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Vision 2016

CAPS Vision 2016

1.0 Executive Summary

During the 2012-13 school year, a series of actions were performed in an effort to define CAPS Vision 2016 and strategic plan. Using the CAPS Rapid Prototyping Curriculum Development Process© as the foundation for the methodology, stakeholder input was gathered from:

- CAPS Advisory Board
- Economic and Industry Trends
- Student Interest
- Program Effectiveness Data
- Stakeholder Visioning Session

CAPS Vision 2016 prototyping team consists of CAPS Staff, External Consultants, Key Business and University Partners. McKinsey & Company and Mr. Patrick Davis, CFO & COO of Suture Express performed external audits. McKinsey & Company concluded that CAPS is an industry-led, professional program characterized by five areas of distinctiveness:

1. Initiated and run by visionary leaders equipped with industry experience.
2. Supported by a robust network of business partners.
3. Frequently iterated curriculum shaped by industry partners and pedagogy based on student self-discovery.
4. Facilitated by faculty that bring in business partners and guide student driven learning.
5. Provides multiple pathways for students in their “Education to Employment” journey.

Two significant gaps were identified: 1) Lack of seamless pipelines from CAPS, Universities/Colleges, and Industry Partners/Employers, and 2) Current programming requires updating to meet new industry demands. To ensure the sustainability of significant business partnerships, CAPS must close these gaps.

The establishment of seamless pipelines could create a sustainable value proposition for industry partners by:

- Decreasing talent acquisition cost
- Decreasing talent turnover
- Increasing early talent productivity
- Providing free skilled labor in the form of internships and project work

Initial CAPS student cohort are juniors in college, therefore the measurement of alumni success is eminent. Seamless pipelines could produce true ecosystems of economic development where all stakeholders win.

2.0 CAPS Vision 2016 and Two Strategic Goals

CAPS, in partnership with targeted universities/colleges/post-secondary institutions, will connect students’ passions/strengths to high demand/high skill careers.

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To accomplish CAPS Vision 2016, CAPS must achieve:

Goal 1: Create Seamless Pipelines Connecting CAPS, University, Key Business Partners

By 2016, CAPS will create seamless pipelines connecting CAPS, Universities/Colleges and Employers aligned with economic development and emerging market trends resulting in perceived return on investment (ROI) for key CAPS Business Partners.

Targeted industry partners are: Garmin, Sprint, Black & Veatch, Burns & McDonnell, Cerner, St. Luke's, DuPont/Danisco, (missing Medical/bioscience), (missing Advanced Manufacturing company) and Kauffman Foundation of entrepreneurial connections.

Goal 2: CAPS Alignment with New Economic and Industry Demand

Using the CAPS Rapid Prototyping Curriculum Process©, create, eliminate, or enhance programs in alignment with industry trends. Examples of new CAPS programming to include but not limited to: Food Engineering (*Nutrigenomics, Culinary Food Science*), Veterinary Medicine, Nursing and Physician Assistants and Foreign Language Full Immersion in Global Business.

3.0 CAPS History 2004-2013 (see “First Four Years” 2009- 2013)

In 2004, 150 BV school administrators and community members attended a strategic planning meeting. One of the outcomes was the idea that profession based learning should be guided by business needs. This idea was included in the 2005/10 Strategic Plan. The plan directed the district to “adopt innovative programs.” An Innovation Committee was formed to begin researching practices across the country with an emphasis on 21st Century Skills. Programs did not meet the criteria set in the strategic plan and were eliminated from consideration.

The district conducted a Feasibility Study that included parent focus groups, student input, an educational analysis, and a business analysis. A report was developed that would serve as the blueprint of what a new program would look like in Blue Valley. The program included discussions about business skill sets and opportunities for mentoring, shadowing and internships. The feasibility study identified potential instructional strands by looking at regional economic development trends. Three areas stood out from this survey - Bioscience, Engineering, and Animal Science. The strands grew with time and now include: Bioscience, Engineering, Human Services and Business/Technology/Media Strands.

