Connected Cities, Productive Cities

Parag Khanna

Mapping the Rise Of Data-Cities

As cities around the world are confronted with population growth and increasing demand for their legacy systems, bold ideas are needed to propel the dialogue between governments, civil society and the private sector. Urban leaders in every corner of the globe are demonstrating how digital technologies and data analytics can help drive efficiencies and more seamless experiences. However, creating "smart" cities should not be viewed as an end in itself, rather it's a means toward unlocking economic growth opportunities for cities; creating a better quality of life for citizens; and building more sustainable and resilient communities.

Meanwhile, cities have started to organize themselves in global networks where they exchange learnings and best practices with each other. While resources may differ in different parts of the world, challenges are often very similar, nurturing a global civic spirit that connects Chicago with Sydney, Mexico City with Johannesburg, and Paris with Shanghai.

Dr. Parag Khanna has been a leading voice on the rise of connected cities, the role of data and governance in the digital age. In his article below, he explores the impact of globalization on urban centers - and lays out how city governments can harness 21st century technologies to drive inclusive growth.

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The Rise of the Connected City

Connectivity will be the foundation of tomorrow's efficient and inclusive global economy.

As we enter 2017, more than two decades of progress toward creating a global social and economic community are under pressure. The very pillars of that cooperation are being questioned. Isolationism is on the rise. Once stable trade relationships are under fire. Even the existence of the United Nations is being questioned in some quarters. But the tide of globailzation cannot be stopped. One of the biggest reasons it will continue – and increase the chances for a greater amount of citizens to be included in its benefits – is the concept of connected cities.

The rise of cities as economic centers has been a key factor in the quarter century. The gigantic wave of globalization that followed --combined with the spread of technology--has brought unprecedented growth and prosperity on a truly universal scale. But within just two decades from now, we will wake up to the news that the world population has reached approximately 10 billion people and even begun to decline, and that nearly three-quarters of humanity lives in major cities with the rest remaining suburban or rural. In this future of peak population and peak urbanization, what force will drive productivity and progress? Again, the answer is more connected cities.

Connected cities offer transportation and communications platforms that facilitate people's civic and commercial interactions. Empowering such connectivity both within and between cities through sustainable, affordable, and digitally accessible mobility networks and payments systems will be the foundation of tomorrow's efficient and inclusive global economy.

Connectography: A Global Tour

In my view, a tour of the best practices in connected cities begins in Europe. Moderately sized and densely populated cities such as London and Paris, Stockholm and Berlin, Barcelona and Zurich offer robust multi-modal public transportation and high-speed Internet access in homes and public spaces. Those cities share the transportation and digital connectivity that bring citizens to services and citizens to governments. Both can also produce actionable data. Even in a low-growth environment, such cities have bustling services economies with a high percentage of employment generated through small and medium-sized enterprises. At the same time, municipal aggregation--as has been proposed in UK with the "Northern Powerhouse" from Leeds to Liverpool and in Italy's plans to reorganize into fourteen metropolitan clusters--could inject greater dynamism into second-tier cities. In Europe, then, fiscal allocation and regulatory reforms are needed to further entrepreneurialism and innovation so that more citizens take advantage of robust baseline connectivity.

In America, I see a need to spread the benefits that its largest and most resilient metro economies such as New York and Los Angeles have enjoyed. Becoming more connected within and without city borders is critical. Of America's 350 major metro areas, the vast majority have not yet agglomerated into efficient hubs the way Silicon Valley is now doing in the triangle formed by San Francisco, San Jose and Oakland, a region that generates nearly $250 billion in annual GDP. But with interest rates at sustained lows, there remains a historic opportunity to finance an upgrade of America's highways and railways, subways and electric busses, broadband Internet and affordable housing. The new adminstration seeks to unlock $1 trillion in public and private capital to facilitate 21st century commerce much as the Interstate Highway System did in the 1960s. Denver, Kansas City, Atlanta, Columbus and other cities are all devising plans to enhance mobility and increase their appeal to college graduates and digital businesses.

It is time to re-imagine how life is organized on Earth. We're accelerating into a future shaped less by countries than by connectivity. Mankind has a new maxim – Connectivity is destiny – and the most connected powers, and people, will win.

