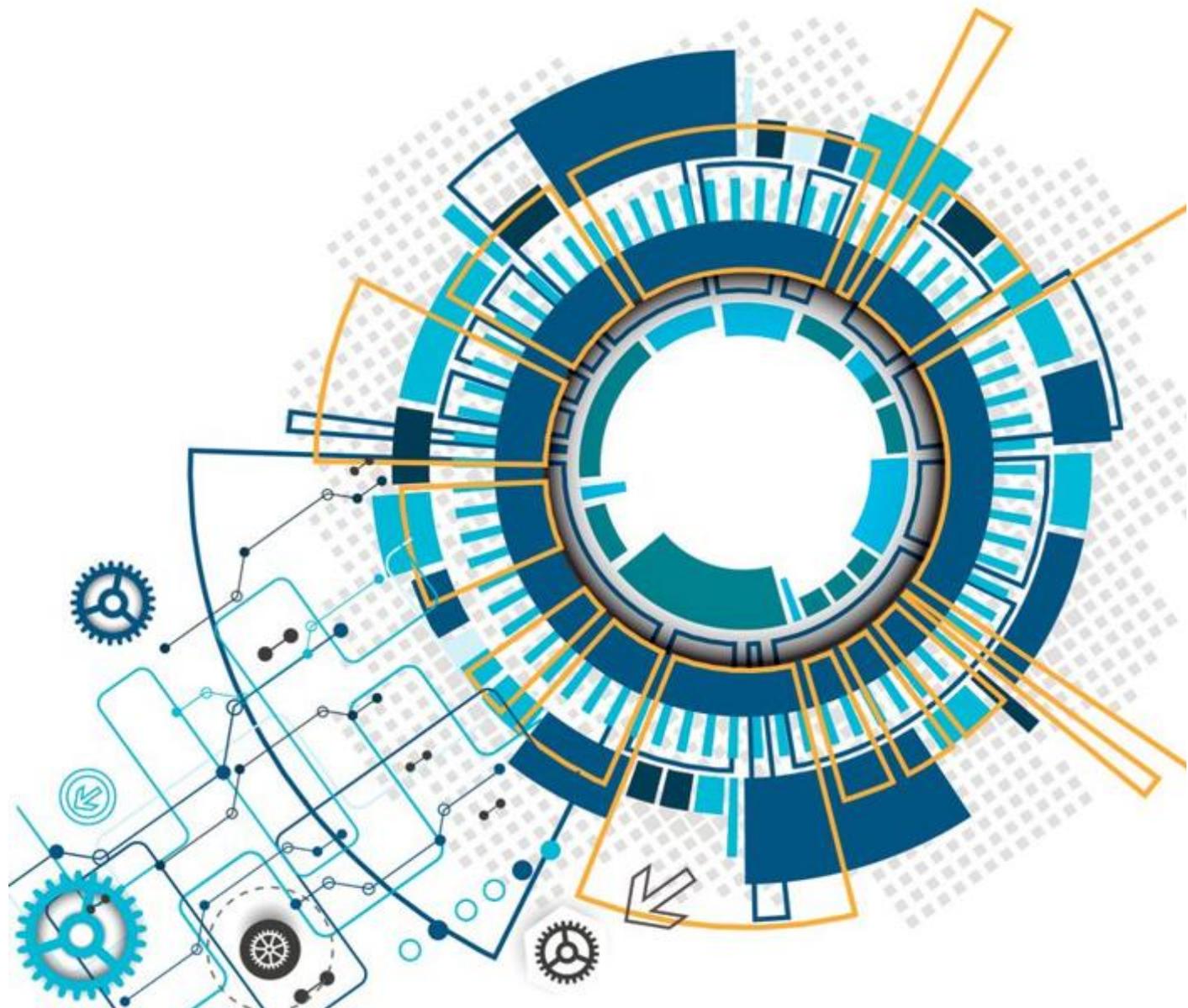


New MIT innovation hub takes on world's biggest challenges



By **L. Rafael Reif** OCTOBER 26, 2016 – *The Boston Globe*

WHAT WOULD it be worth to society to have a treatment for Alzheimer's that actually worked — and via portable, noninvasive technology? Or a radically low-cost method for early detection of cancer, or Ebola, or Zika, that was as quick and simple as a home-pregnancy test? Or an ingestible robot that enabled surgery with no incision? How about grid-scale batteries that would make solar energy more dependable than the sun? Or carbon-free energy from nuclear power that was inherently meltdown-proof? Or biodegradable plastics made without fossil fuels?

