# Software to Fit T&L Practices

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# Sakai Project Summary

- Building Open Source Collaboration and Learning Environment (CLE)
- Indiana, MIT, U. Michigan, Stanford, Berkeley, Foothill
- Funded from Mellon Foundation through 2005
- Releases 1.0 10/04, 1.5 1Q05, 2.0 2Q05
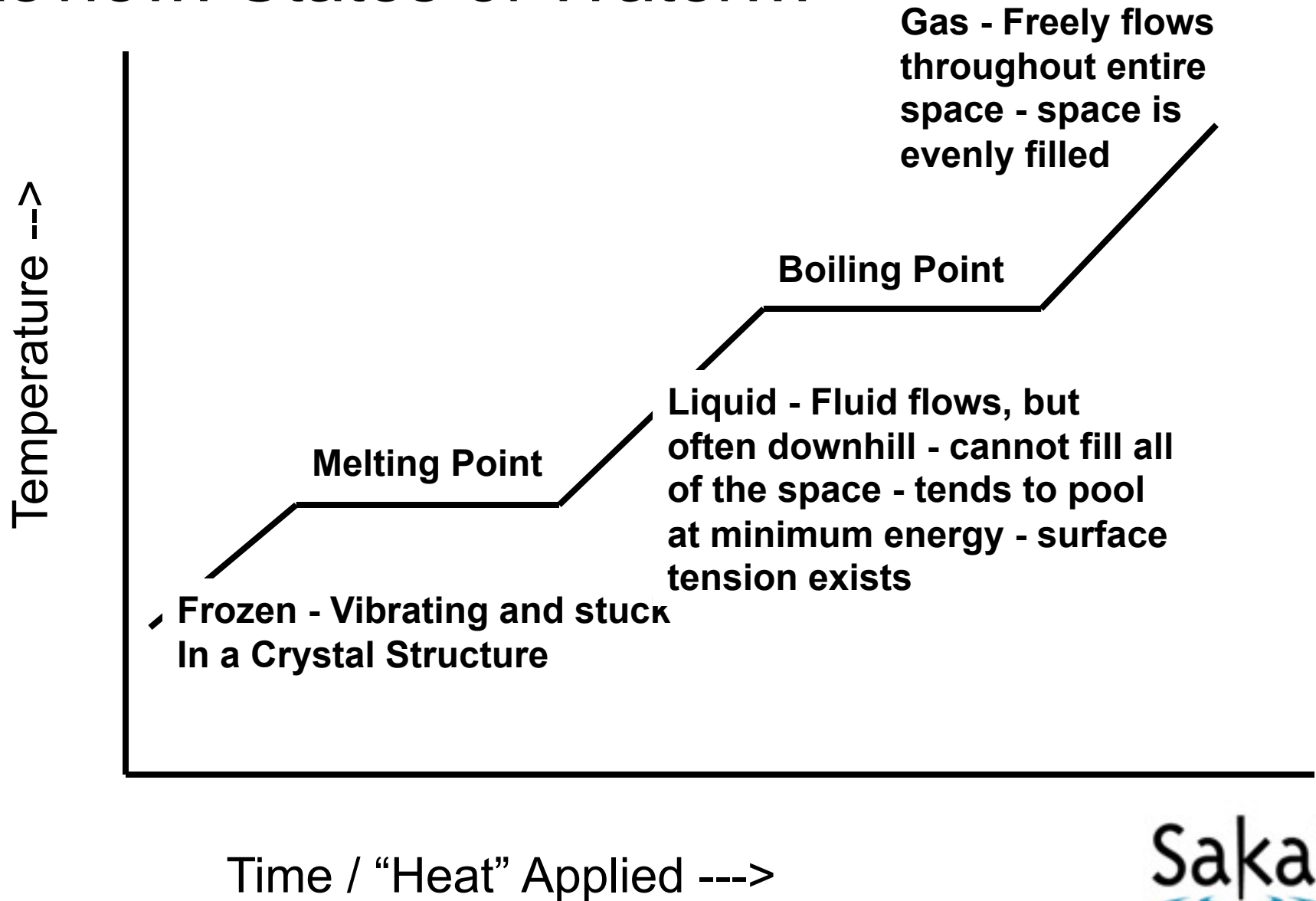- Goal: Version 2.0 will be comparable to commercial offerings
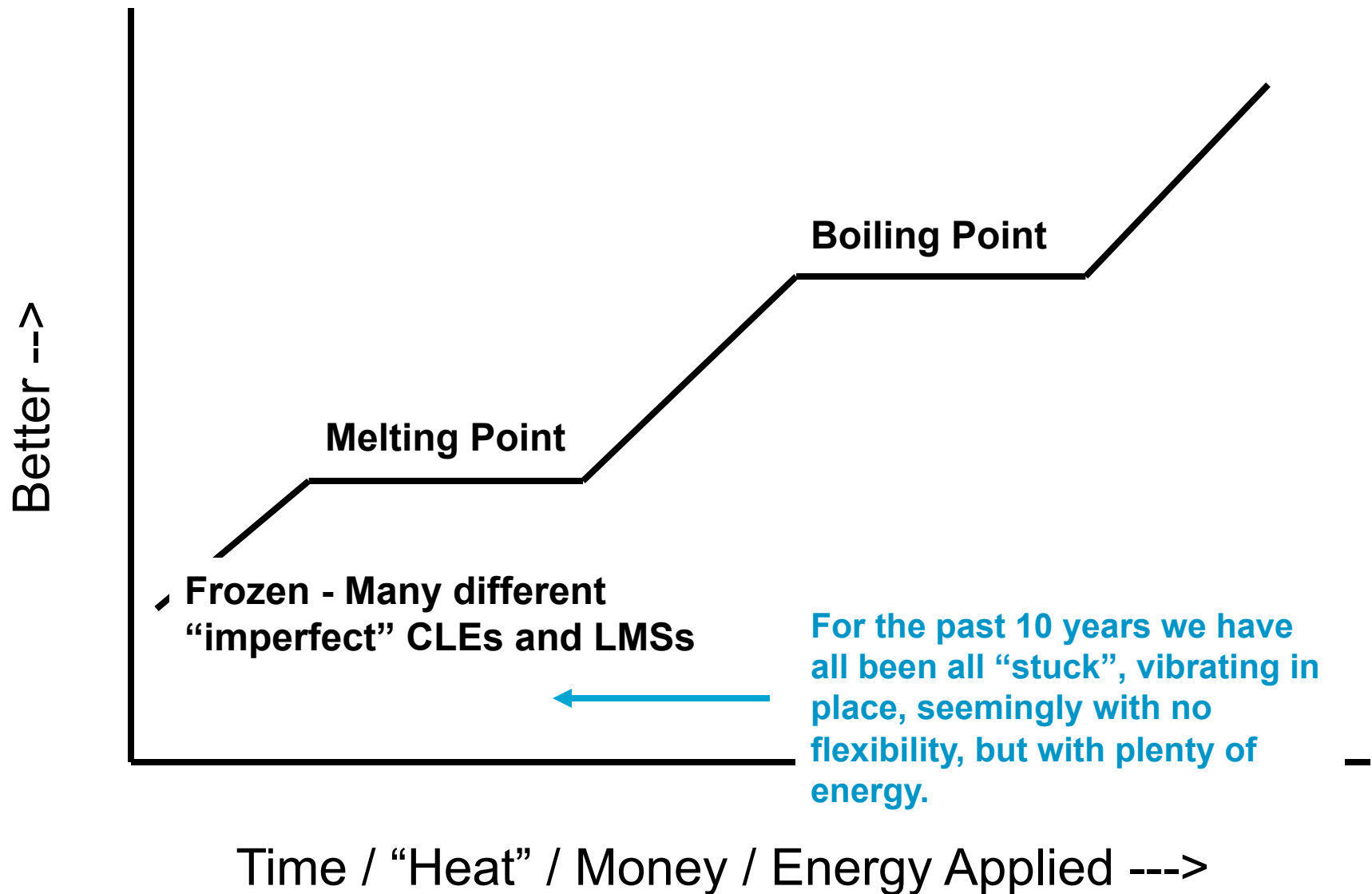
# Sakai's Goals (per Chuck)

