

Education Innovation Partners

(Three EIP Initiatives: Teaching, Learning & Leadership Academy; Personalized or Individual Learning and Regional Technology Plan)

Self-Assessment Check Sheet Regional Technology Plan's Best Practices

Committee: *Kris Lee, Mike Hoche, Harlan Tjader, Thomas Forsman, Keke Sirjord, Rochelle VanDenHeuvel, Bart Johnson, Kim Jirik, Sheri Lee, Carrie McDonald, Robbi Albert, Jon Loeffen, Jim Bovee, Supt Jim Varichak, Troy Caddy, Lora Mathison*

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Goal: To design a Regional Technology Plan or roadmap that can guide, align, standardize and support EIP members while providing a cost effective, enterprise solution. Areas of focus:

- Bandwidth
- Foundation
- 1:1 Implementation
- Shared Curriculum
- Technology used to Maximize Teaching & Learning
- Distance Learning/Telepresence
- Shared Core Infrastructure

Components of EIP Technology Plan:

- 1) Diagram of EIP's Regional Technology Plan which is **built from the bottom up. The base must be accomplished before moving up a column.**
- 2) Best Practice for EIP Regional Technology. These Best Practices are standards that are required throughout the EIP if utilizing EIP funds.
- 3) Self-assessment check sheet. EIP members will self-assess using the quick check sheet when applying for EIP funds. Best Practice outlines in detail EIP requirements; the check sheet is only a tool, it does not supply all the detail. Use the check sheet in tandem with the Best Practices.
- 4) Application Form. An application form will need to be completed and submitted for each funding request to the EIP.

Funding Application: Funding applications, forms online, will clearly outline the request and via the check-sheet ensure that all prior needs have been addressed. Detail to support the check sheet is in the Best Practices. If help with the self-assessment is needed, EIP members can contact NESC for assistance.

Appeal Process: If an EIP member chooses to skip a step or requirement listed in the best practices, they must file a clear appeal outlining why the step is not needed in their particular circumstances. The appeal would need approval by the EIP RTC before any EIP funds would be released for the project.

Acronyms:

AP – Access Point

LMS – Learning Management System

BYOD – Bring Your Own Device
 CC – Community College
 D2L – Desire to Learn
 EIP – Education Innovation Partners
 LAN – Local Area Network
 NEAT – N.E. Alliance for Telecommunications
 NESC – North East Service Cooperative
 NHED – Northeast Higher Education District
 SAMR - substitution, augmentation, modification, redefinition
 POE – Power Over Ethernet
 QOS – Quality of Service
 RFP – Request for Proposal
 RTC – Regional Technology Committee
 TIS – Technology Integration Specialist
 TP – Telepresence
 TUG – Technology Users Group
 WAN – Wide Area Network

Checking “yes” means you met the item requirement. If you check “no” a brief explanation is required. If an item does not apply, check “no” and include a brief explanation.

Foundation – goal; enterprise & standardized bandwidth, infrastructure, cable, switches, wireless, access points & shared expertise

Bandwidth

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Bandwidth at minimum of 100 Mbps for 1,000 internet connected devices
		2.	Provider either NESC/Middle Mile or MnIT (previously OET)
		3.	Consideration for BYOD
		4.	Consideration for 1:1 and carts when figuring minimum bandwidth
		5.	Priority users are clearly defined and regulated as needed
		6.	Support legislative movement to reduce bandwidth cost
		7.	E-rates for bandwidth have been filed
		8.	Policy addresses video streaming
		9.	Student devices used for EIP classes have required access and speed
		10.	Effective firewall. Expanded firewall if expanding bandwidth

		11.	Enterprise filter with priority users defined
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Infrastructure

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Equipment in all closets is racked
		2.	Closets adhere to EIP cooling & climate recommendations
		3.	UPSs with batter backup are used on all closet equipment
		4.	Technology closets are clean, secured and easily accessible

Cable

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Cable runs identified and documented
		2.	Standard cable runs meet EIP recommendations (Cat6A or two runs Cat5e). Wireless runs meet EIP recommendations Cat6A recommend, minimum Cat6.
		3.	Fiber between all closets
		4.	All cable is labeled on both ends. Current data base with labeling scheme.
		5.	Technicians have been trained and can test cable and run length with ease.
		6.	Plenum/non-plenum runs identified in documentation

