

## BUSINESS PROPOSITION

OpenVES provides a compelling business proposition to states interested in implementing eLearning Platform Infrastructure. It provides a comprehensive, sustainable turnkey solution to the costly and time consuming steps of requirements definition, piloting and prototyping. It also provides a methodology that will assist states to understand the policy, architectural, reliability, scalability, and customization issues involved in building eLearning Platforms.

A State investment in eLearning Platform Infrastructure can be large and the costs of maintaining it are ongoing. The pervasive power of this technology can be a double-edged sword. While an eLearning Platform can deliver significant benefits, making a mistake, building an unsustainable or incomplete model, finding out too late that your solution doesn't scale, or changing the user interfaces, can create serious problems. The OpenVES solution will help you steer clear of the pitfalls while building a scalable, extensible, and powerful system for your state. It will help you use the system to sell itself within your state.

No state has adequate funds to build ALL the features in an eLearning Platform that they need. Some states have already invested significantly in building some of the infrastructure and components. OpenVES provides three answers to this dilemma.

- 1) OpenVES is publishing a set of specifications and standards, consistent with an open, standards based, public eLearning Architecture. States that are beginning, or engaged in development, will be able to use this roadmap to help them make decisions, buy products, and build systems that will have the potential for synergy and interoperability with other systems.
- 2) OpenVES will provide a core reference eLearning Platform infrastructure for states to use. If they use this infrastructure, the applications and tools they build for it, and integrate with it, will be interoperable.
- 3) OpenVES has an open education licensing model based on the ideas of sharing and collaboration. Once you have standards, once you have a core reference eLearning platform, and once states invest their development dollars building standards based components, it will be possible for states to share those reusable components with one another.

It will be this sharing that provides the greatest benefit to participating states. OpenVES is taking almost 2 million dollars of hardware, software, and licenses contributed by vendor partners and building the Sandbox to make it available to states. When states integrate their existing education and information applications into the Sandbox, those applications will be available under an Open Education License to other states. States choosing to adopt OpenVES will receive tens of millions of dollars of value, contributed by the vendor community and other states. Each new participating state will be obligated to contribute, as well. (The costs described below are for on-site support, focus groups, training, technical support, analysis and customization services.)

**SCHEDULE:** Group A - September 2002 - 2003  
**LICENSE:** Open Education License  
**COST:** \$ 25,000 - \$ 50,000 per state  
**BENEFITS:** Overwhelming

### OpenVES Sandbox Calendar (will be adapted state by state)

SEP02	OCT02	NOV02	DEC02	JAN03	FEB03	MAR03	APR03	MAY03	JUN03	JUL03	AUG03
<b>Phase 1 - Preparation</b>											
1a	1b	1c									
<b>Phase 2-Design</b>											
2a	2b										
<b>Phase 3 - Piloting and Prototyping</b>											
3a	3b	3c									
			<b>Decision Making</b>			<b>Go to Scale</b>					
Reference School Implementations – rural - urban											
<b>PUBLIC-PRIVATE PARTNERSHIP – (Partners, Memberships and Supporters)</b>											


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## ARCHITECTURE

	REGION OR DISTRICT	STATE APPLIANCE	OpenVES SANDBOX	GATEWAY CLEARINGHOUSE	OTHER GATEWAYS*
<b>STORAGE FRAMEWORK</b>	REPOSITORY DATA	REPOSITORY DATA WH	<b>STORAGE AND REPOSITORY</b> JNDI JDBC LDAP DNS RNS WebDAV	REPOSITORY	REPOSITORY
<b>APPLICATION FRAMEWORK</b>	LOCAL APPLICATION	STATE APPLICATION	<b>APPLICATION COMPONENTS</b> WSDL UDDI SOAP	NATIONAL APPLICATION	OTHER APPLICATION
<b>SERVICES FRAMEWORK</b>	LOCAL SIF ZIS	STATE SIF ZIS	<b>COMMON SERVICES</b> WSRP WSUI WSXLS DSML LDAP	NATIONAL SERVICES	OTHER SERVICES
<b>INTEGRATION FRAMEWORK</b>	LOCAL DIRECTORY	STATE DIRECTORY	<b>DIRECTORY PORTAL</b> HTML XHTML XML WAP XFORMS SOAP		
<b>USER DEVICE FRAMEWORK</b>			<b>END USER AND EDGE DEVICES</b>		