- Stop institutions from writing "yet another" local CLE

- Provide Open Source reference implementation of a CLE

- Encourage portability between commercial and non-commercial CLE's

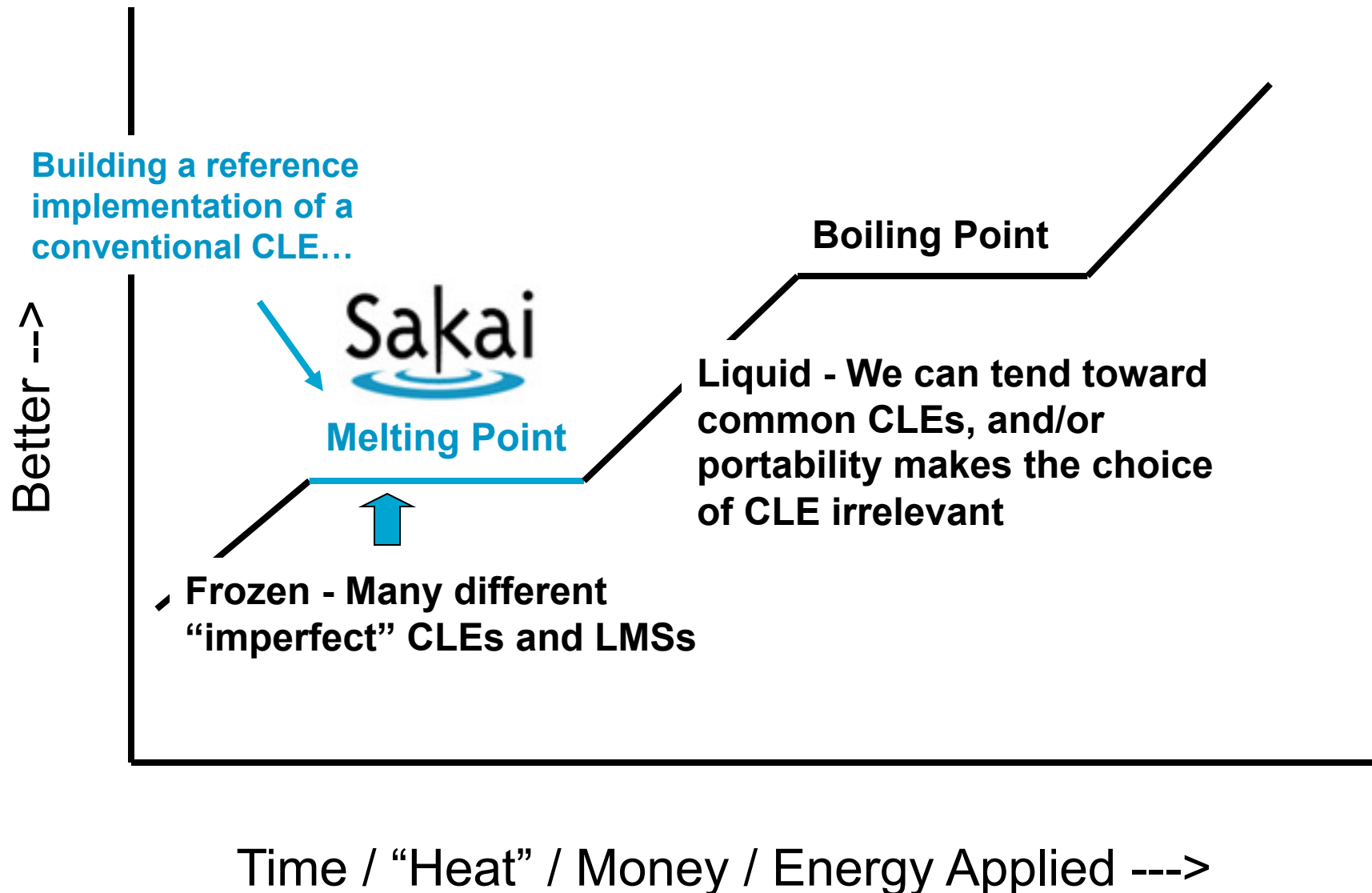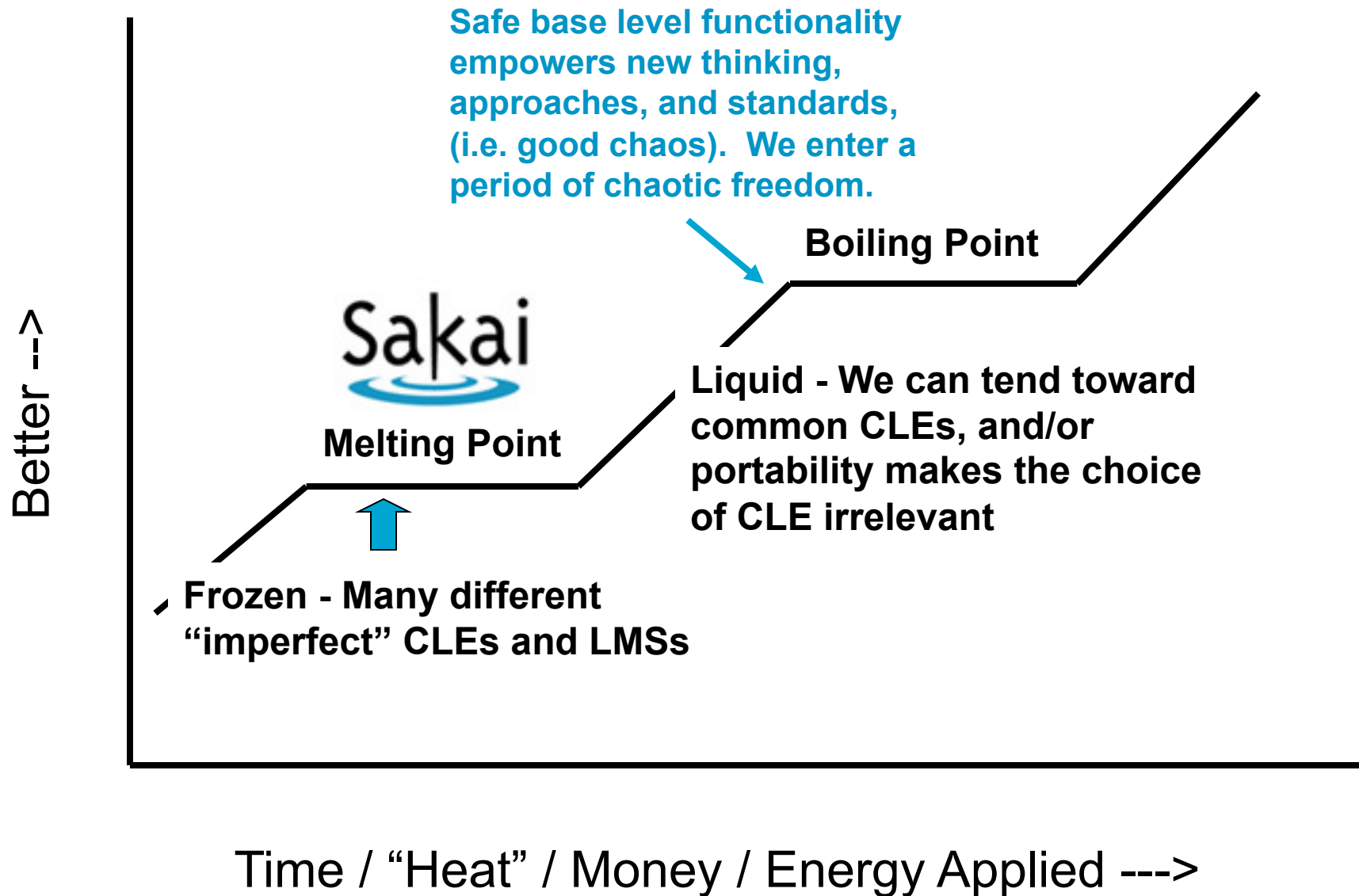- Ultimately: Act as base for true innovation in T & L