Switches

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Switches are current model, not end of life
		2.	Gigabit switching with EIP recommendations
		3.	POE required on a minimum of 50% all district/bldg switches

		4.	24 or 48 port
		5.	Spanning-Tree Features
		6.	Thoughtfully constructed Vlans
		7.	QOS as required
		8.	Storm control on network
		9.	Switch support & maintenance training
		10.	Switch standardization throughout EIP
		11.	Bulk order whenever possible
		12.	Switches clearly labeled and documented in data base

Wireless/Access Points Base Foundation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Detect AP failure and automatically adjust
		2.	Detect RF interference
		3.	Independent implicit beamforming recommended in base, required in 1:1
		4.	Multicast delivery, stream prioritization & resource reservation recommended in base, required in 1:1
		5.	Centralized management that is scalable & can manage APs
		6.	One click diagnosis & integration with other key architecture components
		7.	Support high client density loads with advanced features enabled
		8.	Thoughtfully constructed Vlans. Consider larger subnet for wireless.
		9.	Visibility to applications running on wireless network
		10.	Identify, prioritize and filter applications
		11.	New deployment able to upgrade to wave 2 without changing existing APs
		12.	AP requirements met. AP installed & rated in accordance with State Fire

			Codes and law.
		13.	AP placement based on documented plan
		14.	POE recommended on all switches, required on a minimum of 50%

Technical Support

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Technical support in your district/college follows EIP best practices
		2.	Technicians share expertise with one another throughout the EIP

Share Expertise throughout EIP

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Identify how you will share learned expertise
		2.	Inform EIP members of upcoming trainings

1:1 Implementation – goal; students learn anytime & anywhere

Wireless/Access Points 1:1 (see base requirements above & additional requirements below)

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Wireless & AP base requirements are met
		2.	Ability to do independent implicit beamforming
		3.	Multicast delivery to the AP edge & stream prioritization
		4.	Support high client density loads with advanced features
		5.	Ability to failover to back up controller
		6.	Support Multicast DNS & DNS Service Discovery-Bonjour

		7.	AP placement based on engineer service plan
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Policy, Procedures & Practices

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Research effective 1:1 projects
		2.	Develop a clear & complete 1:1 Plan
		3.	Use SAMR model in Plan
		4.	Identify measurable goals and benchmarks in your Plan
		5.	Identify apps and software needed
		6.	Inventory devices/equipment purchased with EIP funds
		7.	Communication plan to keep everyone informed
		8.	Policies and processes updated or established
		9.	Technology Integration Specialist position secured or ongoing classroom support defined
		10.	Choose end device compatible with EIP collaboration
		11.	Choose CMS compatible with EIP collaboration
		12.	Address BYOD process
		13.	Bulk order whenever possible
		14.	1:1 Plan tied to your district's Technology Plan

Professional Learning Plan

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish a comprehensive training/staff development plan
		2.	Teachers have device/tool in advance of implementation
		3.	Detailed digital citizenship training identified for students

		4.	Technician training for all 1:1 components
		5.	Communication with community
		6.	Ongoing training/staff development plan

Pilot

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Identify pilot audience & goals
		2.	Identify digital curriculum, apps and software, goals & benchmarks
		3.	Order and prepare devices for pilot
		4.	Establish future rollout process

Measure & Adjust

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Goals and benchmarks clearly defined
		2.	Identify a goal that encourages collaboration within the EIP
		3.	Review & adjustment process for goals and benchmarks

Implementation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Clear Plan that identifies all 1:1 components
		2.	Evaluation process
		3.	Up-to-date document/data base identifying all technology components
		4.	Devices inventoried
		5.	CIPA compliance met

Sustainability

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish budget for 1:1
		2.	Review 1:1 Plan and budget minimum of annually

Shared Curriculum – goal; to develop &/or share curriculum across the EIP

Process & Procedures

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Develop a Plan for sharing curriculum based on best practices & standards
		2.	If using distance learning refer to requirements under Distance Learning
		3.	Communication strategy

Professional Learning Plan

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish a comprehensive training/staff development plan
		2.	Administration supports professional learning/staff development plan
		3.	Teacher champions identified
		4.	Goals and benchmarks identified
		5.	Integrate into EIP's Teaching, Learning & Leadership Academy

Share Expertise within EIP

Yes	No	Check yes or no for each item completed according to EIP standards	
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		1.	Identify how you will share learned expertise across EIP
		2.	Establish ongoing training

Measure & Adjust

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Goals and benchmarks clearly defined
		2.	Establish monitoring and evaluation process

Implementation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Clear Plan that identifies all project components
		2.	Ability to adjust Plan as needed
		3.	Sustainability considered
		4.	Cooperative purchasing or RFPs considered if applicable

Technology used to Maximize Teaching & Learning – goal; technology is integrated into the classroom & staff development. TIS skills are utilized.