In 2008, an executive director was hired with the intent of opening the facility in the 2010 school year. The Board of Education accelerated the program and students began participating in the fall of 2009 at satellite sites housed in area businesses; Freedom Bank, Sprint, Black & Veatch and DLR Group. From the beginning, the district saw CAPS as an inclusive program with the capacity for at least 500-800 students. As the facility was designed, the number of students expanded to between 1000-1200. Participation in CAPS is not achievement driven, but is focused on the individual professional interests of students. The students in the CAPS program reflect a broad spectrum of achievement levels and include district resident students who are

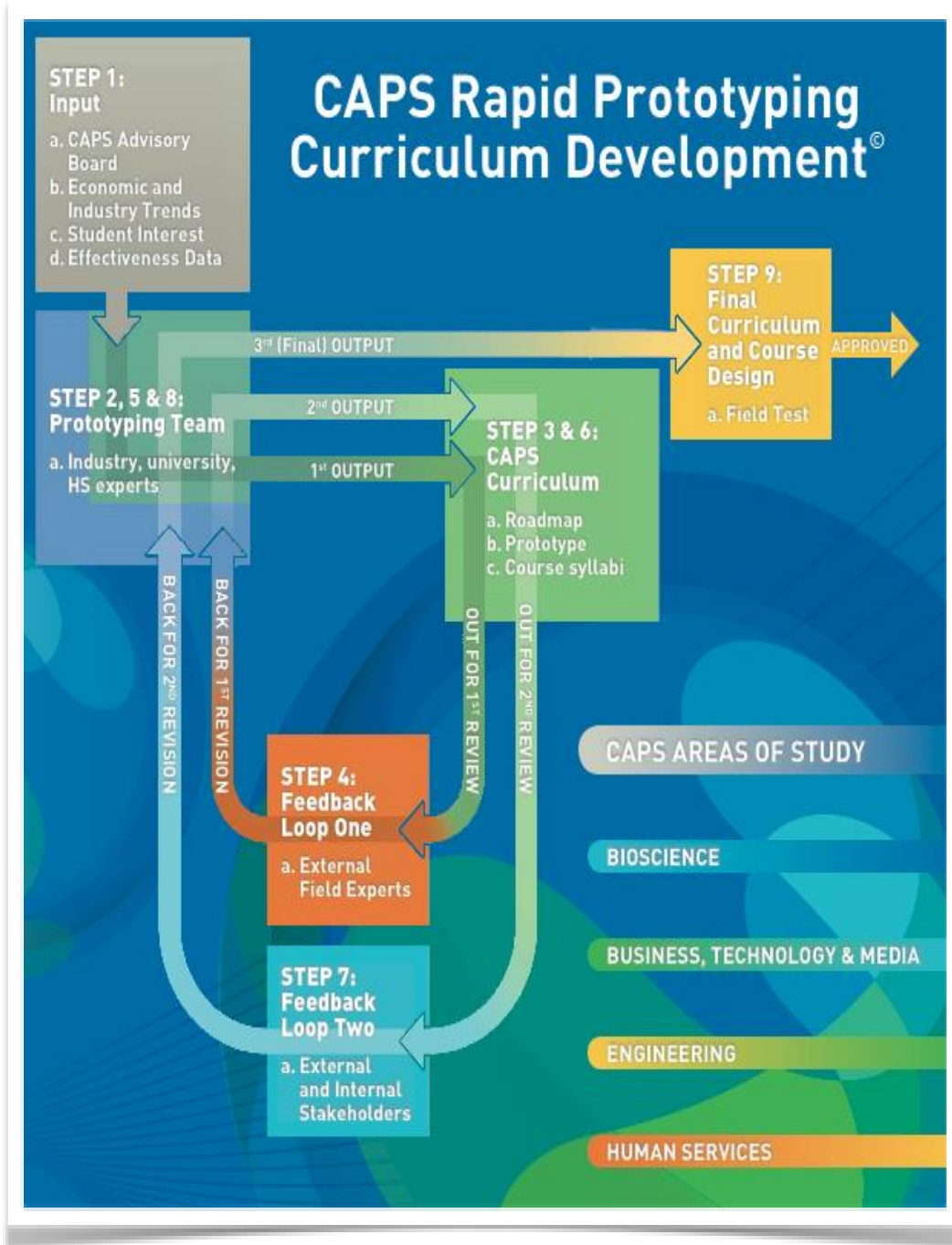
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currently enrolled in an alternative high, home schools, and private schools.

