State of Illinois

**Race to the Top
Application for Phase 3 Funding**

CFDA Number: 84.395A

December 16, 2011

Appendices

Appendix 1

Participating LEA Expectations and State Supports

Race to the Top 3
Participating LEA Expectations and State Supports

	Participating LEA Expectations	State Supports
General Capacity and Commitments	1. The district must agree to integrate with the Illinois Shared Learning Environment (ISLE), participating in the 2nd phase of implementation, to support all of the RTTT3 strategy areas 2. The district must implement a comprehensive school and district continuous improvement process: either Rising Star or approved equivalent 3. The district must agree to provide sufficient autonomy in the use of time and re-allocate PD resources necessary for implementation 4. The district must participate in all State-led efforts to undertake district networking activities, disseminate implementation models, and evaluate program results 5. The district must leverage ISLE and redesigned State Report Card for parental and community engagement 6. If the district has any Tier I or Tier II schools, the district must seek to leverage School Improvement Grant funds to support its RTTT3 implementation plan 7. The Participating LEA allocation may only be used for expenditures relating to its implementation of its RTTT3 plan	1. Illinois Shared Learning Environment 2. Center for School Improvement 3. Additional ISBE Capacity 4. Illinois Collaborative for Education Policy Research 5. New State Report Card

Standards Implementation: Instructional Practices	1. Establish strong instructional leadership at the district- and school-level
	2. Establish professional learning communities to support implementation of all aspects of instructional improvement process
	3. Establish alignment teams to address critical transition points: PreK to elementary, middle to high school, high school to postsecondary
	4. Ensure the district's plan for RtI implementation provides for targeted interventions and differentiated supports, aligned to the revised Learning Standards, for students that are not on pace to meet college- and career-ready expectations
	5. Embed the learning maps available through ISLE (as described in Appendix 5, Section IV.C.2) as a central part of instructional practices at all grade levels
		1. Center for School Improvement (CSI) supports instructional improvement processes
		2. Illinois Shared Learning Environment hosts learning maps
		3. State alignment supports:
		  • KIDS
		  • College and Career Readiness Program
		4. State RtI supports

Race to the Top 3
Participating LEA Expectations and State Supports

	Participating LEA Expectations	State Supports
Standards Implementation: Curriculum, Grading, & Reporting	1. Perform grade-level curriculum analysis using new standards 2. Undertake cross grade-level discussions to identify shifts in content 3. Integrate writing through-out the curriculum 4. Integrate CCSS in Math, ELA and literacy across the curriculum, including the concept of text complexity for ELA and application for Math 5. Integrate CCSS Science framework into curriculum 6. Implement a standards-based reporting system in Math, ELA, and Science	1. CSI oversees standards & curriculum implementation activities, working closely with content specialists at ISBE 2. Illinois Shared Learning Environment hosts resources for implementation

High Quality Assessments	1. Develop an assessment system that includes formative and summative assessments in a coherent framework to support standards-aligned instruction and, where appropriate, measure student growth
	2. Integrate CCSS assessment items in subjects other than math and ELA
	3. Participate in district network activity across all of the RTTT 3 participating districts to develop Type II and Type III assessment frameworks and items which can be used on a district-wide basis by all teachers in a given grade or non-tested subject area
	   • 10% of the Participating LEA's allocation must be used for development and implementation of Type II or Type III assessment frameworks and items
	4. Agree to serve as a pilot district for PARCC consortium and KIDS assessment
		1. CSI
		2. "Assessments for Learning" strategies:
		  a. Statewide contract for Type I assessments and corresponding tools to help districts use these assessments
		  b. Open-source frameworks and district network activity to develop assessment items for Type II and Type III assessments
		  c. Assessment item bank and other assessment supports hosted on ISLE

Race to the Top 3
Participating LEA Expectations and State Supports

	Participating LEA Expectations	State Supports
Learner Profiles and Pathways	1. As part of the Participating LEA's integration with ISLE, implement a strategy to link student data across local systems to support the creation of integrated learner profiles 2. Establish an individual learning plan program, commencing in 7th grade, that aligns to a Programs of Study model in the predominant feeder schools for high schools implementing STEM Programs of Study 3. *For LEAs serving grades 9-12:* Establish two or more Programs of Study promoting critical STEM application areas	1. Illinois Shared Learning Environment provides platform for learner profile, ILP, and Program of Study supports 2. STEM Learning Exchanges support POS implementation in critical STEM areas 3. College and Career Readiness Programs supports POS alignment to postsecondary education

Educator Quality & Effectiveness: Performance Evaluations	1. School districts having 500,000 or more inhabitants must fully implement PERA's requirements for teacher evaluations by September 1, 2013. All other school districts must have union agreement to implement PERA's teacher evaluation requirements on a timeline that is at least as aggressive as the following:
	   a. Implementation with a "no stakes" student growth component in all schools by September 1, 2013 (i.e., student growth component is not used in final summative evaluation)
	   b. Full PERA implementation:
	     ▪ By September 1, 2014 for Participating LEAs within the lowest performing 20% of districts, as defined by ISBE
	     ▪ By September 1, 2015 for all other school districts
	2. Establish a formal peer evaluation system that is used for a significant portion of summative evaluations and can be used as part of evaluations during teacher remediation
	3. Use positive performance evaluations as part of the basis for selecting peer evaluators and mentors
	4. Implement State-adopted survey of learning conditions or an approved equivalent, subject to availability of RTTT3 or State funding
	5. Fully cooperate in the PERA Research-based Study
		1. Performance evaluation training program
		2. Support for principal and teacher evaluators to participate in training
		3. PEAC and PEAC Subcommittee support
		4. PERA Research-based Study

Race to the Top 3 Participating LEA Expectations and State Supports		
	Participating LEA Expectations	**State Supports**
Educator Quality & Effectiveness: HPHM Schools; Induction & Mentoring	1. Partner with ISBE and preparation programs in pipeline strategies for High Poverty High Minority Schools 2. Establish induction/mentoring of two years in duration for teachers and one year for principals meeting specified standards subject to availability of RTTT3 or State funding 3. Participate in State technical assistance and accountability infrastructure for induction and mentoring programs	1. Incentives for teacher preparation programs to establish Participating LEA partnerships and redesign programs to address CCSS and ISLE 2. Funding for induction/mentoring in Participating LEAs and certain state infrastructure

Appendix 2

Participating LEA Implementation Timeline

Race to the Top 3
Participating LEA Implementation Timeline

	2012 Jan - June	2012 July - Dec	2013 Jan - June	2013 July - Dec	2014 Jan - June	2014 July - Dec	2015 Jan - June	2015 July - Dec
General Capacity and Commitments	• Develop final RTTT3 Scope of Work	• Establish necessary autonomies, reallocations of resources, and CBA waivers to implement plan • Training and piloting of Rising Star or approved equivalent • Develop parental and community engagement strategy around RTTT 3 plan		• Implement Rising Star or approved equivalent. • Incorporate ISLE parent portal and redesigned State report card into parental and community engagement strategy.				
Illinois Shared Learning Environment (ISLE)	• Outreach, requirements gathering, and IT systems analysis for ISLE implementation		• ISLE technical integration commences	• Continued ISLE technical integration • PD on effective use of ISLE to impact teaching and learning	• Initial ISLE launch	• Full ISLE implementation		
Standards Implementation	• Establish professional learning communities and alignment teams	• Align RtI implementation plan to revised standards • Implement alignment processes around critical transition points • Curriculum analysis using new standards • Cross grade-level discussions to identify shifts in content		• Integrate writing throughout the curriculum • Integrate CCSS into grading process in Math, ELA and literacy across the curriculum • Integrate CCSS Science framework into curriculum • Design standards based reporting system • Embed learning maps in instructional practices		• CCSS implemented throughout curriculum • Implementation of standards-based reporting system		
High Quality Assessments	• Design local assessment system to support standards implementation and PERA			• Continued design, preliminary implementation of assessment system		• Full implementation of assessment system		

