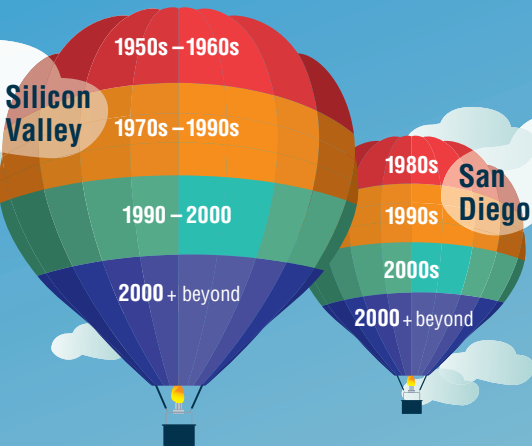


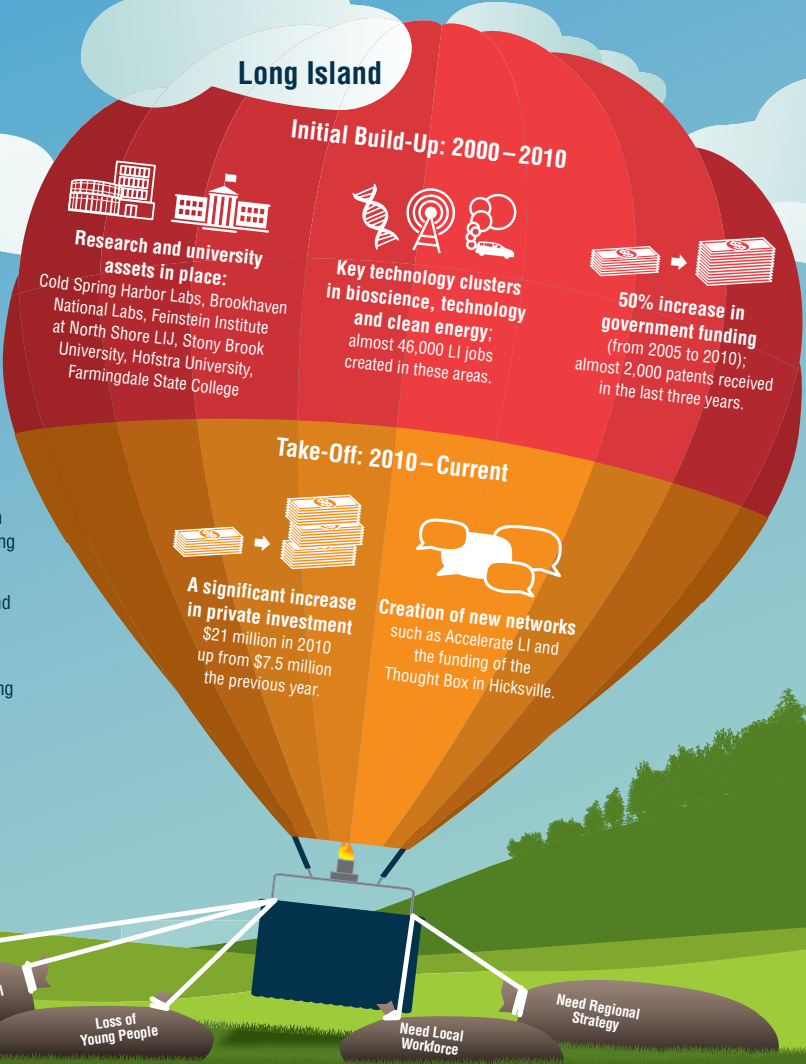
A Region Ready for Take-Off: But Will We?

Long Island is at a tipping point, where we have made serious movement toward creating a new innovation economy, one that can fuel a growing economy, higher paying jobs and increased opportunity. But without addressing our liabilities, our take-off could be stalled.



Regions go through a very predictable life cycle from start-up to full-blown success:

- Initial Build-Up:** Technology push driven by federal investment and institution building
- Take-Off:** Technology push replaced by market pull driven by private investment and network building
- Expansion:** Technology clusters grow based on innovation environment reinforcing dynamic industry development
- Convergence:** New technologies emerge and usually converge with each other creating new successes and the process begins again



Stages of Development for an Innovative Region	Two Success Stories		A New Innovative Region?
	SILICON VALLEY	SAN DIEGO	LONG ISLAND
INITIAL BUILD-UP: Often driven by federal investment and institution building	In the Cold War period of the 1950s and 1960s innovation was driven mainly by defense spending and investments by the Advanced Research Projects Agency (ARPA). The early development of the semiconductor and computer industries was supported by the Department of Defense and NASA to develop missile and space technologies to compete with the Soviet Union.	Defense funding of communications technologies in San Diego along with National Institute of Health funding of biotechnology research at the University of California at San Diego in the 1980s created a foundation for a transition from technology push to market pull led by private sector investments in leading digital communications firms as well as a large number of venture funded biomedical firms.	With world-class universities and research centers, a growing talent base in science and engineering, and increasing research and development funding, Long Island has the same critical assets that enabled other regions to succeed. Further, there is an increased federal investment through direct research and collaborative grants to institutions and growing small business research grants to LI companies (second only to Silicon Valley).
TAKE-OFF: Technology push is replaced by market pull driven more by private investment and network building.	In the mid-1960s and 1970s, commercial applications of these defense funded technologies were identified and growing markets for integrated circuits and computers led to the rapid growth of entrepreneurial firms in what is now known as Silicon Valley. This transition from federal to private investment was critical to the “take off” of the region.	A critical transition was achieved as a result of regional efforts to actively connect university research to local industry and attract venture capital to support entrepreneurial firms.	With recent increases in private and public funding as well as the formation of Accelerate Long Island to connect our institutions with capital, Long Island is poised to move to the next stage of the cycle.
EXPANSION: Innovation regions begin to see the expansion of technology clusters based on a vital cycle where the innovation habitat reinforces dynamic industry development.	Computing, software as well as the internet based on earlier defense investments in ARPANET, led to the emergence of world class information technology clusters in the 1990s.	Communications and biosciences clusters expanded rapidly in the 1990s and into the decade of the 2000s.	
CONVERGENCE: When new technologies emerge, there is usually a convergence at the intersection of these technologies and the process begins again.	After the dot com bust in the early 2000s, information technology began to converge with biotechnology and advanced materials to give rise to new developments in personalized medicine, bioinformatics and clean energy. Digital communications, software and the internet converged into new breakthroughs in mobile communications and social media in the late 2000s and early decade of 2010.	Biotechnology and communications have also converged into new developments in health IT while biotechnology and advanced materials has led to the emergence of new biofuels industries in the region.	