In 2012/13, CAPS completed all phases of construction with the opening of the CAPS Accelerator offering the CAPS Innovate course. The CAPS Innovate course is designed for entrepreneurially minded students seeking high-tech resources and multi-talented teams to “innovate” and “accelerate” their ideas. Students from varying backgrounds and interests work together to explore and pursue opportunities such as new product inventions or services while connecting with a support network to act on those opportunities. Programming is modeled from top innovative labs such as the Babson Venture Accelerator, Harvard Innovation Lab, Stanford Design School, UMKC Institute for Entrepreneurship and Innovation, and the MIT Media Lab. CAPS Innovate offers a copyrighted curriculum and certification through Kauffman FastTrac® TechVenture™ program. Students have the opportunity to work with and be mentored by both local and coastal design firms such as Google, Apple, and IDEO. Students attempting to launch and grow start-ups are provided initial business and legal counsel by partnering firms. The CAPS Innovate course concludes with the opportunity to pitch the student’s business plan to a panel of investors in a “Shark Tank” style event. Early results of the CAPS Accelerator were recognized internationally through the National Business Incubator Innovation Award (NBIA) 2013. Within the last two years (2010/11 and 2011/12) students have filed thirteen provisional patents and students formed six Limited Liability Corporations (LLC).

4.0 CAPS Vision 2016 Methodology

During 2012-13 school year, focus was placed on defining CAPS Vision 2016. Using the CAPS Rapid Prototyping Curriculum Development©, Step 1 and 2 were completed.



Step 1: Gather Input

- CAPS Advisory Board
- Economic and Industry Trends
- Student Interest
- Program Effectiveness Data
- Stakeholder Visioning Session
- External Audit Reports
- Benchmark Visits

Step 2: Prototyping Team

- CAPS Staff
- External Consultants
- Key Business and University Partners

5.0 Gather Input

Data and input was collected from the following sources. Detailed reports can be found in Appendix.

CAPS Advisory Board

The CAPS Advisory Board was put in place May 2008 with the purpose of creating a forum of Blue Valley colleagues, school board members, university and business partners to provide guidance and decision-making for the CAPS program. Currently, the CAPS Advisory Board consists of 30 members, including high demand/high skill careers and five universities/colleges.

Economic and Industry Trends

CAPS is an industry-led, profession-based program committed to frequently iterated curriculum shaped by industry partners. The following documents were reviewed to identify trends in high skill/high demand careers and how CAPS Vision 2016 should be impacted.

National Association of Colleges and Employers (NACE) 2013

Top Degrees in Demand (Bachelor's Degree)

- Finance
- Computer & Information Sciences
- Accounting
- Business Administration/ Mgmt.
- Mechanical Engineering
- Management Information Systems
- Electrical Engineering
- Computer Engineering

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- Marketing/Marketing Mgmt.
- Economics

Mid-America Regional Council (MARC) 2012 -2016 (See Appendix)

- 10 Growth Jobs By Education
- KC Regional Overview 2012
- 30 Fastest Growing Jobs 2012- 2017

Kansas City Employer Survey MARC 2012

Emerging Industries:

- Advanced Manufacturing
- Health Care
- Biosciences
- Transportation Logistics
- Engineering
- Technology
- Small Business/Entrepreneurial Start-ups

Kansas Commerce Department 2013

Kansas has built a diverse industry base that includes bioscience, animal health, energy technology, aviation, advanced manufacturing and agriculture.

Wichita is the aviation capital of the world, with 50 percent of domestic commercial aircraft and 40 percent of global aircraft produced in the city. Northeast Kansas is home to a burgeoning animal health corridor, with 40 percent of global animal health and veterinary science interests converged in the region.

Top Ten Employers in Kansas City

1. HCA Midwest Health System 8,632 employees
2. Sprint Nextel Corp. 7,000 employees
3. Saint Luke's Health System 6,891 employees
4. Cerner Corporation 6,615 employees
5. Children's Mercy Hospitals & Clinics 5,151 employees

Note: CAPS has a significant gap in their base of business partners in the area of hospitals and healthcare systems.