Race to the Top 3
Participating LEA Implementation Timeline

	2012 Jan - June	2012 July - Dec	2013 Jan - June	2013 July - Dec	2014 Jan - June	2014 July - Dec	2015 Jan - June	2015 July - Dec
Learner Profiles and Pathways	• Identify STEM application areas	• STEM POS systems designed • Individual Learning Plan model selected • College and Career Readiness Program (CCRP) planning		• Continued POS design, preliminary implementation • Individual Learning Plan piloted • Preliminary CCRP implementation		• Full implementation of POS, Individual Learning Plan, and CCRP		
Educator Quality& Effectiveness: Performance Evaluations	• Identify PERA joint committee members, informal meetings of joint committee	• Joint committee formally convened by November 1 • Develop local evaluation plan, including student growth measures and peer evaluation system • Train all evaluators • Pilot survey of learning conditions • Implement PERA for principal evaluations		• Implementation of PERA for teacher evaluations with "no stakes" student growth component • Implement survey of learning conditions • Full cooperation with PERA Research-based Study		• Full PERA implementation for teacher evaluations for bottom 20% • Continued no stakes imp. of student growth component for others • Continued implementation of survey of learning conditions		• Full PERA implem. for all Participating LEAs
Educator Quality & Effectiveness: HPHM Schools; Induction & Mentoring	• Engagement and planning with teacher prep programs around High Poverty High Minority Schools partnerships • Participating LEAs with existing induction programs expand to all first- and second-year teachers and first-year principals • Participating LEAs without existing induction and mentoring programs establish such programs • Establish method for use of positive performance evaluations as part of the basis for selecting peer evaluators and mentors			• Implement HPHM partnerships • Implement induction and mentoring programs • Participate in State's technical assistance and accountability systems for induction and mentoring				

Appendix 3

RTTT3 Student Outcome Goals

RTTT3 Student Outcome Goals

The Student Outcome Goals table below details data from recent years and goals for future improvement in student performance on state and national assessments, high school graduation rates, and college enrollment rates, overall and by subgroup. Annual targets are shown for the NAEP to demonstrate the trajectory of the State's student outcome goals, although the NAEP is not administered every year.

Overall Student Outcome Goals								
	SY08-09	SY09-10	SY10-11	SY11-12	SY12-13	SY13-14	SY14-15	SY15-16
NAEP: Grade 4 Mathematics	37.6	NA	38.3	39	40	41	43	45
NAEP: Grade 4 Reading Language Arts (% at or above proficient level)	32.3	NA	33.3	33.9	34.5	35.5	37	39
NAEP: Grade 8 Mathematics	33.1	NA	32.8	33.3	34	35	36	38
NAEP: Grade 8 Reading Language Arts	32.7	NA	33.9	34.5	35	36	37	39
ISAT: Grade 3 Math (% at meets and exceeds)	85.2	86.3	87.3	88	89	91	93	95
ISAT: Grade 3 Reading	72.2	73.7	74.7	75	76	79	81	83
ISAT: Grade 4 Math	85.7	86.0	87.7	88	89	91	93	95
ISAT: Grade 4 Reading	73.8	73.7	74.7	75.5	76.5	78	80	82
ISAT: Grade 5 Math	82.4	83.4	84.0	85	86	88	90	92
ISAT: Grade 5 Reading	73.5	74.7	76.4	77.5	78.5	81	83	85
ISAT: Grade 6 Math	82.4	84.6	84.0	84.8	85.5	87	89	91
ISAT: Grade 6 Reading	79.9	81.2	84.1	85	86	88	90	92
ISAT: Grade 7 Math	82.8	84.4	84.3	85	86	88	90	92

ISAT: Grade 7 Reading	77.5	77.5	78.8	79.5	80.5	82.5	85	87
ISAT: Grade 8 Math	81.7	83.7	86.3	87.3	88.3	90	92	93
ISAT: Grade 8 Reading	83.6	84.1	85.0	86	87	88	90	92
PSAE: Math (% at meets & exceeds)	51.6	52.7	51.3	52.5	53.5	56	58	61
PSAE: Reading	56.9	54.0	51.0	53	54	56	59	61
High School Graduation Rate	87.1	87.8	83.8	85	87	89	92	93
Total College Enrollment (% of students who entered 9th grade)	42	43	45	46	47	49	52	55
Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	28	30	33	35	36	38	40	42
Black Subgroup								
	SY08-09	**SY09-10**	**SY10-11**	**SY11-12**	**SY12-13**	**SY13-14**	**SY14-15**	**SY15-16**
NAEP: Grade 4 Mathematics	10.9	NA	14.3	14.8	15.5	16	17	18
NAEP: Grade 4 Reading Language Arts	11.4	NA	12.5	12.9	13.4	14.2	15	16
NAEP: Grade 8 Mathematics	8.9	NA	9.9	10.3	11	12	13	14
NAEP: Grade 8 Reading Language Arts	10.2	NA	15.4	15.9	16.4	17	18	19
ISAT: Grade 3 Math	69.9	72.6	73.9	74.5	75.5	77	79	81
ISAT: Grade 3 Reading	56.9	59.1	60.6	61.4	62.4	64	68	70
ISAT: Grade 4 Math	71.0	71.6	76.4	77	78	80	82	84

ISAT: Grade 4 Reading	55.8	56.8	57.6	58.2	59	61	63	65
ISAT: Grade 5 Math	65.7	66.9	69.2	70.2	71.5	73.5	76	79
ISAT: Grade 5 Reading	55.6	57.6	60.7	62	64	67	69	71
ISAT: Grade 6 Math	65.4	68.7	68.6	69	70	72	74	76
ISAT: Grade 6 Reading	64.9	66.6	71.5	72.5	73.5	75.5	78	80
ISAT: Grade 7 Math	64.7	68.5	70.7	71.5	72.5	74	76	79
ISAT: Grade 7 Reading	63.1	61.9	64.8	65.8	66.8	69	72	74
ISAT: Grade 8 Math	63.6	68.0	73.8	75	76	78	80	82
ISAT: Grade 8 Reading	70.7	72.2	74.1	75.5	77	79	81	84
PSAE: Math	18.6	20.4	20.2	20.8	21.5	22.5	24	26
PSAE: Reading	28.0	27.6	24.8	26	27	28	30	32
High School Graduation Rate	76.7	78.0	74.0	75	77	79	82	84
Total College Enrollment (% of students who entered 9th grade)	30	31	33	34	36	38	41	44
Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	18	19	21	23	26	29	32	35
Hispanic Subgroup								
	SY08-09	**SY09-10**	**SY10-11**	**SY11-12**	**SY12-13**	**SY13-14**	**SY14-15**	**SY15-16**
NAEP: Grade 4 Mathematics	20.3	NA	19.9	20.5	21	21.8	23	24
NAEP: Grade 4 Reading Language Arts	15.6	NA	18.1	18.5	19	20	22	24
NAEP: Grade 8 Mathematics	17.0	NA	19.1	19.7	20.5	21.7	23	25

