

STEM Interim Study – S15–34

A STEM Imperative for Oklahoma

Michael Carolina

Member of Governor's Science and Technology Council
and Executive Director, OCAST

STEM Interim Study (S15-34)

“OneOklahoma” A Strategic Plan for Science and Technology in Oklahoma, 2015

STEM Recommendations
of the
Governor’s Science & Technology Council



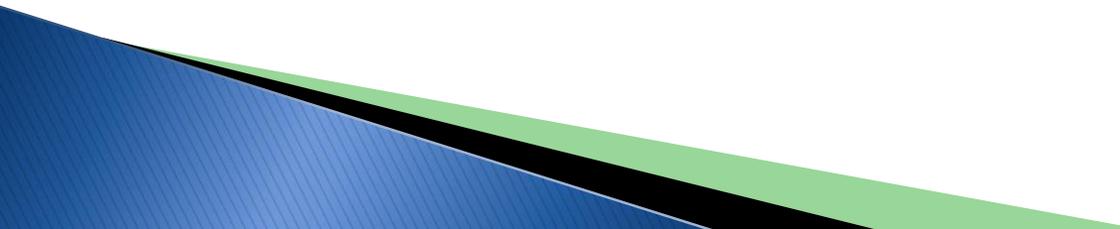
Oklahoma STEM Summit, October 13th, 2015

A State Imperative

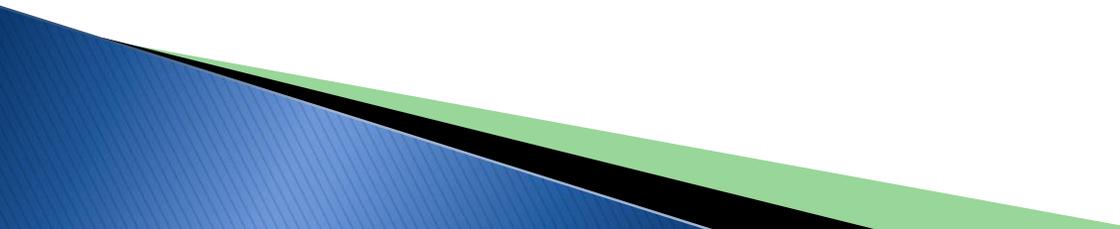
“Increasing the number of students versed in STEM and growing the number of graduates pursuing STEM careers or advanced studies are critical to the economic prosperity of every state and the nation.”

“Building a STEM Education Agenda,” National Governor’s Association, 2011.

OK STEM Jobs Growth

- ▶ By 2025, 77% of jobs will require technical skills
 - ▶ OK projected to produce 6,700 STEM-related jobs per year for the next 10 years
 - ▶ STEM jobs pay 40% more per hour
- 

OK's STEM Skills Gap

- ▶ Degrees and certificates
 - ▶ Addressing the skills gap
[Oklahoma Works, Complete College America, Oklahoma Educated Workforce, FIRST Robotics, Botball, PLTW, GE's STEM Empowers OK, OneOklahoma]
 - ▶ Grow talent base in new technologies/innovations
[energy, aerospace/defense, agriculture, manufacturing, IT, infrastructure]
- 