Student Interest

Demand driven programs like CAPS require continual focus on student interest. CAPS Vision 2016 examined the following data to determine student interest:

1. EXPLORE and PLAN interest inventory data. Key interest areas are the following:

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2. Engineering Research Study and Findings
3. CAPS Student Applications
4. Customer Satisfaction Data from Students
5. Anecdotal data from parents, open house sessions, MS and HS counselors, MS and HS gifted facilitators.

	<u>PLAN</u>	<u>EXPLORE</u>
ADMINISTRATION & SALES CAREER CLUSTER	596	555
Employment-Related Services	39	40
Marketing & Sales	210	150
Management	239	248
Regulation & Protection	108	117
BUSINESS OPERATIONS CAREER CLUSTER	103	97
Communications & Records	32	23
Financial Transactions	58	61
Distribution & Dispatching	13	13
TECHNICAL CAREER CLUSTER	324	510
Transport Operation & Related	34	53
Agriculture, Forestry & Related	29	46
Computer & Information Specialties	115	135
Construction & Maintenance	25	46
Crafts & Related	52	146
Manufacturing & Processing	8	17
Mechanical & Electrical Specialties	61	67
SCIENCE & TECHNOLOGY CAREER CLUSTER	2016	1828
Engineering & Technologies	711	668
Natural Science & Technologies	228	248
Medical Technologies	218	237
Medical Diagnosis & Treatment	756	627
Social Science	103	48
ARTS CAREER CLUSTER	858	1134
Applied Arts (Visual)	314	406
Creative & Performing Arts	438	628
Applied Arts (Written & Spoken)	106	100
SOCIAL SERVICE CAREER CLUSTER	686	714
Health Care	201	193
Education	274	291
Community Services	171	197
Personal Services	40	33

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Program Effectiveness

Since the launch of CAPS in 09-10 school year, a series of studies has been conducted to gauge its short-term and long-term impacts on the program stakeholders, including:

- Annual CAPS student, instructor, principal and counselor, parent, alumni, alumni parent, mentor, and business partner surveys
- Annual enrollment analysis
- GPA comparison study in 09-10
- Early career success study in 11-12

There was strong evidence that CAPS has had a positive short-term impact on the stakeholders. Each year, around 90% of the survey responses were positive, with around 60% of “Strongly Agree” responses. The CAPS students, whose academic level varied wildly¹, felt that they were better prepared for the future by:

- Gaining a deeper understanding of the profession in which they are interested
- Developing professional skills that the traditional high schools fall short of
- Building professional network and portfolio

Students regardless of their academic level, gender, grade level, and strand consistently reported these positive impacts.

Echoing the student perception, the parents also frequently reported that the program reignited their child’s interest in learning, changed attitude toward school, or “saved” his or her senior year.

The CAPS business partners reported benefiting from participating in the program too. The benefits included:

- Improving the engagement of employees who are excited to support CAPS
- Helping move newest initiative forward
- Enhancing communication/mentoring skills of associates involved
- Bringing freshness and energy into organization
- Identifying excellent students to fill the pipeline

There was preliminary evidence from the employers of CAPS student interns suggesting that CAPS was successful in helping students develop the key professional skills and those developed skills were translated into high job performance soon after the internship started. However, more studies are needed to corroborate the preliminary evidence. The long-term impact of CAPS is

¹ Each year, about half of the CAPS students had a cumulative GPA between 2.0 and 3.0 and another half between 3.3 and 4.0.

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concerned with two types of readiness: college readiness and job readiness. So far, the evidence of long-term impact is very thin due to the challenge of gathering the long-term impact data.

6.0 Visioning Session

On January 17, 2013, over 100 key stakeholders gathered to brainstorm CAPS Vision 2016 using the following questions for discussion:

The Visioning Session was designed and facilitated by Willoughby Design. Four Big Ideas resulted from the session:

1. Define Processes for Program Evaluation

Establish a more detailed and trackable documentation process for successes and projections of future success. Have a plan for what CAPS will look like 10 years down the road and start sharing that projected story.