NAEP: Grade 8 Reading Language Arts	18.4	NA	23.4	24	24.5	25.7	27	28
ISAT: Grade 3 Math	77.7	79.2	82.0	83	84	86	89	91
ISAT: Grade 3 Reading	54.9	55.2	61.4	62	64	66	69	71
ISAT: Grade 4 Math	79.5	79.8	82.4	83.5	84.5	87	89	91
ISAT: Grade 4 Reading	60.1	59.1	63.3	64.5	66	68	71	74
ISAT: Grade 5 Math	75.5	77.1	78.6	79.5	81	83	86	88
ISAT: Grade 5 Reading	59.8	61.0	64.8	65.5	66.5	69	71	74
ISAT: Grade 6 Math	75.9	79.7	78.9	79.7	81	83	85	88
ISAT: Grade 6 Reading	69.4	72.7	78.0	79	80	82	84	86
ISAT: Grade 7 Math	78.1	79.9	79.8	80.6	81.6	83	85	88
ISAT: Grade 7 Reading	66.8	67.4	72.8	73.5	74.5	77	79	82
ISAT: Grade 8 Math	76.3	79.3	82.6	83.5	84.5	86	88	90
ISAT: Grade 8 Reading	77.4	77.5	80.1	81	82	84	86	89
PSAE: Math	31.6	33.8	34.9	35.5	36.5	38	40	43
PSAE: Reading	36.5	33.2	33.1	34	35	37	39	41
High School Graduation Rate	76.8	79.4	76.8	78	79	81	84	86
Total College Enrollment (% of students who entered 9th grade)	30	31	33	34	36	38	41	44
Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	18	19	21	23	26	29	32	35
Low-Income Subgroup								

	SY08-09	SY09-10	SY10-11	SY11-12	SY12-13	SY13-14	SY14-15	SY15-16
NAEP: Grade 4 Mathematics	17.9	NA	19.6	20	20.8	21.5	23	25
NAEP: Grade 4 Reading Language Arts	14.8	NA	16.4	17	18	19	21	23
NAEP: Grade 8 Mathematics	14.5	NA	17.1	17	18	19	21	23
NAEP: Grade 8 Reading Language Arts	16.2	NA	18.6	19	20	21	23	25
ISAT: Grade 3 Math	75.9	78.2	79.9	80.9	82	84	87	90
ISAT: Grade 3 Reading	57.6	60.2	62.4	63	65	68	71	74
ISAT: Grade 4 Math	76.7	77.7	80.8	81	82	84	87	90
ISAT: Grade 4 Reading	59.3	60.0	62.2	63	64	66	69	72
ISAT: Grade 5 Math	72.0	73.9	75.5	76.6	78	80	83	86
ISAT: Grade 5 Reading	58.6	61.2	64.1	65	66	68	71	74
ISAT: Grade 6 Math	71.9	75.7	75.0	76	77	79	81	84
ISAT: Grade 6 Reading	68.0	70.6	75.1	77	78	81	84	86
ISAT: Grade 7 Math	72.4	75.4	75.9	76.5	77.5	79.5	82	85
ISAT: Grade 7 Reading	65.1	65.4	68.3	69	71	73	76	79
ISAT: Grade 8 Math	70.6	74.6	78.8	79.5	80.5	83	86	88
ISAT: Grade 8 Reading	73.6	75.1	77.0	78	79	81	83	86
PSAE: Math	26.3	29.0	28.8	29.7	30.8	32	34	36
PSAE: Reading	33.2	31.8	29.9	31	32	33	36	39
High School Graduation Rate	76.6	79.3	75.1	76	77	80	83	85
Total College Enrollment (% of students who entered 9th grade)	30	31	33	34	36	38	41	44

Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	18	19	21	23	26	29	32	35
LEP Subgroup (English Language Learners)								
	SY08-09	**SY09-10**	**SY10-11**	**SY11-12**	**SY12-13**	**SY13-14**	**SY14-15**	**SY15-16**
NAEP: Grade 4 Mathematics	10.6	NA	12.0	12.5	13.0	14	15	16
NAEP: Grade 4 Reading Language Arts	7.4	NA	4.5	5	5.5	6	7	8
NAEP: Grade 8 Mathematics	7.4	NA	3.5	4	4.5	5	6	7
NAEP: Grade 8 Reading Language Arts	4.5	NA	2.2	3	3.5	4	5	6
ISAT: Grade 3 Math	73.2	71.5	73.5	74.5	76	78	80	83
ISAT: Grade 3 Reading	43.4	38.2	42.5	43.5	44.5	46	49	51
ISAT: Grade 4 Math	68.3	66.9	66.6	67	68	70	72	75
ISAT: Grade 4 Reading	39.3	36.0	33.9	34.5	35.5	37	39	41
ISAT: Grade 5 Math	58.2	58.5	54.9	55.5	56.5	58	60	62
ISAT: Grade 5 Reading	33.4	31.4	28.1	29.3	30.3	32	34	37
ISAT: Grade 6 Math	55.8	56.2	50.9	52	53	55	58	60
ISAT: Grade 6 Reading	41.1	38.2	41.5	42	43	45	47	50
ISAT: Grade 7 Math	56.8	55.2	51.4	52.5	53.5	56	59	61
ISAT: Grade 7 Reading	33.7	29.7	31.7	32.8	34	37	40	42
ISAT: Grade 8 Math	54.4	53.6	59.1	60	61	63	66	68
ISAT: Grade 8 Reading	46.8	38.9	43.6	44.5	45.5	47	50	52

PSAE: Math	17.7	17.4	13.0	15	17	20	23	25
PSAE: Reading	8.1	5.9	3.5	5	7	10	13	16
High School Graduation Rate	63.1	63.0	67.7	68.7	70	72	74	76
Total College Enrollment (% of students who entered 9th grade)	20	22	24	26	29	32	35	38
Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	13	14	15	17	19	21	23	25
IEP Subgroup								
	SY08-09	**SY09-10**	**SY10-11**	**SY11-12**	**SY12-13**	**SY13-14**	**SY14-15**	**SY15-16**
NAEP: Grade 4 Mathematics	23.3	NA	19.2	20	21	22	24	27
NAEP: Grade 4 Reading Language Arts	14.7	NA	13.0	14	15	17	19	21
NAEP: Grade 8 Mathematics	7.9	NA	9.6	10.5	11.5	12.5	14	17
NAEP: Grade 8 Reading Language Arts	9.9	NA	7.8	8.5	9.5	11	14	17
ISAT: Grade 3 Math	66.2	68.4	69.5	70.5	71.5	73	76	78
ISAT: Grade 3 Reading	41.7	44.5	43.8	44.8	46	49	52	54
ISAT: Grade 4 Math	64.0	62.8	65.3	66	67	70	73	76
ISAT: Grade 4 Reading	40.4	39.7	39.2	40	41	43	46	48
ISAT: Grade 5 Math	54.8	55.5	55.3	56.2	58	60	63	66
ISAT: Grade 5 Reading	37.6	38.0	38.3	39	40	42	45	48
ISAT: Grade 6 Math	50.7	53.4	50.9	51.7	53	55	58	61

ISAT: Grade 6 Reading	43.9	43.8	47.2	48.2	49.2	51	54	57
ISAT: Grade 7 Math	47.7	50.1	49.1	50	51	53	56	58
ISAT: Grade 7 Reading	38.3	37.5	36.4	37.3	38.3	40	43	46
ISAT: Grade 8 Math	44.7	46.5	51.0	52	53	55	58	61
ISAT: Grade 8 Reading	46.2	46.9	47.5	48.5	49.5	51	54	57
PSAE: Math	12.1	13.3	12.1	13	14	17	20	22
PSAE: Reading	16.8	17.2	15.6	16.5	17.5	19	22	25
High School Graduation Rate	78.1	79	79.5	80.5	81.5	83	86	89
Total College Enrollment (% of students who entered 9th grade)	30	31	33	34	36	38	41	44
Students Completing at Least One Year of College Credit Applicable to a Degree (% of students who entered 9th grade)	18	19	21	23	26	29	32	35

Appendix 4

STEM Application Areas and Functions of STEM Learning Exchanges

Priority STEM Application Areas

The nine Science, Technology, Engineering, and Mathematics (STEM) application areas identified as priorities in the RTTT Phase 2 Application and the RTTT3 Plan include:

1. **Agriculture, Food and Natural Resources**: development, production, processing, distribution, of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources;
2. **Energy**: developing, planning and managing the production of energy including renewable energy and clean coal technology and its distribution through smart grid technologies;
3. **Manufacturing**: product and process development and managing and performing the processing of materials into intermediate or final products and related support activities;
4. **Information Technology**: designing, developing managing, supporting and integrating hardware and software system;
5. **Architecture and Construction**: designing, planning, managing, building, and maintaining the built environment including the use of green technologies;
6. **Transportation, Distribution and Logistics**: planning, management and movement of people, materials and goods across all transportation modes as well as maintaining and improving transportation technologies;
7. **Research and Development**: scientific research and professional and technical services including laboratory and testing services, and research and development services;
8. **Health Sciences**: planning, managing and providing therapeutic, diagnostic, health informatics, and support services as well as biomedical research and development; and
9. **Financial Services**: securities and investments, business finance, accounting, insurance, and banking services.