Process & Procedures

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish a Plan that will promote & sustain educational success
		2.	Identify the tools needed and comply to EIP requirements
		3.	Identify how the Plan supports students
		4.	Establish a Communication Plan
		5.	Integrate into EIP's Teaching, Learning & Leadership Academy

Professional Learning Plan

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish a comprehensive training/staff development plan
		2.	Training includes content delivery system/tools
		3.	Key individuals in all participating districts identified & roles defined
		4.	Establish monitoring and evaluation process

Share Expertise throughout EIP

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Identify how you will share learned expertise across EIP
		2.	Inform EIP members of upcoming trainings

Technology Integration Specialist

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Proposed TIS or classroom support clearly outlined
		2.	Identify resources that encourage higher order of thinking
		3.	Recommend TIS has classroom experience

Measure & Adjust

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Goals and benchmarks clearly defined
		2.	Establish monitoring and evaluation process

Implementation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Clear Plan that identifies all project components
		2.	Ability to adjust Plan as needed
		3.	Establish monitoring and evaluation process
		4.	Sustainability considered
		5.	Cooperative purchasing or RFP considered if applicable

Distance Learning – goal; expand educational opportunities for students, staff & community

Policy, Procedures & Practices

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Clear Plan or EIP Guidelines that identify all project components
		2.	Key person in your district who determines class needs &/or capacity
		3.	Priority registration throughout EIP
		4.	Student Information Systems – attendance & grading
		5.	Process for after hour utilization
		6.	Establish a Communication Plan

Programmer

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	TP class scheduling process
		2.	Identify programmer and contact information

		3.	Plan for resolving technical issues
		4.	Priority utilization defined
		5.	Process for programming after hours
		6.	Programming process defines relationship between K-12 & NEAT

Professional Learning Plan

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish a comprehensive training/staff development plan
		2.	Technician training for all TP components
		3.	Process for training after-hour instructors/users

Installation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Common vendor used for EIP installations
		2.	Purchase & physical location of end equipment
		3.	Technician training for all TP components
		4.	Standardized EIP classroom recommendations/guidelines followed
		5.	TP room manual outlining basic operations, troubleshooting and technical contact information
		6.	Bandwidth and traffic flow confirmed
		7.	Work with NESC for video delivery

Compatible Classrooms

Yes	No	Check yes or no for each item completed according to EIP standards	
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		1.	Bell & calendar schedule aligned
		2.	Standardized or compatible CMS
		3.	Required TP classroom tools standardized or compatible
		4.	Standardized classroom signage
		5.	Classroom expectations standardized and defined for staff & students

Pilot

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Identify class needs &/or capacity. Establish measurement for success.
		2.	Training/staff development defined. Identify how learned expertise will be shared across EIP.

Measure & Adjust

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Establish goals and benchmarks
		2.	Establish monitoring and evaluation process

Implementation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Clear Plan that identifies all project components
		2.	Ability to adjust Plan as needed
		3.	Cooperative purchasing or RFP considered if applicable

Sustainability

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Sustainability considered
		2.	Budget for distance learning established

Core – goal; shared enterprise infrastructure that supports EIP members and the region

This check list is relevant to EIP centralized core vendor(s) only, but it is helpful for EIP members to see what considerations vendors need to address.

Process & Procedure

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Physical location of core functions &/or hardware
		2.	Expenses to the EIP Collaborative for identified service responsibilities
		3.	Cost affiliated with membership; new or leaving
		4.	Adhere to the EIP Best Practices for standardization when working with members
		5.	Expectation 24/7 service
		6.	Optimum bandwidth

Installation

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Process and fees affiliated with installation, upgrades, replacement or new components
		2.	Key personnel and contact information

Redundancy

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Expectations for downtime
		2.	Redundancy options assessed ensuring 24/7 service

Sustainability

Yes	No	Check yes or no for each item completed according to EIP standards	
		1.	Plan for ongoing stability & growth for the core
		2.	Identify fees for core utilization by non EIP members
		3.	Seek alternative funding sources