STEM skills needed

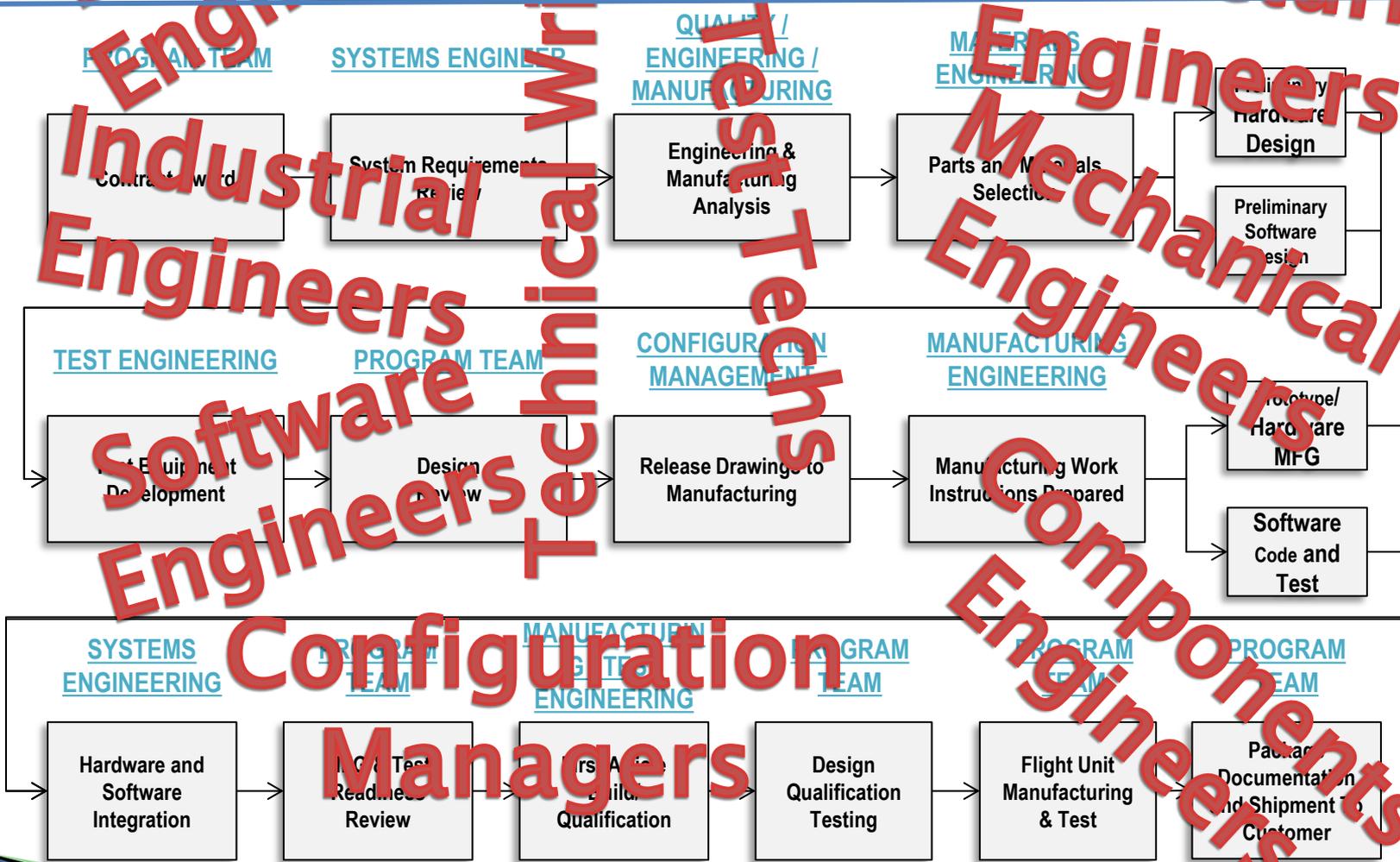
Contracts Admin
Manufacturing Engineers

Acquisition Specialists
Electrical Engineers
Industrial Engineers
Software Engineers

Technical Writers
Test Techs

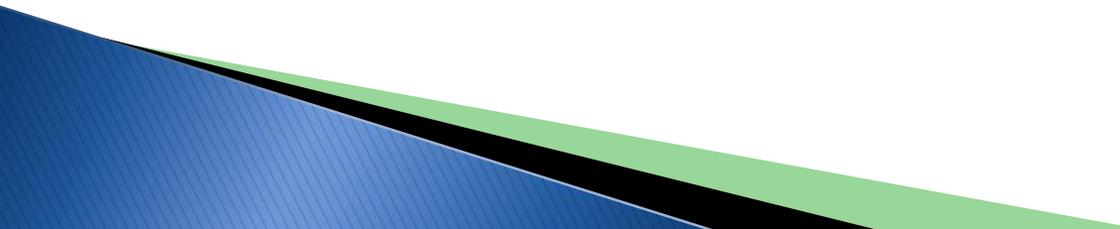
Engineers
Mechanical Engineers
Components Engineers

Process Inspectors

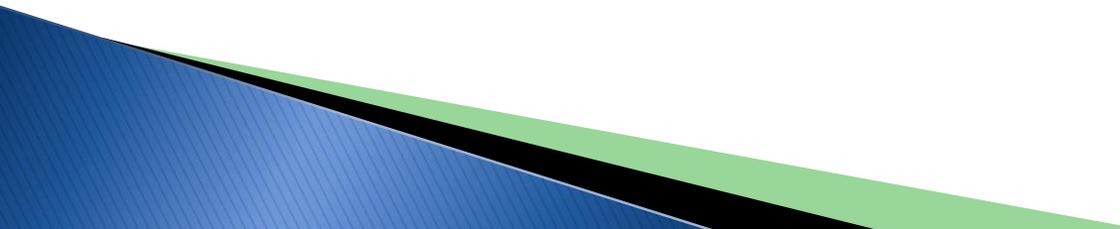


A Vision for Oklahoma

The goals of the S&T Council's Strategic Plan are to help make Oklahoma a place where:

- ▶ we realize STEM opportunities and benefits;
 - ▶ S&T businesses and industries create wealth;
 - ▶ out-of-state businesses and industries want to relocate;
 - ▶ legislators work to support and fund the necessary initiatives and programs;
- 

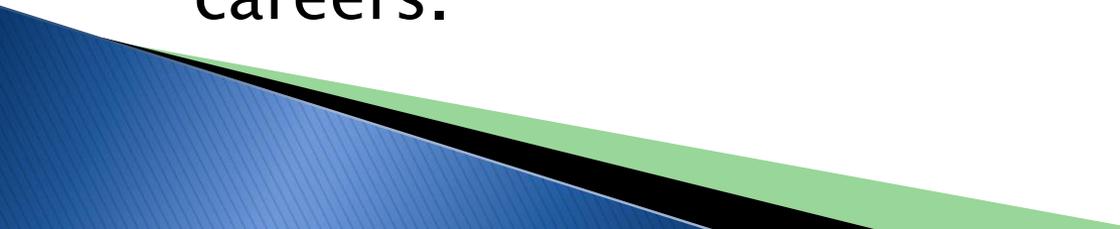
A Vision for Oklahoma

- ▶ career pathways last beyond formal education;
 - ▶ academic degrees are encouraged and realized;
 - ▶ STEM teachers are exceptionally qualified and recognized;
 - ▶ all students have access to advanced education and training;
- 

A Vision for Oklahoma

- ▶ communities put a high priority on STEM education and training and have created partnerships with businesses and industries;
- ▶ STEM education continues with after-school networks and programs;

and....

- ▶ a high quality of life and opportunities are realized through high-paying STEM jobs and careers.
- 

STEM Recommendations

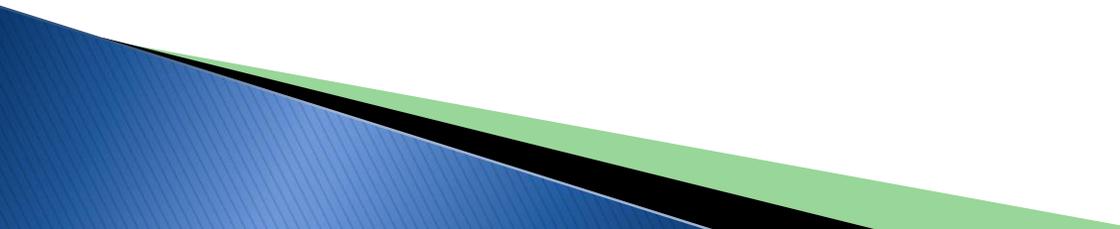
- Recommendation 1:

Coordinate

STEM Recommendations

- Recommendation 2:

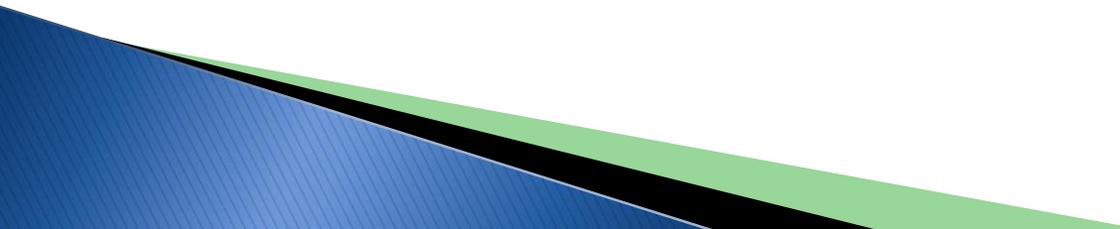
Increase Rigor



STEM Recommendations

- Recommendation 3:

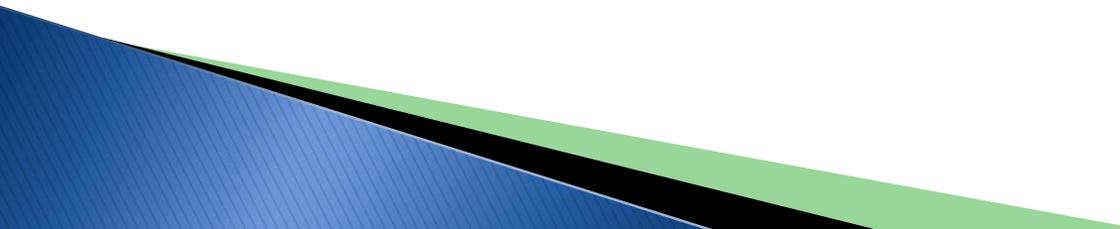
Increase Relevance



STEM Recommendations

- Recommendation 4:

Form STEM Communities



STEM Recommendations

- Recommendation 5:

Diversity