Eight of the nine identified areas are consistent with the National Career Cluster Framework with the exception of "STEM," which has been renamed "Research & Development" for the purposes of the Illinois Pathways Initiative. In addition, the Information Technology (IT) Task Force of the Illinois Workforce Investment Board (IWIB) recommended changing the national IT pathway model to reflect changes in the IT sector. Given the increased investment, policy focus, and emerging occupations related to the energy sector, "Energy" is listed as a separate career cluster based on the recommendation of the Illinois Workforce Investment Board's State Energy Sector Partnership.

Functions of a STEM Learning Exchange

The nine functions of the STEM Learning Exchanges are:

1. Provide e-learning curriculum resources, including on-line courses, assessments and feedback systems, reference materials, databases, and software tools.

2. Expand access to classroom and laboratory space, equipment, and related educational resources necessary to support programs of study through regional partnerships and other strategies.

3. Support student organizations and their major activities, including conferences, internships and professional networking experiences, competitions, and community projects that build leadership, communication and interpersonal skills and provide professional and peer support networks.

4. Provide internships and other work-based learning opportunities that connect students with adult mentors.

5. Sponsor challenges and project management resources for students to work in collaborative teams addressing real-world interdisciplinary problems.

6. Provide professional development resources for teachers and school administrators integrated and aligned across middle school, high school, and community college instruction, including externships, support for web-based networks, and integrated professional development for academic and CTE instructors.

7. Provide career development and outreach resources to expand awareness of cluster-related programs and careers to K-12 students.

8. Provide tools and resources to assist students and schools with implementing personalized education plans and transitions to post-secondary academic and training programs, including establishing course articulation and dual credit opportunities.

9. Review performance of Programs of Study through assessments and work with school partners to continuously improve performance.

The Illinois Pathways Interagency Committee (IPIC) may, through action of its Governing Board, agree to modify these functions or add new functions of a Learning Exchange.

Appendix 5

ISLE Project Description and System Architecture Diagram

Illinois Shared Learning Environment (ISLE)

Planning Team Project Description

Note: This is a preliminary ISLE project description that is subject to further refinement and adjustment as the Steering Committee is established and ISLE is implemented.

I. INTRODUCTION

The Illinois Shared Learning Environment (ISLE) represents a remarkable opportunity to move Illinois into national leadership in supportive technologies for P-20 education and workforce development. As currently envisioned, the array of applications hosted on ISLE will include, among others, instructional and teaching collaborations, custom-designed resources for individuals learners from pre-school to college and career, mentoring and instructional spaces, teacher dashboards, information vaults, work-based learning supports, and social networking applications. While a number of vendor-developed applications will be supported through ISLE, it is necessary to develop the ISLE platform as a public resource for a variety of reasons. First, because ISLE will integrate and store sensitive personal information, ISLE's users must have confidence that the entities responsible for its development and management have experience and trustworthiness with this type of data, such as State agencies, public universities, or school districts. Second, ISLE is building from a number of existing public initiatives, such as the state longitudinal data system, Illinois Interactive Report Card, Illinois workNet, and the IlliniCloud, and therefore requires an aligned public governance model. Finally, while ISLE will provide needed services, it will also serve as a State economic development initiative, as ISLE will provide a platform for research and development and serve as an incubator for application developers to promote stronger education software and job growth in Illinois (similar to Illinois' health IT test-bed initiative).

ISLE has the benefit of building on a thoughtful requirements gathering process that was initiated as part of Illinois' Race to the Top applications, and expanded upon in a June 2011 report by the National Center for Supercomputing Applications (NCSA) at the University of Illinois Urbana-Champaign (UIUC) for the Illinois State Board of Education (ISBE) and the Illinois Department of Commerce and Economic Opportunity (DCEO). The NCSA report and its accompanying technical appendix provide recommendations to address the requirements that were necessary to realize the vision originally put forth in the State's Race to the Top applications, but also expanded upon that vision to provide the technical blueprint for an architecture addressing broader P-20 educational and workforce development objectives. With this blueprint, Illinois is prepared to develop a nationally leading platform to empower state agencies, school districts, educators, workforce development agencies, higher education institutions, and life-wide learners to use digital resources and benefit from research that provides insight, stimulates innovation, and improves learning and career development outcomes.

II. LEVERAGING CURRENT INITIATIVES AND INVESTMENTS

Illinois is leveraging significant national and state-level investments to establish ISLE as a transformative, next generation technology platform. Some of the existing initiatives that ISLE will leverage and support include the following:

- **State Longitudinal Data System:** The P-20 Longitudinal Education Data System Act establishes the framework and requirements for the development of the State's longitudinal education data system. This legislation, for which four Illinois policymakers received the Data Quality Campaign 2009 Leadership Award, requires the State to

implement all of the America COMPETES Act elements, and to ensure the SLDS can be used to support instruction and education-decision-making. The State's aggressive efforts in recent years have led to full implementation of an SLDS with all of the America COMPETES Act elements, as well as establishing the foundation for the provisioning of data to support many of ISLE's functions.

- **Shared Learning Infrastructure/Shared Learning Collaborative:** The Shared Learning Collaborative, an alliance formed by the Council of Chief State School Officers, the Bill & Melinda Gates Foundation, and the Carnegie Corporation of New York, is in the process of implementing the Shared Learning Infrastructure (SLI), an open-source system supported by a $100 million philanthropic investment that will enable states to provide administrators, teachers, parents, and other education stakeholders with an array of affordable, high-quality content and tools. Illinois is one of five states chosen by the Shared Learning Collaborative to first implement the SLI. The SLI will be piloted and operational in two Illinois school districts by the end of calendar year 2012, with a scaling up to other Illinois school districts in the following year.

- **IlliniCloud**:   The IlliniCloud was formed in 2009, when a core group of district tech coordinators and regional Learning Technology Center Directors, in coordination with ISBE, began to formally meet to support a grassroots effort to build a shared, cloud-based technology infrastructure "by K-12 for K-12". Since that time, this effort has grown to include over 200 Illinois school districts receiving Software as a Service and Infrastructure as a Service through IlliniCloud. The IlliniCloud recently received a $4.2 million ISBE grant to establish 1) multiple operational data-centers located at five lead school districts; 2) a pilot project utilizing the Illinois Interactive Report Card web server to use a cross-district data-repository that supports classroom-level reports for teachers; and 3) a series of professional development events for educators and technology staff from a total of sixty participating school districts. IlliniCloud is currently expanding its scope to serve workforce and human services agencies, serving as a proof-of-concept for a common cloud-based solution for education, workforce, and human services.

- **Illinois Interactive Report Card (IIRC):** IIRC hosts an array of reporting services, assessment reports, teaching and learning resources for teachers and students, and individual level test results for public schools and districts throughout Illinois. "MyIIRC," launched in 2010, provides a secure portal giving individual teachers and school administrations a customized, classroom-level data dashboard of information about their students (in the case of principals, students in their building), showing year-over-year reports of student progress in reading and mathematics using growth metrics. The IIRC offers an environment for developing specific web services applications and data warehousing resources for K-12 educators and schools that utilize ISLE.