The OpenVES Architecture is based on recognized industry standards, openness, ASP hosting and an optional, distributed, value added model. It provides a reliable, scalable, sustainable, extensible way to manage eLearning based on J2EE and SunONE..

### OPEN

The OpenVES Architecture is based upon a rich collection of mature and emerging standards, best practices and implementation specifications for XML in education. It supports the commitment that any vendor or developer should be able to build components and plug-ins for the platform. More importantly, because it is web service based, any author, anywhere, can create content which can be delivered on the platform.

### RELIABLE

Simply building eLearning systems to scale is not enough. Anywhere, any time eLearning systems must be capable of running non-stop at high capacity. They must be designed to minimize and accommodate failure in order that when unanticipated and extreme failures do occur, even those failures only result in graceful degradation of service. As in any ASP hosted service environment, users have a right to expect nothing less than the highest levels of service.

### INTEGRATED

One of the salient features of OpenVES is its deep and pervasive integration. More than a set of boundary strategies, the integration framework provides a new way to think about educational applications. Driven by the Directory Service, integration begins with single sign-on and session security, and extends to collaboration tools, content management, and legacy applications. Name it, and you can integrate it.

### SUSTAINABLE

We are committed to not only providing the best and highest performance eLearning systems, but ones that are manageable, add real value at all levels of the organization and are sustainable because their human and technology costs are eclipsed by their human and technology benefits, and because in any rigorous bottom line analysis, they raise student achievement. We are so confident of this that we have built in the measurement tools to prove it.

### SCALABLE

PK12 Applications cannot succeed if they are built the requirements of pilots and prototypes. The PK12 Community of Practice works at a scale, which is orders of magnitude larger than higher education and most commercial training companies. To build, manage and support systems at this scale requires a robust enterprise architecture and a set of applications which provide both horizontal and vertical scalability.

### EXTENSIBLE

As an ASP model, OpenVES can scale rapidly, capture economies of scale, and meet the most demanding and aggressive implementation plans. The reason it can do these things is because it is being built on the same J2EE SunONE architecture almost all successful Internet companies use. But we added one more thing. We built in right from the beginning what we call the "Seventh Framework". It is our extensibility framework, to let us grow.

## eLEARNING PLATFORM FEATURES

### OUR JOB IS TO GIVE YOUR TEACHERS THE TOOLS THEY NEED TO SUCCEED!

We take this mission seriously. We want to start by convincing you that we can accomplish it. We believe that all teachers should receive the missing tools for standards based education reform, which they need to transform teaching and learning in their classrooms. We believe that it is no more fair to hold teachers and schools accountable, than it is to hold students accountable, until they have all the tools they need to do the job. During the last four years we have engaged in the reengineering of public education to make sense of the things needed to truly "leave no child behind". The minimum tool set includes the following things which are now, or will be included, in the OpenVES core eLearning platform.

