This article was first published in the November 2015 issue of WIRED magazine. Be the first to read WIRED's articles in print before they're posted online, and get your hands on loads of additional content by subscribing online (http://www.wired.co.uk/subscriptions?utm_source=wired&utm_medium=Editorial&utm_campaign=article00&utm_source=wired&utm_medium=Editorial&utm_campaign=Editorial&utm_source=wired&utm_medium=Editorial&utm_campaign=Editorial).

If one had to pick a single corner, anywhere on the planet, as the most innovative and productive crossroads in history, the intersection of Vassar Street and Main Street, in the new world's Cambridge, Massachusetts, would be a leading candidate. A couple of decades ago, much of the area was a ragtag collection of warehouses, parking lots and old barracks. Now this one corner may generate one per cent to two per cent of the future global economy (http://www.wired.co.uk/economy) and may be a model for creating jobs, (http://www.wired.co.uk/jobs) knowledge and power in other cities.

Begin a short tour with the corner's dumpiest building, a thin, seven-storey sliver of dark brown with a mediocre plaza in front, the Whitehead Institute (http://wi.mit.edu/). Most of the seventeen core faculty don’t teach much, but during the first decade of this century, their research had the greatest citation impact among the world's top 15 life-science and genetics departments. And, as they helped birth entire fields of research, developing our understanding of genetics (http://www.wired.co.uk/genes), genomics and epigenetics, these individuals also helped launch enormous companies such as Genzyme (https://www.genzyme.com) and Millennium.

When the Whitehead got too small for genomics Eric Lander's
ambitions, he launched a flashier and brasher newcomer next door. The Broad Institute (https://www.broadinstitute.org/)’s gargantuan gleaming glass lobby is filled with early gene-sequencing instruments. Its multimedia screens boast that this is one of the world’s largest gene-sequencing and research factories. The Broad’s strategy is different from that of the Whitehead; instead of concentrating a few in an ultra-exclusive bioclub, Broad bridges MIT (/mit), Harvard (http://www.wired.co.uk/harvard) and most of the hospitals in Boston. Its 2,000 members extend outwards, partnering with tens of thousands of others globally. Those working at the Broad are not averse to commerce; its director alone helped to build Foundation Medicine (http://www.foundationmedicine.com/), Verastem (http://www.verastem.com/), Millennium, Fidelity Biosciences, Courtagen and Aclara among many other leading companies.

Cross the street and enter the new Koch Institute for Integrative Cancer Research (http://ki.mit.edu/): an unusual cancer facility in that there are no day-to-day patients, nor is it part of a medical school. Its research focuses on the very basics of cancer: how cells go rogue, cures involving nano molecules (http://www.wired.co.uk /molecules), a variety of ingenious devices and early diagnostics. By mixing and matching biologists with electrical, chemical, mechanical, materials science and bio engineers, the Koch reiterates the lesson that productivity, patents (/patents) and companies take off when you blend disciplines. There are no "departmental common rooms" - you eat and chat with everyone else, and you might run into Bob Langer (the world’s most prolific bio-inventor), Darrell Irvine (who uses his immune system to attack cancer), Sangeeta Bhatia (a nanoengineer who detects cancer very early), Nobel laureate Phil Sharp and MIT’s ex-president Susan Hockfield. Their discoveries translate into companies with the market capitalisation of mid-sized countries.

Next door sits a huge Frank Gehry building that looks "a little post-earthquake"; this is one weird but interesting place, harbouring an extraordinary hodgepodge of disciplines. Within the lobby café you might run into the creator of the world wide web, the founder of the free-software movement and some of those who let loose the first computer worms (for which they are most sorry). Conversations range from AI to robots, programming cells for every imaginable purpose, the next generation of the web, the future of computing, simultaneously grading millions of homework assignments, all with a dab of Chomsky’s linguistics commentary drifting down from the top floor.
Cross the street and you enter a huge, gleaming white rectangle that brings together everyone studying the brain (/brain): psychologists, psychiatrists, electrical engineers, neurologists, radiologists and dozens of other tribes that study consciousness. The building literally straddles a railway line, so that lunchtime conversations between departments such as Brain and Cognitive Sciences, Learning and Memory, and Neural Imaging can run uninterrupted. Proximity matters; Sloane’s Thomas Allen found we are four times as likely to communicate with someone two metres away as someone ten times further away and often unlikely to communicate much with someone on a different floor or building. Clustering is not new at MIT; provost Marty Schmidt recalls that in 1916, when the greatest universities were busy building isolated departments separated by carefully landscaped quads, MIT built out the “infinite corridor”, an endless, massive building. Every department still wants to be “close in”.

The sixth building on this extraordinary corner, Novartis, focuses on private research, and represents a huge migration from Basel in Switzerland towards the MIT campus, becoming Cambridge’s largest employer. Pfizer, Sanofi, Amgen, Biogen-Idec and hundreds of others cluster nearby. The decision to promote commerce alongside research is a critical differentiator in MIT’s success and competitiveness. One need only count the number of construction cranes, new restaurants, cinemas and museums in Boston to understand what a vibrant bridge between research and startups means overall city life. MIT’s alumni already generate companies with sales equivalent to more than two trillion dollars, the same as the world’s ninth largest economy, India.

Attracting a critical mass of really, really smart nerds and intermingling them with entrepreneurs and large companies is essential to growing and maintaining a global city. Ed Roberts, an expert on MIT’s impact, recalls how a few conversations, around the greasy Formica tables of the old F and T Diners, eventually engendered this behemoth of a job machine. In the past decade alone, 18 out of every 100 MIT alumni launched companies, eight per cent of them near MIT. Massachusetts now hosts 6,900 startups launched by MIT alumni. Combined, they represent 26 per cent of all state sales.

Balancing research and entrepreneurship, Korea, Taiwan, the Netherlands, Singapore and a few others have also built global economic powerhouses based on city states. The good news? A newcomer can quickly overtake former powers. The bad news? By its very nature a knowledge economy can be a fragile phenomenon because, as Phil Sharp likes to quip, “Innovation walks on two feet.” A few 747s can add or remove large chunks of innovation. In this era of increasing political polarisation, public officials ought to pay attention, by combining urban planning, support of entrepreneurs and academic recruitment. Because by attracting the best and the brightest, one can change not just a city but the world.