- **STEM Learning Exchanges:** ISLE will serve as the information technology platform for resources and supports developed by the STEM Learning Exchanges -- a new State public-private infrastructure that will align resources and efforts within STEM cluster areas to support programs of study linking education and workforce systems. The STEM Learning Exchanges are in the process of being launched through both RTTT funds and private support.

- **Illinois workNet:** Serves as a one-stop e-resource provider for workforce development and workforce readiness through a web-based portal and a collection of web-applications designed for a variety of user audiences. Illinois workNet currently uses IlliniCloud as its

cloud service provider and leverages intra-governmental service integration with the Illinois Department of Employment Security (IDES), as well as featured applications targeted to K-12 students. .

- **Illinois Common Identifier Project:** ISLE may provide data storage and management services to support the Illinois Common Identifier Project, which will allow the integration of data on individuals and families across State education, workforce, and human services agencies for research, auditing, and analysis.
- **TAACCCT Grants:** Illinois community colleges have received over $20 million in grant funds through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) program which will be used in part to develop open source curriculum materials that may, as appropriate, be hosted on ISLE to support job training and education aimed at dislocated workers.

III. PROJECT GOVERNANCE AND BUSINESS MODEL

To guide the establishment of ISLE, the ISLE planning team has developed a "Development Governance" structure that includes a steering committee, various user group subcommittees, and a project management structure, proposed as follows:

A. ISLE Steering Committee

The ISLE Steering Committee has overall decision-making authority for the project through a consensus-based process and will guide the full scope of project administration. The steering committee will include representatives from, at minimum, the following organizations: (1) ISBE; (2) DCEO; (3) ICCB; (4) IBHE; (5) Early Learning Council; (6) P-20 Council; (7) University of Illinois - NCSA; (8) Northern Illinois University - Illinois Interactive Report Card (IIRC); (9) school district representatives, including representatives of the IlliniCloud.

Tasks and functions of the steering committee include:

- Establishing the framework for and **enabling the work of the project management team structure**, discussed in Section III.C. The steering committee delegation of project execution authority must be provided to empower the principle project partners, as defined in Section III.C, to dedicate human resources along with expectations and constraints defined by an annual project plan, budget, and schedule. These processes will appropriately empower the project management team to advance coordinated activities and ensure avenues are available to escalate conflicts among the project management partners to the attention of the full steering committee.
- Developing **a plan for a transition to an operational governance structure** that will oversee the long-term management and operations of ISLE. The transition plan must be developed by no later than January 1, 2014, with the transition completed by June 30, 2015.
    o The transition plan will define the long-term business model for ISLE, including its staffing and revenue mix for ongoing sustainability. The IlliniCloud has developed a "*cost recovery*" based business model that relies on a mix of user participation fees, district technology expenditures, and state and federal grants to

support its operations and expansion. Using the lessons learned from IlliniCloud, a similar business model will be adopted for ISLE that also incorporates appropriate fees for vendors accessing the ISLE platform. In addition, the multi-state SLC will be leveraged to the maximum extent possible for services such as application management to minimize ISLE's ongoing costs.

- o The transition plan will also describe the ongoing functional and operational relationship between IlliniCloud and ISLE. As mutually determined by the ISLE steering committee and IlliniCloud's governance body, this relationship may mature as an organizational marriage or they may remain two distinct autonomous organizational units throughout and beyond the proposed project.

- **Defining decision-making and review processes** that afford appropriate oversight of project management, regular meetings, review of project milestones, and remediation of risk.
- **Defining the processes for procurement and contractual matters** that comply with all legal and, as appropriate, agency and organizational process requirements. All procurement and contractual decisions that involve the expenditure of State capital funds must be agreed to by ISBE and DCEO.
- **Overseeing public reporting and information on ISLE**, including public information on overall project progress with milestone goals, and other public information announcements to manage public awareness and expectations.
- Authorizing appropriate agreements and approvals to empower individual school districts, organizations, institutions of higher learning, and State agencies to define and maintain **full authoritative control of any data, applications, and/or cloud services** as well as complete elective authority over any degree of integration and/or use of applications and services to be offered or to be accessible through ISLE.
- Establishing procedures for consideration and approval of **future changes to steering committee membership** as necessary to reflect ISLE's evolution and new partnerships.
- In addition to the user-group sub-committees identified below, **identifying and charging other sub-committees** necessary for ISLE's development and initial operations, including sub-committees addressing applications policies and data access and use.

B. User-group Subcommittees

- Five user-group sub-committees will allow for a broader group of stakeholders to participate directly in ISLE's governance: K-12, Early Learning, Community Colleges, Higher Education, and Workforce Development. Each sub-committee will include both technical and "end-user"-oriented members.
- The project managers must participate in the user-group sub-committees to ensure ISLE's users have sufficient input into decisions relating to system architecture and applications.

C. Project Management

- Overall project management will be led by NCSA, with *four* project management contractual positions -- one at NCSA/UIUC, one at IIRC/NIU, one at IlliniCloud, and the last at Illinois workNet/SIU. The project management team structure will facilitate the establishment of the community of *four principle project partners* that will collectively

coordinate planning, design, development, and integration milestones to align with the strategic goals and directives set forth by the steering committee. The steering committee will establish the positions, will be involved in the selection process, and must approve the selection. Each of the *principle project partners* will be expected to establish a project team that enables the arrived upon scope of work, deliverables, and integration milestones to be achieved within budgetary and time constraints defined by the steering committee, as well as each institution's processes and procedures for project execution.

- Systems Architecture Project Manager (NCSA):
  - Lead project management position; responsible for overall project coordination, scheduling, and roll-out management
  - Serves as direct project manager for the following ISLE work clusters (as separately defined by the ISLE planning team): Infrastructure, Data, and Core Software & Middleware
  - Must coordinate project activities and milestone goals in collaboration with other project managers and as the lead project manager with accountability to both the *principle project partners* and the steering committee
- K12 Cloud Services Project Manager (IlliniCloud):
  - Serves as direct project manager for ISLE activities related to integration and intra-data center operations, cloud services, and data-center operational relationships for the scope of services made available to the K12 community leveraging IlliniCloud
  - Must coordinate project activities and milestone goals in collaboration with other project managers under the guidance and leadership of the project management officer
- Learning and Instruction Project Manager (IIRC):
  - Serves as direct project manager for the following ISLE Work Clusters: End-User Experiences (which includes dashboard design and applications), and Learning Content
  - Responsible for course and class-room level assessment reports for individual students and teachers
  - Responsible for ensuring useful data is provisioned to school districts with respect to assessments and other student performance metrics, learning tools, and school and district improvement planning, in partnership with ISBE, the LDS, and participating districts
  - Must coordinate project activities and milestone goals in collaboration with other project managers under the guidance and leadership of the project management officer
- Career Development Project Manager (Illinois workNet/SIU):
  - Serves as direct project manager for ISLE activities relating to career development, planning, and management
  - Responsible for the basic default applications for career assessment, exploration, career planning, educational planning, work-based learning and mentoring, career/employment transitions, career advancement and networking, and career/labor market information

  o Must coordinate project activities and milestone goals in collaboration with other project managers under the guidance and leadership of the project management officer

The Steering Committee representatives will negotiate and execute an intergovernmental agreement formalizing the development governance structure by the end of calendar year 2011.

IV. <u>ISLE PROJECT COMPONENTS</u>

ISLE integrates the SLI's multi-state components and various state and local system components in a coherent framework to support Illinois educators, students, and families. ISLE is logically divided into three main layers, as depicted on the attached project diagram:

A. The "Source Layer" aggregates data that will flow into and out of ISLE and enables the overall administration of ISLE's cloud infrastructure
B. The "Data Layer" governs *how* data flows in and out of ISLE and the ISLE applications
C. The "Applications Layer" provides an ever-expanding set of applications and services that allow ISLE to support a wide range of personalized learning and career development tools

A. <u>Source Layer</u>

The source of data for ISLE will be a cloud computing infrastructure and operational data-center network that is peered, interconnected, and integrated across various cloud-computing resources.