# Review: States of Water…



**Gas - Freely flows throughout entire space - space is evenly filled**

**Boiling Point**

**Liquid - Fluid flows, but often downhill - cannot fill all of the space - tends to pool at minimum energy - surface tension exists**

**Melting Point**

**Frozen - Vibrating and stuck In a Crystal Structure**

Temperature -->

Time / "Heat" Applied --->

# Latent Heat of CLE Innovation

Better -->

Time / "Heat" / Money / Energy Applied --->

**Boiling Point**

**Melting Point**

**Frozen - Many different "imperfect" CLEs and LMSs**

For the past 10 years we have all been all "stuck", vibrating in place, seemingly with no flexibility, but with plenty of energy.

# Latent Heat of CLE Innovation

**Building a reference implementation of a conventional CLE…**

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**Melting Point**

**Boiling Point**

**Liquid - We can tend toward common CLEs, and/or portability makes the choice of CLE irrelevant**

**Frozen - Many different "imperfect" CLEs and LMSs**

Better -->

Time / "Heat" / Money / Energy Applied --->

# Latent Heat of CLE Innovation

Safe base level functionality empowers new thinking, approaches, and standards, (i.e. good chaos). We enter a period of chaotic freedom.

**Boiling Point**

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**Melting Point**

Liquid - We can tend toward common CLEs, and/or portability makes the choice of CLE irrelevant

Better -->

Frozen - Many different "imperfect" CLEs and LMSs

Time / "Heat" / Money / Energy Applied --->

# Latent Heat of CLE Innovation

**Better -->** (y-axis label)

**Time / "Heat" / Money / Energy Applied --->** (x-axis label)

**Gas - Innovation can spread to cover the space of T & L practices**

True change in T & L happens in ways can not anticipate. CLE/LMS's can take completely new forms and directions…

**Boiling Point**

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**Melting Point**

**Liquid - We can tend toward common CLEs, and/or portability makes the choice of CLE irrelevant**

**Frozen - Many different "imperfect" CLEs and LMSs**

# T&L Innovation: Point Solutions

- There is a wide diversity of opinion when it comes to Teaching and Learning Practice and how technology is best used

- Those at the innovation front for T&L almost always evolve their own "point solutions"

- There is an impedance mismatch between these "point solutions" and conventional LMS Systems

- Until point solutions mature and become "conventional", LMS flexibility and standards for building/integrating many different tools is necessary

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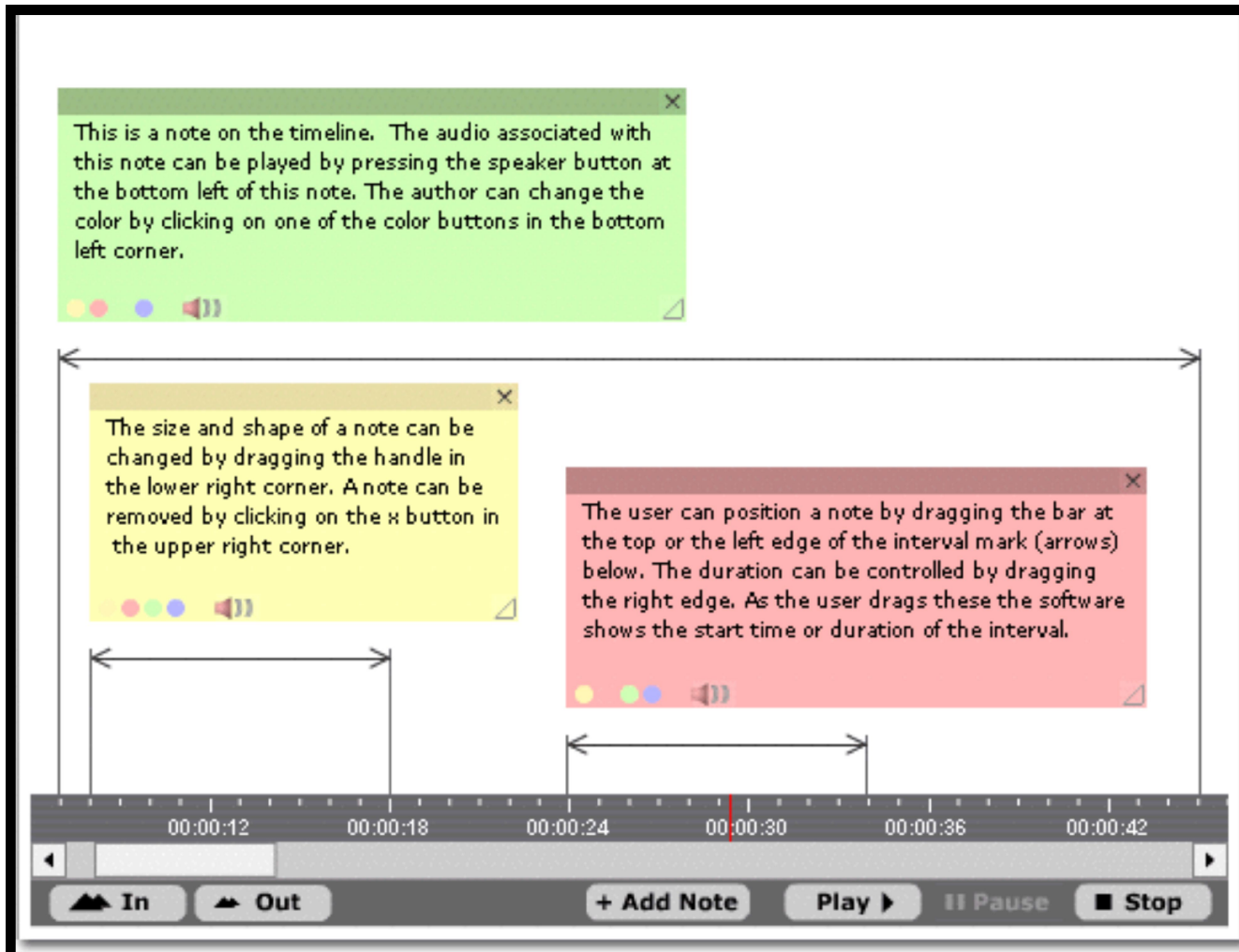
# Anatomy of a Point Solution for T & L

