city has for the contributions this community makes to Wellington.

F) Surrounded by stunning natural beauty

Imagine all the forests, hills, wine country and beaches your imagination can conjure. They’re all on the doorstep of Wellington at the south end of New Zealand’s North Island. On beaches, like this one at Te Awaiti, you’ll probably find yourself enjoying it all alone.

New Zealand's capital, and future of the experience economy

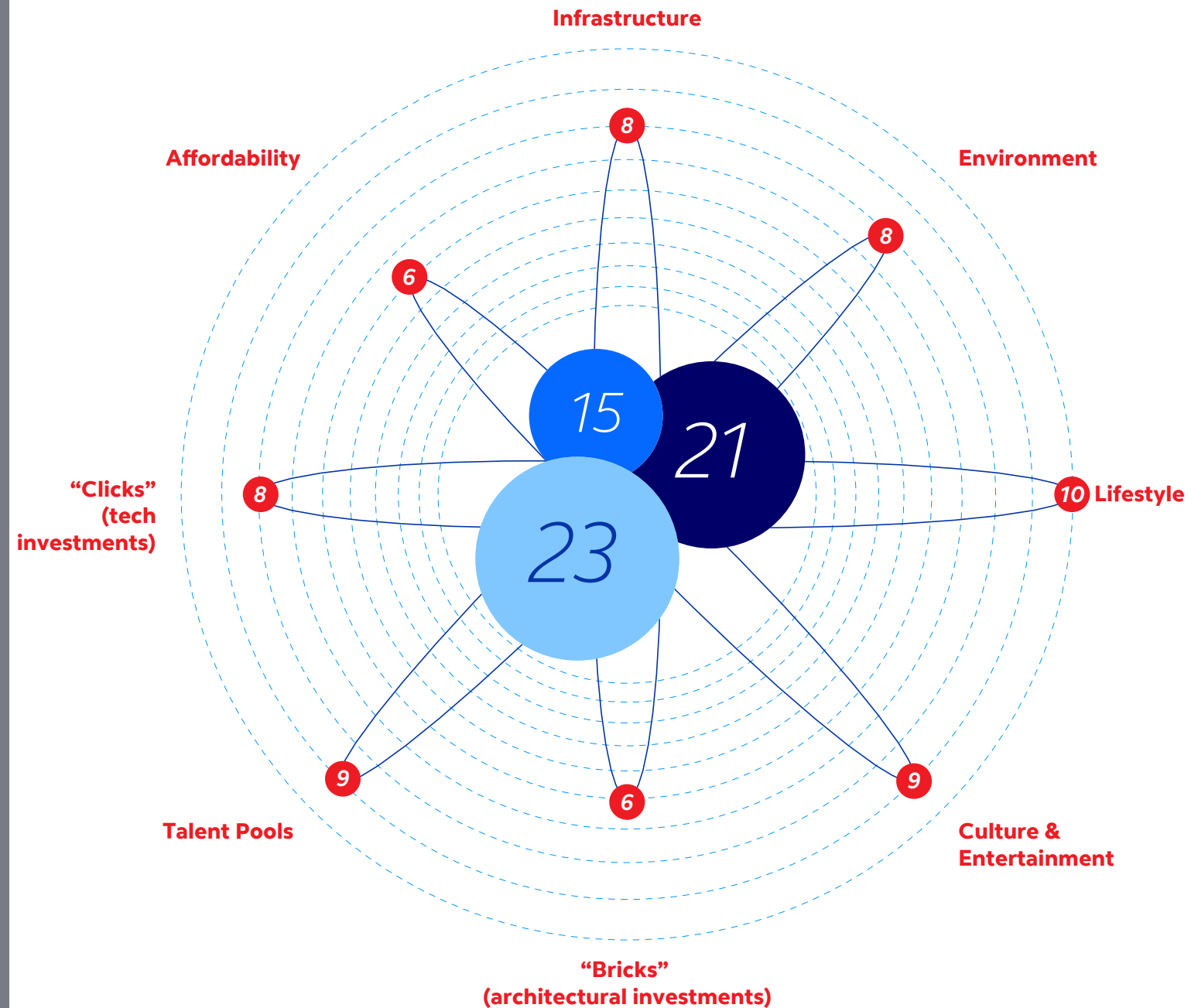
THE NUCLEUS

(Scale of 1-25)

- Local Government
- Quality of Universities
- Access to Private Capital

THE ELECTRONS

(Scale of 1-10)



What Wellington can teach other places readying for the Fourth Industrial Revolution

Space to grow – but smart growth.

Although it's New Zealand's capital, Wellington is about one-quarter the size of Auckland. There's plenty of room for growth in the future – smart growth that retains human-scale character. Wellington's train lines running to the Upper and Lower Hutt valleys represent a template for transit-centric planning that's not car-centric.

Recalibrating immigration in the wake of COVID-19.

To foster its talent needs, Wellington has eagerly welcomed the world's unorthodox – and most talented. Current Prime Minister Jacinda Ardern has ardently advocated for multicultural immigration. As the country went from a historic high in 2019 to virtually zero in 2020 because of COVID-19, calls are growing for a new debate on population policies.