1. ISLE Data Centers

ISLE will build from the existing data-centers that constitute the IlliniCloud proof of concept foundation, and that are currently being enhanced and expanded through an ISBE grant. ISLE will establish an operational data-center at the University of Illinois Urbana Champaign, which may be accomplished by repurposing an existing computational cluster from NCSA and through support from the University of Illinois for the use of the physical facilities and data-center footage that are currently in place and could potentially available for 42 months. The coordination of IlliniCloud and University of Illinois resources will provide a footing to establish the "public service" cloud computing infrastructure for P-20 education and workforce readiness envisioned for ISLE. ISLE will not represent a competitive service provider to IlliniCloud, but rather is envisioned to compliment, expand upon, and enhance the spectrum of services offered through IlliniCloud to the State educational and workforce development community. ISLE's scope includes build-out or enhancements of hardware resources at the data centers to the extent necessary to support ISLE's intended development of infrastructure services, applications, and managed services.

Northern Illinois University currently supports the IIRC and MyIIRC services and is also supported by IlliniCloud data integration investments. Illinois workNet has engaged with IlliniCloud for hosting and other cloud services. These relationships clearly demonstrate that

IlliniCloud is an important provider of cloud services in Illinois for a wide variety of education and public service functions. Data centers operated by other ISLE participants (such as Chicago Public Schools, Learning Technology Centers, community colleges, institutions, or agencies) may also be integrated and/or supported by IlliniCloud or ISLE cloud services, and leverage the State's broadband infrastructure provided through the Illinois Century Network.

2. ISLE Cloud Physical Infrastructure & Services

ISLE's scope of work includes developing the systems for intra data-center integration to support fault tolerance, connectivity, and administration of data center operations. Enterprise-level software technologies will support the accountability and auditing features necessary to govern inter- and intra-data center operations. ISLE will also allow user entities to dynamically procure and employ virtual computer networks in one or more of ISLE's data centers as necessary to address the entity's usage needs (*i.e.*, Infrastructure as a Services, or IaaS). ISLE will strive to implement service offerings that can be used to establish the full range of "Hybrid-Cloud" capabilities including establishing mechanisms and relationships to support dynamic scalability through commercial service providers using open-source platforms supporting the necessary API constructs and interfaces.

3. Data Transmissions to and from Buildings, Districts, and Agencies

As the result of the integration of data center operations, ISLE can centrally support managed processing for data transmissions between user entities and/or managed data services provided as cloud services. For school district user entities, ISLE will build upon the work of the IlliniCloud to develop and implement a School Interoperability Framework (SIF) Zone Integration Service (ZIS) and alternative interfaces that will facilitate the preparation and provisioning of data. ISLE's extension of the IlliniCloud model will support building-level and district-level business process automation functionalities to populate district-managed operational data stores and enable operational support for managed and/or unmanaged data warehouse and data marts to support local needs.

As appropriate, ISLE will also draw data from various State source systems, such as state assessment data from the ISBE Student Information System, early learning data from the ISBE SIS and Department of Human Services systems, and workforce data from DCEO and the Illinois Department of Employment Security. The scope of work for ISBE's data warehouse includes the design of a SIF agent that will allow ISBE to publish master data in standard XML format to support ISLE applications and data validation processes. A similar agent can be used for other State systems. State agencies will also leverage ISLE to support cross-agency data sharing, common identifier validation, and federated matching services.

B. <u>Data Layer</u>

ISLE's data layer integrates critical components of the SLI and several State enhancements and extensions, as discussed below.

1. ISLE Middleware Platform

The ISLE middleware platform establishes a rich framework for supporting the State's vision for the broad array of ISLE applications and P-20 users. The middleware platform is a foundation for developing, deploying, implementing, and integrating software applications and services in a supportable, standardized and consistent manner, utilizing the following platform components:

a) Authentication and Access Service: A centralized and federated authentication, authorization, and access control service will delegate access requests to proper authorities and facilitate "single sign-on" for ISLE users. This service will leverage proof of concept work through MyIIRC.

b) B2B Data Exchange: The ISLE middleware platform will support Business-to-Business (B2B) automation often used by business partners to facilitate data preparation and propagation between their respective information technology systems. As described in the NCSA June 2011 report, these services are composed of several middleware components that respond to external requests for data, originate data requests, and permit the monitoring of data processing. The project timeline for ISLE's data exchange and automation features will be developed to support the SLI pilot, while establishing the service framework necessary for a broader implementation for school districts and other ISLE user communities.

c) Multi-tenant Data Services & Platform: As data is provisioned to ISLE from source systems, the ISLE middleware will include a database services platform that supports commercial and open source database engines. The platform will support multi-tenant use, with clear delineation and segregation for each Illinois entity participating in ISLE.

d) Multi-entity Data Services & Exchange: The ISLE middleware will also include an application services platform that supports commercial and open source application engines. This platform will also support multi-entity use, and will capture auditable usage details such as who did what, when, and for how long.

e) External Research Services: ISLE will enable the establishment of a multi-entity data store that can, with appropriate privacy and governance controls, be used for comparative analysis and external research projects.

f) Monitored Job Scheduling & Execution: The ISLE middleware will establish a centrally-managed job scheduling and execution service (JSES) to enable data-exchange procedures to be automated across users where appropriate authorizations are in place. The JSES service is envisioned to provide buildings, districts, and agencies with a service to manage and monitor job execution for regularly scheduled and required exchanges.

2. Data "Vaults" and Stores

ISLE is envisioned to have a series of "data vaults" that organize and maintain information for particular individuals and entities, and facilitate the use of that information by applications. The "data vault" concept is used to describe a functionally specific data store that contains "private attributes" that are to be isolated and segregated with predefined access controls that govern use and/or modification. This construction and service is intended to be available for students, teachers, administrators, agencies, institutions, and authorized research

organizations to facilitate limited, audited, and managed accessibility by applications and/or web-services. For example, the *student vault* will include information on a student that generally remains with the student as he or she transitions from preschool to kindergarten, from school to school, and on into postsecondary education and the workforce. Within the application layer, an authorized web-service or portal application will be able to access the vault and show informational attributes on the student in a unified view, available to parents, educators, and other authorized persons with appropriate privacy and access controls and monitoring. Further design will determine the precise nature of the relationship between the ISLE vaults and the SLI data stores.

3. Data, Apps, & Web-services Integration

ISLE will also include services for data to flow securely to and from applications. The SLI scope includes the development of a Secure Web Services API that will strictly govern access to all data within the SLI data stores. ISLE will leverage this API and, as necessary, include other data exchange services to support ISLE applications and content.

C. <u>Application Layer</u>

Illinois will leverage the full extent of the SLI application environment to develop a robust and open applications marketplace that fully enables personalized learning across the P-20 spectrum. The applications marketplace will include vendor applications, State- and district-developed applications, and open source applications. While the State will support the development of free or low-cost "default" applications in certain priority areas, the State will foster competition and not establish any monopolies unless a particular type of application must be used for regulatory or accountability purposes. User ratings and performance outcomes will be used to provide information to ISLE consumers on the best available applications for particular purposes and functions.