And what would it be worth to the future of Greater Boston if our regional innovation ecosystem were uniquely geared to deliver such solutions to the world, now and for decades to come?

At MIT, we are taking an important step today to help make these twin dreams come true.

To extend the power of our education and research, MIT's mission statement directs us “to bring knowledge to bear on the world's great challenges.” In effect, it is our duty to bring transformative innovation to the world.

Yet from listening to entrepreneurs across the region, we are concerned that many new-science innovations with

great potential for addressing humanity's most serious challenges are being stymied on the long trek to the marketplace. Why? Because turning a brand new piece of science into a world-changing technology that is optimized, tested, and ready for manufacture at scale can take more than a decade, longer than venture capitalists can reasonably wait. The result is that our society's current system for funding and commercializing new ideas — so effective with relatively quick-to-market digital products — leaves many “tough technology” solutions permanently stranded.

In that context, we see an exciting opportunity to advance MIT's mission by investing in a new model of startup support that nurtures such high-impact ideas and speeds them into the world while helping our regional innovation ecosystem flourish and grow through a self-sustaining cycle of success.

Here's the idea: This week, MIT is launching a separate entity called The Engine. From its headquarters a few blocks from our campus, it will offer tough-tech innovators a distinctive package of “patient capital,” affordable local space, access to highly specialized equipment, streamlined legal and business services, and technical expertise, from prototype to scale-up. Just as important, it will connect them with a network of MIT alumni, like-minded entrepreneurs, and major corporations in other innovation nodes near and far. What truly sets The Engine apart is the emphasis on impact: In assessing candidate companies, it will prioritize breakthrough answers to big problems over

early profit.

Our opening commitment is serious — 26,000 square feet and \$25 million — and it will expand in both dimensions. Ultimately, we hope the engine will serve 60 startups at any one time. To magnify the impact, MIT will seek to attract hundreds of millions of dollars in additional support and to enable hundreds of thousands of square feet of space for entrepreneurs in Kendall Square and nearby communities.

Some aspects of The Engine will be familiar from other acceleration efforts. But we believe it offers a constellation of features that will be uniquely effective for firms aiming for transformative results with new-science technologies. What's more, we are convinced that benefits from The Engine will flow not only to local startups, but to the regional entrepreneurial community and, ultimately, to society as a whole.

By giving entrepreneurs working on “tough technologies” a systematic way to develop and commercialize them here — close to the mothership — we can shorten the time it takes them to get “VC-ready.” Crucially, The Engine will systematically build on and seamlessly link with highly effective programs, on our campus and beyond, that cultivate hands-on making, instill the skills of entrepreneurship, seed-fund new ideas, and provide seasoned mentors. Its comprehensive suite of support will also inspire many more innovators to bring their boldest, most important ideas out of the lab.

We expect The Engine will benefit the ecosystem and Greater Boston by accelerating its success. Helping tough-tech companies develop to the point that they are ready for venture capital investment will naturally complement the strengths of the VC community. And by building a new excitement about how entrepreneurship can deliver world-changing impact, The Engine will foster new investment, attract fresh talent, retain thriving companies, and help the region establish a self-renewing model of growth, reinvention, and success.

For the nation and the world, the potential benefits are impossible to calculate. When it comes to the most important problems humanity needs to solve — climate change, clean energy, fresh water and food for the world, cancer, and infectious disease, to name a few — *there is no app for that*. We believe The Engine will help deliver important answers for addressing such intractable problems — answers that might otherwise never leave the lab. Because many of these solutions depend on tangible technologies, we have high hopes that they will ultimately produce not only new companies, but new industries, new forms of manufacturing, and new jobs. And if we can truly make The Engine hum, we hope it might become a model that would be useful to other innovation ecosystems as well.

At MIT, we are intensely aware of the benefits we gain from our geography: an extraordinary pool of talented people, with unusual creativity and drive, united in a community with the highest aims for making a better world. The step we take this week embodies our gratitude

for belonging to this community and our aspirations for what we can achieve together.

L. Rafael Reif has served as MIT's 17th president since July 2012.