A lifeboat for the civilized world?

Wellington is literally at the ends of the earth. But as a place of the future, it's on the cutting edge of democratic values that seem to be slipping elsewhere. Should all hell break loose abroad, Wellington (and New Zealand at large) represents a lifeboat for the civilized world.

THE ELEVATOR PITCH TO ELEVATE YOUR PLACE

So, in the end, what is it that makes a place a place of the future?

The answer: a fundamental belief, widely distributed among the brokers of local power, in the promise of tomorrow, not a longing for the glories of yesteryear. Specifically, belief in:

- **The centrality of technology.** We're no more than 20% into the Fourth Industrial Revolution; ride this wave, attracting and developing the jobs of the future, and a virtuous circle of employment growth, wage growth and tax revenue growth will propel your place forward. Miss it, though, and your town will likely end up a new [Bodie](#) – a curio that tourists will visit in 50 years' time and ask, "What on Earth happened here?"
- **Openness – to ideas, to people, to culture, to experimentation, to failure, to the future.** In the immortal first line of one famous novel, "the past is a foreign country; they do things differently there."⁷ If this is so, then the future is a foreign country, too. Some people (and cultures) like to travel, and some don't. A place that is open to the future has no guarantee that it will thrive, but a place that is closed is guaranteed to ossify and die. Occasionally, that demise can be glorious (*a la* Venice); most times, though, it is more mundane and far less picturesque.
- **A balance between the vested interests of the "incumbent" and the "disruptor."** In too many places that we surveyed for this report, it was all too apparent that the haves were pulling up their drawbridges to protect themselves from the have-nots. Real estate price inflation, education price inflation, healthcare price inflation, entertainment price inflation – all of these are manifestations of a



culture that undervalues tomorrow and is more focused on today's ka-ching. All of these are long-term sell signals – great places now, perhaps, but not places of the future.

- **Education.** Every person, company, institution and society that has risen through history has achieved this status through one basic step: education. Put simply, the brightest people at the greatest scale win. Most of the places in our report reflect this enduring truth. Many of the places that didn't make our list fell down because education wasn't prioritized. The "truth decay" so evident today in different places around the world is a worrying sign of the devaluation of education. Places of the future won't be places where a new Dark Ages reigns.

The places we feature in this report are all very different and have different strengths and weaknesses. To imagine that there is one formula that all 7.8 billion of us should adhere to, wherever it is we live, is clearly nonsensical. But these four beliefs are at the core of what gives a place a future. Mixing them wisely and judiciously will see your place flourish in the challenges and opportunities ahead.

GO WEST, YOUNG (WO)MAN? WHERE YOU ARE NOW COULD BE A PLACE OF THE FUTURE

The mythos of the young person leaving home to find their fortune is as old as recorded history. The American author and newspaperman Horace Greeley summed it up famously in 1865 when he said, “Go West young man, and grow up with the country.” Generations of people have uprooted themselves in search of a better life and a better future, many meeting with wonderful success, even more with disaster, and the vast majority with anti-climax and “meh.” Some lately may have questioned paying thousands for rent, only to decamp elsewhere when contagion struck.

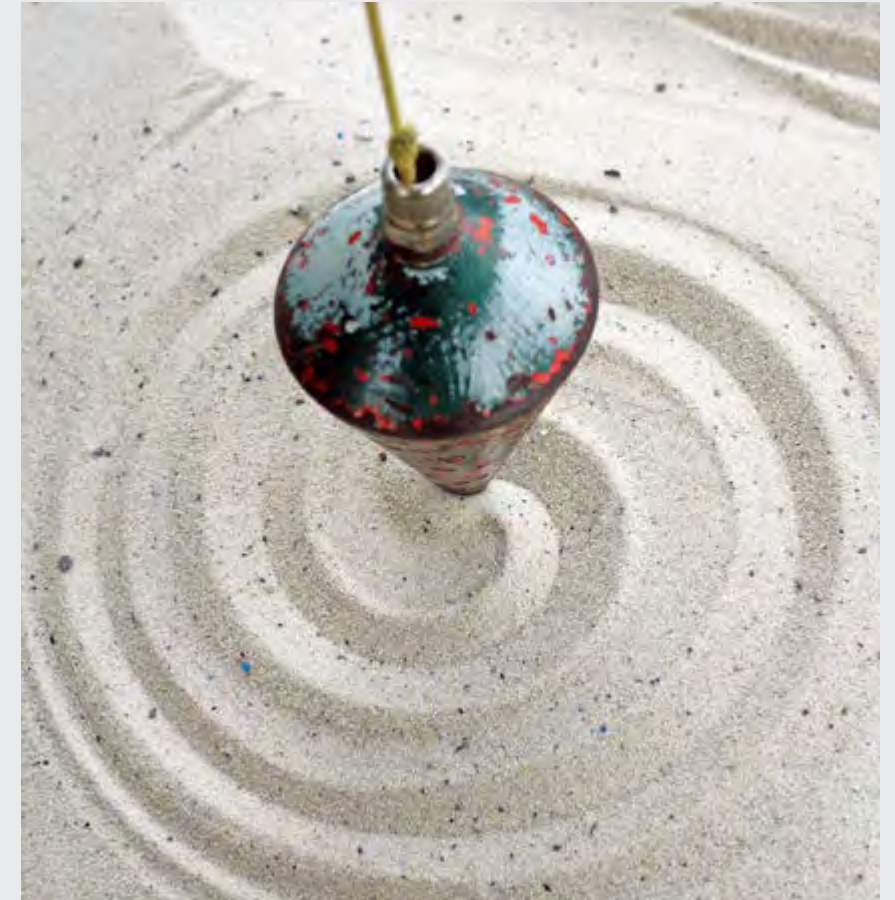
This all suggests that the future of a young person’s work may not necessarily be in “places of the now,” like London or New York or Cupertino or Berlin or Bangalore. Increasingly, it’s going to be in places like those analyzed in this report.