1. ISLE Managed Applications and Services

The State intends to develop or integrate a series of applications and services that are critical for supporting the basic intended functions of ISLE. These applications and services will be integrated and managed by the ISLE governing entity. Some of the key ISLE-managed applications and services include:

a) <u>Collaboration and Core Productivity</u>: ISLE will include a common set of personnel and organizational business productivity tools (documents, spreadsheets, wikis, web-sites, etc.) for all users and construction templates to promote a common presentation standard. The design phase will explore using existing commercial or open source productivity suites, with the objective of establishing a high quality service relationship at the lowest possible cost.

b) <u>IIRC/MyIIRC</u>: ISLE provides a number of opportunities to improve and enhance the services available through IIRC and MyIIRC by, for example: (i) transforming the state's web-based school and district improvement planning process, currently hosted on IIRC, into an information-rich social space for teacher communities to take life, explore

ideas, exchange information on what works, and create improvement learning exchanges; (ii) further building out MyIIRC by making it more accessible to more districts and more content-rich, at even lower cost, while opening access directly to students and parents; and (iii) linking IIRC's numerous progress reports to a web services environment deployed via ISLE where learning exchanges, teaching communities, instruction-focused meta-analysis, and content-rich educational tools will reside and flourish.

c) <u>Career Development</u>: ISLE will support a career development interface that will support major career development functions including career assessment, career awareness/exploration, career and educational planning linked to course and program scheduling and application and gateway course articulation and credit transfer interchanges (e.g., building from IAI portal), work-based learning connections, and employment search and transition/retention.

d) **Principal and Teacher Evaluation Web-based Supports**: ISLE will provide a number of supports for the implementation of teacher and principal evaluation processes as required by Public Act 096-0861. These tools will include online training materials for evaluation and tools for calibrating observations. In addition, ISLE will provide a location to link student performance and teacher's performance goals and professional development. Finally, where possible ISLE can act as a location for data collection for both practice and student growth measures. These tools will be available for district use; however, determination of their use will be determined by districts unless required by statute or rule and with appropriate security and access restrictions.

e) <u>Learning Content Repository</u>: The learning content repository system will provide a centrally managed resource that will allow both locally created content and vendor content to be tagged, rated, stored and delivered within the ISLE portal interface. The NCSA June 2011 report considered the potential to adopt the open source Fedora Commons repository system to meet this requirement.

f) <u>Business Intelligence Apps</u>: Business intelligence applications will support improved decision-making by providing historical, current and predictive analysis of operations and instructional processes.

2. SLC Managed Applications and Services

While a number of ISLE's key applications and services will be developed and managed by the ISLE governing entity, Illinois will also take full advantage of SLC's application management and integration procedures to avoid duplication of effort and to provide full supportive access to the SLC's "application universe". The SLC will undertake a comprehensive engagement strategy to encourage vendors and open source developers to build applications that will be available through SLI. State agencies, the IlliniCloud, CPS and other school districts will actively support the expansion of applications for education available through the SLI to include all instructional support vendors with a large presence in Illinois. The State will also support the development of various applications addressing key priorities that are intended to be integrated and managed by the SLC, rather than the ISLE.

Other core features of the SLI project will be leveraged across ISLE applications to the extent applicable, including the tagging construct defined by the Learning Resources Metadata Initiative (LRMI) and the SLI's search features.
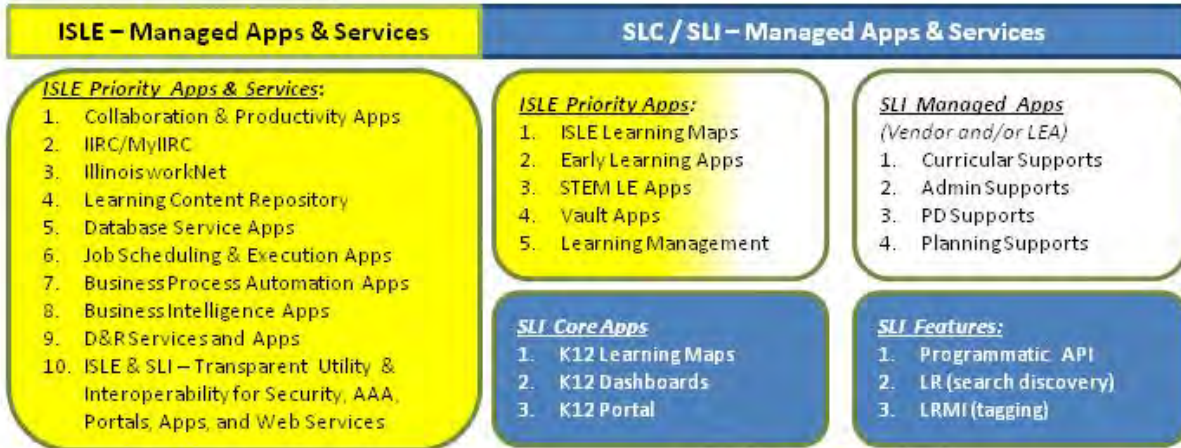
Some of the key SLC-managed applications include:

a. Learning Maps: Within the SLI, integrated data on a student will link to a learning map that identifies the student's progression against age-appropriate learning goals derived from applicable learning standards. These learning maps then link to applications and content to address a student's personalized learning needs. The learning maps can also be used to track the progress of a cohort of students against standards and to obtain supports to improve instruction for this cohort.   The SLI's core scope includes developing learning maps for grades K-12, aligned to the Common Core State Standards. Illinois' extension of the SLI scope through ISLE will include the development of learning maps for critical STEM pathways that extend from high school into postsecondary education and learning maps for preschool (if the State receives a Race to the Top Early Learning Challenge award).

b. SLI "Core" Instructional Support Applications: In addition to the K-12 Learning Maps, included within SLI's core scope is the development of customizable K-12 reporting dashboards and portals for K-12 teachers and principals. In addition, based on the input of teacher focus groups within the pilot sites, the Shared Learning Collaborative (SLC) will fund the development of two additional instructional support applications.

c. Early Learning Apps: A full suite of Early Learning Apps, as described in the State's Early Learning Challenge application, will be developed if the State is a recipient of a Race to the Top Early Learning Challenge award. This application suite will target the needs of preschool educators, administrators, and parents of preschool-aged children, and include customized portals, dashboards, instructional supports, and professional development tools.

d. STEM Apps: STEM Apps will integrate and coherently provide access to the applications and content related to critical STEM application areas.   This includes applications and content developed by the STEM Learning Exchanges, as well as other applications and content within the SLI App Universe that are "tagged" as relating to a particular STEM cluster area.

e. Learning Management System: ISLE will support a learning management interface shell with the capacity to capture information on learning activities; present information for learners and educators; and support curricular development, improvement planning, and evaluation of progress.   The NCSA June 2011 report considered the potential to utilize two open source building blocks, Canvas and Iliad, to meet this requirement.
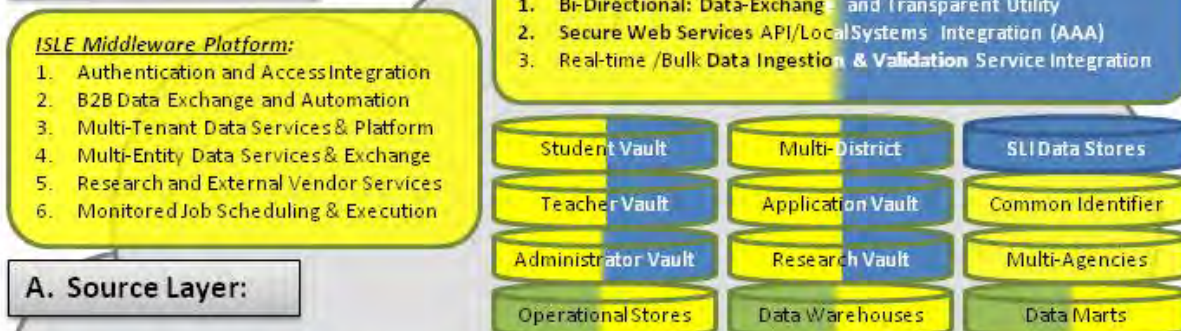
V. PROJECT TIMELINE