**Instructional Management Tools** – tools for teachers to make assignments, conduct assessments, and evaluate student work – the focus will be on performance based criteria and authentic assessments but will include significant use of online assessments

**Student Tools** – tools to track and plan learning experiences, turn in assignments and provide evidence of achievement, and store student work in a digital portfolio

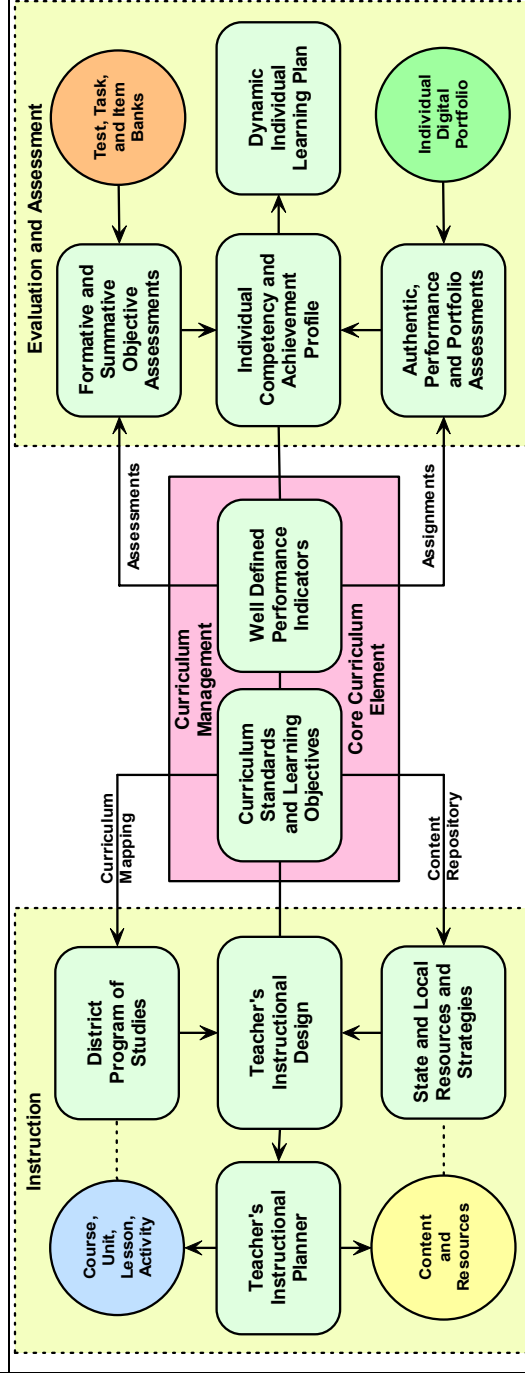
**Communications and Collaboration Tools** – comprehensive tools for synchronous and asynchronous collaboration and communication by teachers and students

**Curriculum Management Tools** – collaborative tools that make school, district, and state expectations of what students know, value, and are able to do, visible.

This listing does not describe all of the tools and resources needed, but should serve to illustrate the key components we have built, are building, and plan to build. Putting these tools in the hands of every teacher, and in their classrooms, will assure that "no teacher be left behind", which is prerequisite to leaving no child behind.

### OpenVES EDUCATION MODEL

The OpenVES architecture helps make sense of state and local education requirements, by providing tools for teachers and students that empower them to create a learning standards centric classroom, a personalized and localized virtual learning environment, and a digital environment that extends the school day and the school year and delivers learning resources whenever students want or need them. This model has some recognizable components, but puts them together in a new way.