Within other large emerging nations such as South Africa, Nigeria, Indonesia, and the Philippines, too much of the population remains disconnected from the commercial hubs of Johannesburg and Lagos, Jakarta and Manila, respectively, each of which generates approximately half or more of the national GDP.

For these emerging markets to achieve their long-term potential for broad-based growth, there is no greater imperative than for the hundreds of millions of citizens residing in second and third-tier cities to get far better connected - physically and digitally. Transportation, infrastructure, mobility and electronic payments are all factors in the connectedness of these markets.

The Promise Of Infrastructure

Fortunately, much as for the US and Europe, macroeconomic conditions provide a crucial window of opportunity to invest in a massive connectivity expansion for these vast urban geographies. Furthermore, in many of the world's most populous countries such as India and Indonesia, elections hinge on the promise of greater infrastructural connectivity for the masses. This is the transmission belt by which the public investment is multiplied by private sector dynamism: Airports bring airlines, special economic zones bring supply chains, schools bring technology providers, construction brings retail, and so forth. Dozens of cities are now striving towards the combination of political stability, economic growth, and attractiveness to capital.

Indeed, it is increasingly clear that the top priority is more connected cities to overcome deep societal challenges. India has become the new textbook example. Under prime minister Modi, a set of "quadrilateral" corridors has rapidly advanced to connect the country's four major hubs of New Delhi, Mumbai, Chennai and Calcutta. The much-touted "smart cities" program has committed nearly $1 billion to special purpose vehicles to promote advanced urban planning and IT integration in twenty second-tier cities such as Jaipur and Bhopal. In all, about one hundred cities have launched public-private partnerships to overhaul utilities such as electricity and sanitation, offer more affordable housing, and construct modern business districts. Demonetization represents another layer of digital leapfrogging that has massively boosted participation in mobile wallet services.
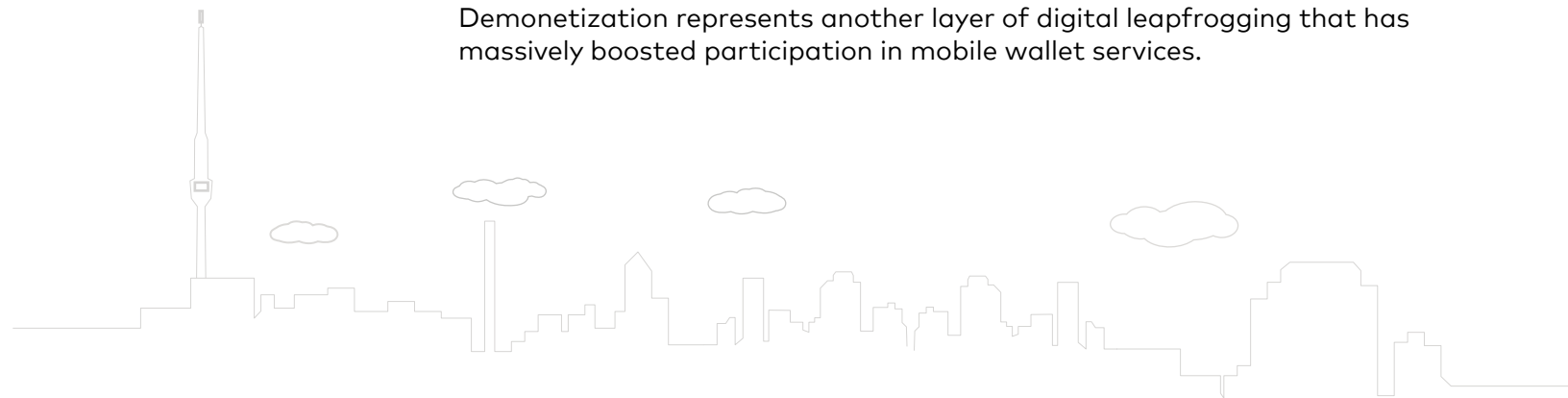
Many developing world megacities are on this path to getting both new hardware and software. In Nairobi, the commercial center for all of East Africa, Magic Bus allows the 70 percent of the population living in slums to use SMS to pre-book a seat on one of the city's 20,000 private matatu minibuses. As a next step, large-scale deployment of a bus rapid transit system could dramatically reduce congestion, promote business efficiency, and raise productivity if free Wi-Fi were added to the service. It is through these kinds of connectivity investments that today's megacities can come to offer the kind of integrated conveniences of multi-functional and RFID enabled payment cards such as Japan's Pasmo, Holland's OV, and Hong Kong's Octopus cards. The interactions and content generated through the digitization of mobility and payments have hugely positive applications from traffic management to land allocation to revenue collection.