Why? Because the jobs of the future exist everywhere and nowhere. Leaving home to find them doesn’t always make sense – and in the case of a place like [Remotopia](#), they could be waiting for you, on your mobile phone and/or your laptop as you sit in your PJs in your bedroom.

The benefits of fine-tuning an organization’s location strategy go beyond increased productivity and efficiency or anecdotal reports on inter-company/inter-industry collaboration. When properly constructed, these places of the future can become epicenters of game-changing innovation and creativity, providing access to talent and ideas. As a result, the space in which we work today matters more than ever.

At the Center for the Future of Work, our motto has been (and continues to be): *semper futurum opus est futuro – incipiens cras.* (Translation: “The future of work is always in the future – starting tomorrow.”) We get the chance to make it what we want it to be – and where we want it to happen.

With the means of production, anyone can do any work, anywhere. So theoretically, *any* place can be a place of the future, with ingredients like bricks, clicks, diversity, sustainability, preservation of natural beauty – and yes, “tech” – on hand to make it so. History has shown that those places that get the atomic elements just right will inherit the future (and have the cool kids, like moths to a flame, wanting to be there, where the action is, and create the future of work). This is the route to making where you live great again (or great for the first time).



We think a place of the future *could* be in the neighborhood where you currently live, right where you were brought up. The future of work *could* be right under your feet – literally in front of your nose, as George Orwell might put it.⁸

All of us potentially have the power to make our places fit for the future. In this report, we hope we’ve offered some ideas – perhaps controversial or at least unconventional – on how to go about doing that.

ENDNOTES

- ¹ “21 Jobs of the Future, Cognizant, 2017, www.cognizant.com/whitepapers/21-jobs-of-the-future-a-guide-to-getting-and-staying-employed-over-the-next-10-years-codex3049.pdf and “21 More Jobs of the Future,” Cognizant, 2018, www.cognizant.com/whitepapers/21-more-jobs-of-the-future-a-guide-to-getting-and-staying-employed-through-2029-codex3928.pdf.
- ² See our reports “Welcome to Remotopia,” www.cognizant.com/futureofwork/whitepaper/remotopia, and “Launching Into Virtual Space,” www.cognizant.com/futureofwork/whitepaper/launching-into-virtual-space.
- ³ For many places, it was not possible to create a final score as the data collected was incomplete, contradictory or skewed in clearly biased ways (local tourist information as one example).
- ⁴ “Dundee V&A: Is This a Bizarre Joke?” BBC News, Sept. 13, 2018, www.bbc.com/news/uk-scotland-45410002?intlink_from_url=&link_location=live-reporting-story.
- ⁵ “From & To: The Future of Your Work – Everything You Wanted to Know But Were Afraid to Ask,” Cognizant, 2019, www.cognizant.com/futureofwork/whitepaper/from-to-everything-to-know-about-future-of-work.
- ⁶ Thomas L. Friedman, *Thank You for Being Late: An Optimist’s Guide to Thriving in the Age of Accelerations*, Insert., Farrar, Straus and Giroux, 2016.
- ⁷ L.P Hartley, *The Go-Between*, New York Review of Books, 2002 (first published 1953), www.goodreads.com/book/show/258079.The_Go_Between.
- ⁸ George Orwell, “In Front of Your Nose,” *The Collected Essays, Journalism and Letters of George Orwell*, 1968, https://orwell.ru/library/articles/nose/english/e_nose.

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Cognizant's Center for the Future of Work™ is chartered to examine how work is changing, and will change, in response to the emergence of new technologies, new business practices and new workers. The Center provides original research and analysis of work trends and dynamics, and collaborates with a wide range of business, technology and academic thinkers about what the future of work will look like as technology changes so many aspects of our working lives. For more information, visit [Cognizant.com/futureofwork](https://cognizant.com/futureofwork) or email CenterforFutureofWork@cognizant.com.

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Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or [@Cognizant](https://twitter.com/Cognizant).



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