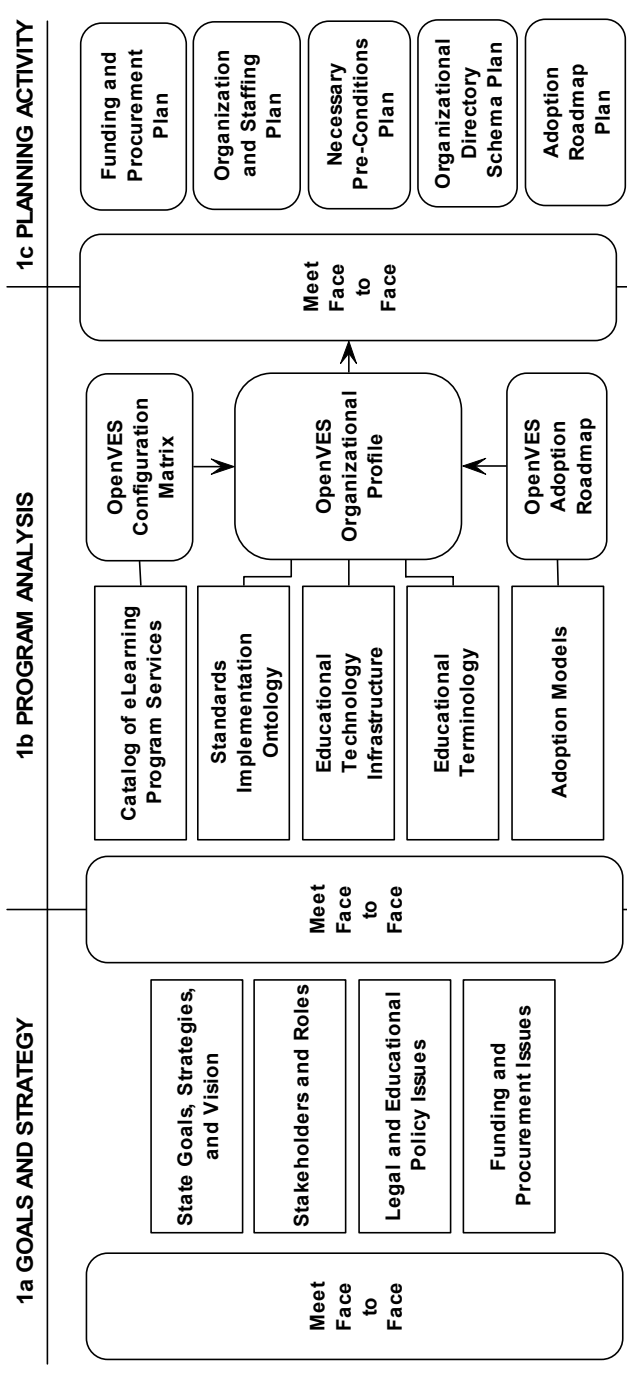
## OpenVES PROCESS AND SUPPORT

### OUR JOB IS TO GIVE YOU THE SUPPORT YOU NEED TO SUCCEED!

A rigorous support process has been designed to help state teams be successful in piloting and prototyping, in preparation for large-scale adoption of OpenVES technology. The process has three phases described below, which will be accomplished through a series of face-to-face meetings, online collaboration, and in-state activities.

#### 1 PREPARATION AND NECESSARY CONDITIONS

During the Preparation Phase 1, the OpenVES team will work with states on Goals and Strategy, preparing a detailed Program Analysis, and complete Program Planning Activity. This chart illustrates some of the major components of Phase 1, the Preparation Phase. This phase will assure that the necessary plans and preconditions for success exist before starting work.



#### 2 COLLABORATIVE DESIGN AND CUSTOMIZATION

During Phase 2 the plans developed in Phase 1 will be executed. A series of focus groups and online activities will use the OpenVES Sandbox environment as a "playground" where users can experiment with different forms of communication and collaboration, incorporate and publish content, and customize the environment to meet the needs of the state and its stakeholders. During this phase a growing number of state "thought-leaders", district personnel, and classroom teachers will get involved using tools and an eLearning environment in the process of designing their own. By the end of this phase, the design arrived at earlier will be validated.

#### 3 PILOTING AND PROTOTYPING

During Phase 3, the customized eLearning platform created, tested, and validated in Phase 2 will be piloted and prototyped in a more ambitious field test, designed to validate design decisions, and to secure stakeholder support. It is important to understand that the expectations raised in Phase 1 and 2 get satisfied in Phase 3 when teachers and other participants in the planning and design activities finally get their hands on the tools for use in their own schools. It is during this stage that valuable feedback is generated to fine tune the full-scale adoption of OpenVES technology in the next school year. It is during Phase 3 that adoption models can be piloted and evaluated in anticipation of statewide rollout, and the tempo of that rollout can be determined.