For cities to rise up the value chain and become regional anchors and gateways, they must more fully make this transition towards services based and entrepreneurial economies. The pillar of an economically healthy and socially progressive city is growth in non-tradable services such as healthcare and education, construction and hospitality, sectors that offer higher wages, are more resilient in the event of global demand shocks, and promote well-being of communities.

Across the world, the private sector plays a pivotal role in these efforts. Especially in the arena of communications technologies such as telecoms and the Internet, companies provide nearly one hundred percent of the

financing for these platforms of next generation growth. Payments companies like Mastercard are already global platforms with the capability to integrate banks and telecoms, vendors and customers, into cross-border alliances of cities that strongly reinforce the value of connectivity.

As global cities continue on their connected journey, I see three specific areas that mayors and other government officials can focus on:

1. **Build a Smart City Framework:** Becoming a connected city has its roots in business planning. Governments cannot set up a series of wi-fi stations and say they're connected. They can't simply set up electronic payments for transit and say they're connected. Cities need a cohesive strategic plan that accounts for proactive partnerships with data companies, private sector businesses, academics, tech incubators and citizens. Have a blueprint that specializes for each functional need. Dubai, for example, has set up incubators for each of its thirteen major agencies to tailor technology solutions for their needs.
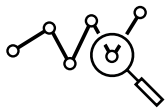
2. **Leverage Commercial Data:** City leaders should also actively harness existing commercial infrastructure to enhance smart connectivity. Electronic payments and transport systems create data that helps authorities to determine the best real estate sites to develop. Crucially, it also contributes to identifying the gaps to be filled such as where to locate skills training centers or co-working spaces. The more connected people get, the more data is generated to enhance services.
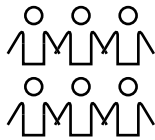
3. **Co-Create with Citizens:** Social media and data analytics together provide a powerful foundation to empower citizens to innovate new services and business models in an emergent API economy. One example is Chicago's "array of things," a network of interactive, modular sensor boxes installed around Chicago to collect real-time data on the city's environment, infrastructure, and activity for research and public use. The IoT will essentially serve as a "fitness tracker" for the city, measuring factors that impact livability in Chicago such as climate, air quality and noise. This data from connected devices benefits the API economy as businesses and consumers are better able to optimize their operations through mobile payments, multi-use ID cards and other products and services co-created across public and private lines.

These pillars of connected city strategies will not only keep societies up to the latest technology standards and practices, but allow cities to devise tailored programs that suit their needs. The blueprint for Singapore is different from that for Nairobi; commercial practices differ from Chicago to Lagos; and co-creation looks different in Los Angeles than in Mumbai. The goal of connected cities is to make each better in its own unique way.

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Parag's latest book is Technocracy in America: Rise of the Info-State (2017). He is author of a trilogy of books on the future of world order beginning with The Second World: Empires and Influence in the New Global Order (2008), followed by How to Run the World: Charting a Course to the Next Renaissance (2011), and concluding with Connectography: Mapping the Future of Global Civilization (2016). He is also co-author of Hybrid Reality: Thriving in the Emerging Human-Technology Civilization (2012). In 2008, Parag was named one of Esquire's "75 Most Influential People of the 21st Century," and featured in WIRED magazine's "Smart List."

Parag holds a PhD from the London School of Economics, and Bachelors and Masters degrees from the School of Foreign Service at Georgetown University. He has traveled to more than 100 countries and is a Young Global Leader of the World Economic Forum.