ISLE System Development	
• ISLE Intergovernmental Agreement executed	December 2011
• Design and development of ISLE Cloud and integration of services from IlliniCloud and the NCSA computational cluster • Design and development of ISLE Middleware Platform, with appropriate integration with SLI	Nov 2011 - December 2012
• Develop ISLE Learning Maps, Early Learning App Suite, and STEM App Suite	June 2012 - June 2013
• Develop remainder of ISLE Priority Apps	January 2013 - June 2014
• Long-term business model development and planning for transition to operational governance structure	June 2012 - December 2013
• System refinements needed to support second phase school district implementation • Transition from development governance structure to operational governance structure	January 2014 to June 2015
• System maintenance, extensions, and enhancements	July 2015 and beyond
SLI Pilot Launch	
• SLI pilot sites (Bloomington Dist. 87 and Normal Unit 5) prepare for full implementation	Nov 2011 - December 2012
• SLI pilot launch, integrated with ISLE Cloud and ISLE Middleware Platform	January 2013
Second Phase School District Launch	
• ISLE Second Phase school districts sites prepare for full implementation (IlliniCloud and RTTT 3 districts)	January 2013 - June 2014
• Second Phase school district launch	July 2014
• Extend implementation to all other school districts	August 2014 and beyond
Early Learning Launch	
• ISLE Early Learning pilot in three locations	January 2013 - Dec 2013
• Extend implementation, on a voluntary basis, to all Preschool for All and Head Start Programs • Pilot implementation in day-care homes and non-Preschool for All/Head Start Centers	January 2014 - December 2014
• Extend implementation, on a voluntary basis, to centers not participating in Preschool for All or Head Start	January 2015 and beyond
Other User Groups	
• Community College, Higher Education, and Workforce Development subcommittees convened	January - February 2012
• Subcommittees develop plan for ISLE use and applications	February - December 2012
• Plans reviewed and adopted by Steering Committee	January - March 2013
• Execute plans for the extension of ISLE to these user groups	April 2013 - June 2015

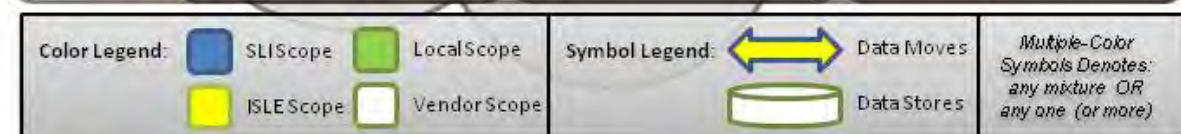# Illinois Shared Learning Environment (ISLE)
Project Diagram

C. Application Layer:

ISLE – Managed Apps & Services	SLC / SLI – Managed Apps & Services

ISLE Priority Apps & Services:
1. Collaboration & Productivity Apps
2. IIRC/MyIIRC
3. IllinoisworkNet
4. Learning Content Repository
5. Database Service Apps
6. Job Scheduling & Execution Apps
7. Business Process Automation Apps
8. Business Intelligence Apps
9. D&R Services and Apps
10. ISLE & SLI – Transparent Utility & Interoperability for Security, AAA, Portals, Apps, and Web Services

ISLE Priority Apps:
1. ISLE Learning Maps
2. Early Learning Apps
3. STEM LE Apps
4. Vault Apps
5. Learning Management

SLI Managed Apps
(Vendor and/or LEA)
1. Curricular Supports
2. Admin Supports
3. PD Supports
4. Planning Supports

SLI Core Apps
1. K12 Learning Maps
2. K12 Dashboards
3. K12 Portal

SLI Features:
1. Programmatic API
2. LR (search discovery)
3. LRMI (tagging)

B. Data Layer:

ISLE Middleware Platform:
1. Authentication and Access Integration
2. B2B Data Exchange and Automation
3. Multi-Tenant Data Services & Platform
4. Multi-Entity Data Services & Exchange
5. Research and External Vendor Services
6. Monitored Job Scheduling & Execution

ISLE & SLI -- Data, Apps,& Web Services Integration:
1. Bi-Directional: Data-Exchange and Transparent Utility
2. Secure Web Services API/Local Systems Integration (AAA)
3. Real-time /Bulk Data Ingestion & Validation Service Integration

Student Vault	Multi-District	SLI Data Stores
Teacher Vault	Application Vault	Common Identifier
Administrator Vault	Research Vault	Multi-Agencies
Operational Stores	Data Warehouses	Data Marts

A. Source Layer:

Local Entities ⟷ ISLE ⟷ State Agencies/SLDS

ISLE Cloud Physical Infrastructure & Services:
1. Intra Data Center Architecture Integration
2. Monitored, Managed, and Audited Operations
3. Dynamic Procurement, Allocation, Use, & Disposition of Virtual Computational Network & Resources
4. Any necessary Refactoring, Refitting, and Build-out or Enhancements of Hardware Resources
5. Security and Policy Enforcement for Resource Management, Use, and all Operational Services

ISLE – Managed Services

ISLE – Data Centers	IlliniCloud Data Centers:	NIU Data Center:	Other Data Centers:
	• Bloomington – SD87	• IIRC / MyIIRC	• School districts
	• DeKalb – CUSD 428	**UIUC Data Center:**	• LTC(s) & ROE(s)
	• 3 – Other SD(s)	• NCSA	• Community Colleges

Color Legend: ■ SLI Scope ■ Local Scope ■ ISLE Scope ☐ Vendor Scope

Symbol Legend: ⟷ Data Moves ⬭ Data Stores

Multiple-Color Symbols Denotes: any mixture OR any one (or more)

Appendix 6

Performance Evaluation Reform Act (PERA) Critical Elements

PERFORMANCE EVALUATION REFORM ACT (PERA): CRITICAL ELEMENTS	
Student Growth	All systems must include student growth as a significant factor in all teacher and principal evaluations. PERA establishes a State "default" model for teacher evaluations basing 50% of the rating on student growth that will apply if an LEA and its union cannot reach agreement within 180 days. Administrative rules to implement PERA proposed by ISBE designate that student growth must constitute 30 percent of the final performance evaluation rating assigned, which will be phased in using 25 percent for the first two years of implementation for school districts implementing systems in 2012-13 and 2013-14 school years. The other component of the evaluation is based on professional practice.
Evaluation Plan Development	PERA requires that local teacher performance evaluation plans be developed in good faith cooperation with the local collective bargaining unit. However, to ensure timely implementation, it also includes a 180-day "backstop" for districts and unions to reach agreement on the plan before defaulting to a State default model. (In Chicago, if the district and union do not reach agreement in 90 days, Chicago Public Schools can implement its last best proposal.)
Evaluators	A broader range of properly trained evaluators can undertake teacher evaluations, including "peer" evaluators. The State must establish an evaluator pre-qualification program that includes rigorous training and promotes inter-rater reliability.
Rating Categories	PERA establishes four rating categories for teacher and principal evaluations (instead of the current three for teachers), with the addition of a "Needs Improvement" category that leads to professional development informed by performance evaluation data.

Timeline	PERA mandates evaluations that include student growth*:
	
	  (a) for all principals by the start of SY 2012-13,
	  (b) for teachers in 300 schools in Chicago by the start of SY 2012-13, with the remainder of CPS schools by the start of the following school year,
	  (c) for all teachers in schools for which an LEA has received a School Improvement Grant, by the date specified in the LEA's grant,
	  (d) for the lowest-performing 20% of remaining LEAs, by the start of SY 2015-16, and
	  (e) for all other LEAs, by the start of 2016-17.
	The time line for PERA implementation will be accelerated in RTTT3 Participating LEAs (see D(2) and Appendix 2). Senate Bill 7 allows any LEA, with the written agreement of the exclusive bargaining representatives of its teachers, to accelerate PERA.

State Supports	PERA ensures that the State establish a number of data collection and support systems to effectively implement evaluations (detailed in Section D(2) of the Plan).

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