2. Franchise CAPS Method

Begin the process of franchising CAPS and distinguishing the BV program as the flagship of a Global CAPS Network or Association. The Network HQ will be based in Blue Valley. Revenue would be derived from consulting, memberships, licensing, curriculum development, etc.

3. Raise Awareness of CAPS Program

Evaluate current awareness and perceptions of the CAPS program among current audiences. Develop strategies for improving/building relationships with target audiences. Begin laying the groundwork for a CAPS conference on innovation in education that is designed to position CAPS as a leader in the field.

4. Develop New Revenue Sources

Assess current corporate partners and gather data on their participation and investment in CAPS.

Develop clearly defined partnership/revenue models for maximizing their involvement in the program. Create a marketing communications program for soliciting new corporate partners.

7.0 External Consultants

CAPS secured an external audit to evaluate the operations, programming, internal controls and success metrics of the organization. The primary purpose of the external audit was to provide an independent and unbiased assessment of the CAPS organization and identify gaps/risks/barriers to the realization of CAPS Vision 2016.

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The following entities provided input to the external audit:

- McKinsey & Company
- Patrick Davis, CFO and COO, Suture Express
- Neale Lobo, Honeywell Executive, Lean Six Sigma Black Belt
- Debra Newald, Chair, Vistage Peer Advisory Boards, Strozzi Institute Certified Somatic Coach™

Detailed report can be found in the appendix.

8.0 Benchmark Visits

MIT, Olin Engineering College, Babson, Stanford, TechStars

9.0 CAPS Staff

Orbiting Sessions

Throughout 2012-2013 school year, CAPS staff performed a variety of actions in support of CAPS Vision 2016. Beginning with preservice professional development on August 9, 2012, CAPS staff performed an ideation session for their personal and program vision for 2016. Monthly Orbiting Sessions were focused on the key differentiator of the CAPS program, profession-based learning. CAPS staff performed the following tasks in an effort to clearly define profession-based learning through the lens of industry partners.

Pick a professional and site visit.

1. Choose only one profession. If you are this profession by trade, choose a different profession to analyze. For example: Chris Crawford is a Certified Athletic Trainer, so he should choose a different profession to analyze that is also a part of the course that he teaches called Sports Medicine, for example a physical therapist or a biomechanics coach.
2. Find a person who is in this profession, preferably someone that you already know, work with as a guest speaker, client and/or mentor for your program.
3. With their support, travel to their place of work, observe the work setting, environment, and culture, take pictures (if permitted), attend a meeting, etc.
4. Collect any artifacts for sharing, but you must come back with a copy of their evaluation form and some feedback on 'how' this tool is used in the work place.

Gather more artifacts and information from your chosen professional. Observe your peers.

1. Be ready to share your observations, findings, artifacts and explain their evaluation system.

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2. Discuss how you might modify how you evaluate your students based upon emulating the professional space.
3. Before the next Orbiting Session, reconnect with your chosen professional and ask the following questions:
 - a. What are the tools that you use for managing and organizing your work?
 - b. What are the types of software that you use to perform your work?
 - c. Gather an artifact of a presentation, project, written documentation, etc.
 - d. Ask what they read, journals, blogs, etc. to stay up to date in their field.
4. Perform a walk-through of one CAPS session (2.5 hours) and observe your peers performing profession-based learning. Gather data to share out.

Share out findings and how you might modify.

1. Be ready to share your findings of your work with your chosen professional and your walk through results of your peers.
2. Discuss any modifications you plan to implement in 2013-14 school year to move your course or program even closer to emulating the real professional world.

Strand Discussions

CAPS Strand discussions occurred gathering input and data defining the vision for their strand in 2016. Special attention was paid to the 'Medical Strand' with a task force of industry, university and CAPS instructors, led by Meg Holloway with a target of ... see reported findings and recommendations in appendix. Business tech media findings, Gina. Reconfiguring the CIM lab and role.

10.0 Recommendation

Goal 1: Create Seamless Pipelines Connecting CAPS, University, Key Business Partners

By 2016, CAPS will create seamless pipelines connecting CAPS, Universities & Colleges and Employers aligned with economic development and emerging market trends resulting in perceived return on investment (ROI) for key CAPS Business Partners.

