



Figure this. Imagine that.

March 6, 2014

The Honorable Deval Patrick
Governor of Massachusetts
State House
Boston, MA 02133

Dear Governor:

Thank you for being a highly visible and vocal advocate for the STEM innovation economy in the Commonwealth. You have made a significant difference in fueling growth in the life science and energy sectors, you have been a champion for IT, and you have created a tremendous opportunity for the Commonwealth by establishing the Governor's STEM Advisory Council. We are so grateful for your leadership and collaboration on the state's STEM agenda.

I am writing to urge you to support our effort to institutionalize, through legislation, the Governor's STEM Advisory Council that you so wisely established via an Executive Order in October 2009. This is critically important because as I am sure that you have heard from employers in the Commonwealth, they cannot find the workers they need to fill the jobs they have now and in the future.

Setting the Context for Discussion of STEM in Massachusetts

There are two key points that I feel best describe the problem that we face in terms of a shortage of workers in the STEM pipeline.

1. As documented by the College Board and presented in the table below, **Massachusetts' high school students' interest in STEM careers is below the national average and behind other leading science and technology states** – a troubling trend that does not bode well for growth in our STEM innovation sectors.

% of High school students taking SATs who list STEM careers as their primary career choice

	<u>1999</u>	<u>2009</u>	<u>2012</u>
National	32.7	28.1	44.7
NC	37.09	33.7	48.9
Cal	33.7	28.2	44.9
VA	-	28.1	44.4
Penn	31.0	28.3	42.9
NY	24.4	21.8	38.9
Mass	25.6	22.1	38.0

Source: College Board State Reports

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2. According to the UMass Donahue Institute, which serves as the primary researcher and evaluator of STEM Council activities:

*“Our students with **high math and science scores have LOW interest** in STEM careers.”*

On top of these negative factors, we have experienced, in the past, a critical lack of leadership that prevented us from achieving meaningful progress. The problem of lack of leadership was solved when you created the Governor’s STEM Advisory Council. As one of half a dozen people who have been involved in workforce development issues for STEM sectors in Massachusetts over the last 15 years, I believe that the Governor’s STEM Advisory Council is critical to ensuring that we have the quantity and quality of workers we need to fill the STEM pipeline and to support continued growth and expansion of our STEM sectors.

Important Role and Accomplishments of the Governor’s STEM Advisory Council

1. Provided the leadership that we had been lacking over the prior decade. For the first time, there was a single point of contact in the Administration; involvement of 3 departments – education, economic development, and labor and workforce development; creation of a leadership group – STEM Council – that could lead, provide expertise, and guide STEM activities; and hiring of full-time staff who could make things happen on a day-to-day basis.
2. Developed a plan, clear goals, and metrics to measure those goals.
3. Created a public awareness campaign – the WOW campaign -- featuring 15 Massachusetts people who exemplified the WOW of STEM. WOWsters spoke at events across the state; WOW poster distributed to schools across the state.
4. Launched the @Sale initiative that identified 17 projects across the state that were successful, measurable, and scalable and provided these projects with funds that were matched with 3 private dollars for every public dollar. This moved Massachusetts out of the realm of “A thousand points of STEM” into a plan to have a modest number of programs with broader systemic and geographic impact.
5. Worked in partnership with the STEM Pipeline Fund (with funding of \$11.5 million over the last decade) to ensure that STEM in Massachusetts meant that STEM leadership, programs, and funding would reach every corner of the state through the Regional STEM Networks.
6. Grew the statewide STEM Summit to over 1000 people providing the unique opportunity for all STEM stakeholders to meet, collaborate, be educated, and exchange ideas.
7. Gained a national reputation as a leader in STEM. Other states have copied our plan, programs, and leadership structure. Massachusetts’ STEM effort have been recognized by the National Governors Association, NASA, President Obama’s ‘Change the Equation’ initiative, national Innovate + Educate initiative, and Race to the Top where Massachusetts received the maximum number of points for its STEM initiative.

The Future of STEM in Massachusetts

The Council has played a pivotal role – guiding, advising, unifying, engaging, mobilizing, and – most importantly -- leading STEM efforts in the state. **Without the leadership of the STEM Council, I believe**

that the tremendous momentum we have going and our role as a national leader and model will be lost. We need to institutionalize the Governor's STEM Advisory Council so that we can:

1. Continue to lead the STEM initiative throughout the state. The STEM Council unifies all the constituencies; provides leadership, direction, and advice; invites engagement; works in concert with the STEM activist community; and is widely viewed as a positive force.
2. Continue to be a national leader and model. While it is terrific that we are now a national model for STEM leadership and accomplishments, there are many states competing for our leadership position, allocating millions of dollars for STEM programs and activities, and trying to leapfrog our progress.
3. Maintain the tremendous momentum that we have on a number of fronts. If we lose the leadership of the STEM Council, we would most likely lose our momentum.
4. Maintain and enhance a tremendous record of accomplishment.

Because STEM transcends political parties, I believe that the Legislature would support the continuation of the STEM Council, in part, because of the 'STEM in Massachusetts means STEM statewide' philosophy.

I am asking for your help, before you leave office, to make the STEM Council a permanent part of the state's infrastructure so that it can lead the effort to address the STEM pipeline issue, in support of the state's STEM innovation economy. I (and many others) believe it is the biggest challenge facing the STEM community today.

You, Governor, helped to create the STEM movement in Massachusetts. I am asking for your help to ensure that the movement continues. It is certain to be an important part of your legacy.

Thank you for your consideration.

Sincerely,



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