Targeted industry partners are: Garmin, Sprint, Black & Veatch, Burns & McDonnell, Cerner, St. Luke's, DuPont/Danisco, (missing Medical/bioscience), (missing Advanced Manufacturing company) and Kauffman Foundation of entrepreneurial connections.

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Below are the steps to develop the seamless pipelines:

1. Interview top leadership and HR executives from nine targeted companies using the following questions:
 - a. What are the current workforce needs and projections for the next 5 years?
 - b. What are the skills that you are not seeing coming from college graduates?
 - c. Are there any existing shortages or challenges in acquiring needed workforce?
 - d. Name the top avenues/colleges that produce the best results for recruiting the talent you need.
 - e. Do you have an internship program with college or high school students? How does that work? Do they receive college credit for the internship?
 - f. Do you have any data of the number of Blue Valley graduates that you employ? Performance levels/satisfaction levels.
2. Modify CAPS curriculum and CAPS Professional Skills.
3. Comprehensive ecosystem meeting: CAPS, the most highly productive recruiting colleges, and respective employers.
 - a. Example Seamless Pipeline:
 - *Devise a plan of how to migrate seamlessly from CAPS to college to employer. For example: Garmin is in need of software engineers and K State is one of the most productive recruiting sites. CAPS Technology Solutions and Software Engineering course represents those skills sets. CAPS students starts in an internship at Garmin their senior year of HS, continues on throughout their college years at K State. Secure course credit for this type of practicum in college. Garmin receives a new hire with less hassle in recruiting that produces value sooner, requires less orientation/training. Garmin sees the ROI, participates more heavily in the CAPS program, maybe even fund a teacher (s), allow their engineers to teach part or full time, ultimately providing financial support. K State wins because their retention and placement rate increases due to this ecosystem and could even see an increase of enrollment due to these linkages.*

Goal 2: CAPS Program Alignment with Economic and Industry Demand

Using the CAPS Rapid Prototyping Curriculum Process, create, eliminate, or enhance programs in alignment with industry trends. Examples of new CAPS programming to include but not limited to: Food Engineering (*Nutrigenomics, Culinary Food Science*), Veterinary Medicine, Nursing and Physician Assistants and Foreign Language Full Immersion in Global Business.

Program Name	Status/Priority	Potential Business Partner	Potential University Partner
<i>Veterinary Medicine</i>	New 2014/15 Interest/Industry	Hills Pet, Bio companies, Mission Med Vet	KState,
<i>Food Engineering (Nutrigenomics, Culinary Food Science)</i>	New 2014/15 Interest/Industry	DuPont, Danisco, Tyson, Bio companies	JCCC, KState, KU Edwards,
<i>Nursing</i>	New 2014/15 Interest/Industry	St. Luke's, other healthcare	St. Luke's Nursing College, JCCC, KU

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Program Name	Status/Priority	Potential Business Partner	Potential University Partner
			Med, UMKC
<i>CAPS Accelerator</i>	Enhanced 2015/16 Incubating live companies	Kauffman Foundation, JCCC Innovation Grant	
<i>Robotics Engineering</i>	Enhanced 2015/16 Delete Digital Electronics	Honeywell, Garmin, Ford, GM	
<i>CAPS Engineering</i>	Examine all programming with business partners/ modification, new, deletions	Black & Veatch, Burns and McDonnell Mike has to lead curriculum reinvention or not be strand leader, meetings with math and science teachers.	Olin Engineering, MIT,
<i>Foreign Language/Global Business Full Immersion</i>	Enhanced 2015/16 Interest/Industry	Financial institutions, but other big partners that are international, e.g. B & V marketing, CST, Sprint	
<i>Big Data Scientists/Technology Solutions</i>	Enhanced 2015/16 Industry	Garmin, Cerner, Sprint, DST	
<i>Construction Engineering</i>	New 2015/16 Industry	J E Dunn	
<i>Response to CAPS Team Listening Sessions</i>	Delete, enrich, merge, create, strands renamed or disbanded		