- Point solutions are by nature deep explorations down a possibly fruitful path by a passionate person or small group.
- Hard to get traction because it is not a "complete" solution
- Often projects end up starving to death for lack of attention
- Often it is a situation where a poet is ahead of their time

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# One Point Solution:
# ProjectPad Audio Annotation

# ProjectPad Details

- Jonathan Smith, Northwestern University (jas@northwestern.edu)
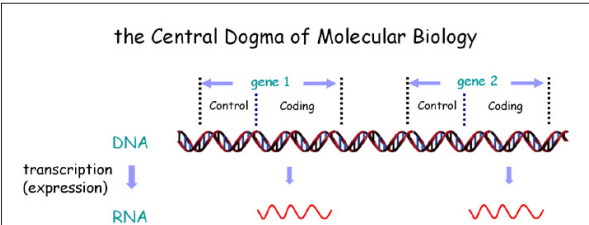- www.at.northwestern.edu/spoken/
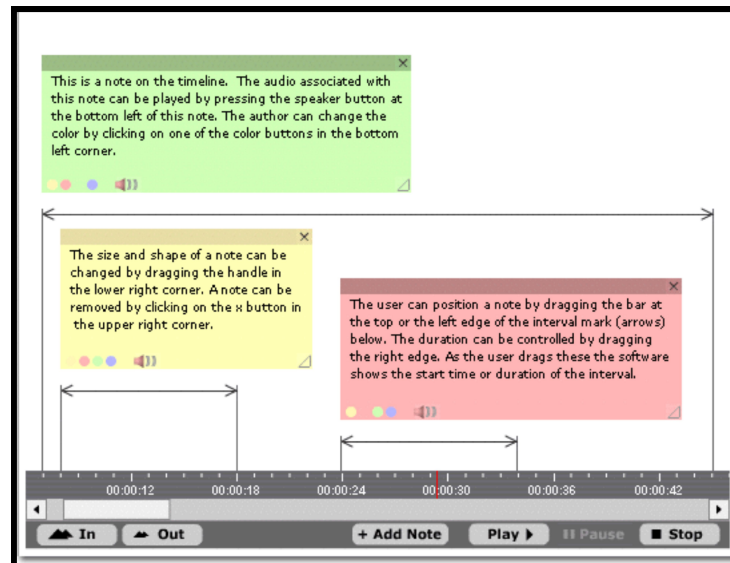
# A Story of a Point Solution

Web Lecture
Archive
Project
www.wlap.org
syncomat.com
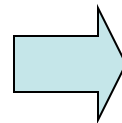


Tools
And
Technologies

Tools
And
Technologies

Lecture
Object

# Sad Story

- 1996 - Invented Sync-O-Matic (Real Media)
- 1997 - 1999 Gave continuous talks / demos at conferences
- 1998 - Tried to commercialize product through my job (It was the 90's after all)
- 1999 - Switched jobs (partially due to bitter experience with intellectual property folks)
- 1999-2001 Re-Invented the idea in ClipBoard-2000 (Quicktime/Apple)

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# More Sad Story…

- 2001 - Switched jobs to the private sector to commercialize technology and deploy into the M.L.T.
- 2001 - Microsoft dropped M.L.T.
- 2003 - Switched jobs again to work on open source CLE (CHEF)
- 2004 - Became part of Sakai (broader open source CLE)

# The Future of my Sad Story (?)

- 2005 - Sakai completes and is installed at 20 universities :)
- 2006 - I take a few months, reinvent ClipBoard and integrate it into Sakai so people can *finally* truly use it
- 2007 - Hundreds of people try my idea and it turns out it was a bad idea - so I invent something else…

- Moral: I have been waiting 10 years, and changed three jobs to find a framework to deploy my idea so people could use it.  Turns out the only way it was going to happen was to help build it myself.

# Chuck's Hierarchy of T & L Needs

Version ???

Version 3.0

Version 2.0

Version 1.0

The Future

Content Management

Assessment and Gradebook

Chat Room and Threaded Discussion

Syllabus on an Web site and an E-Mail List

We must learn to walk before we fly. And we must start at the bottom and work upwards…
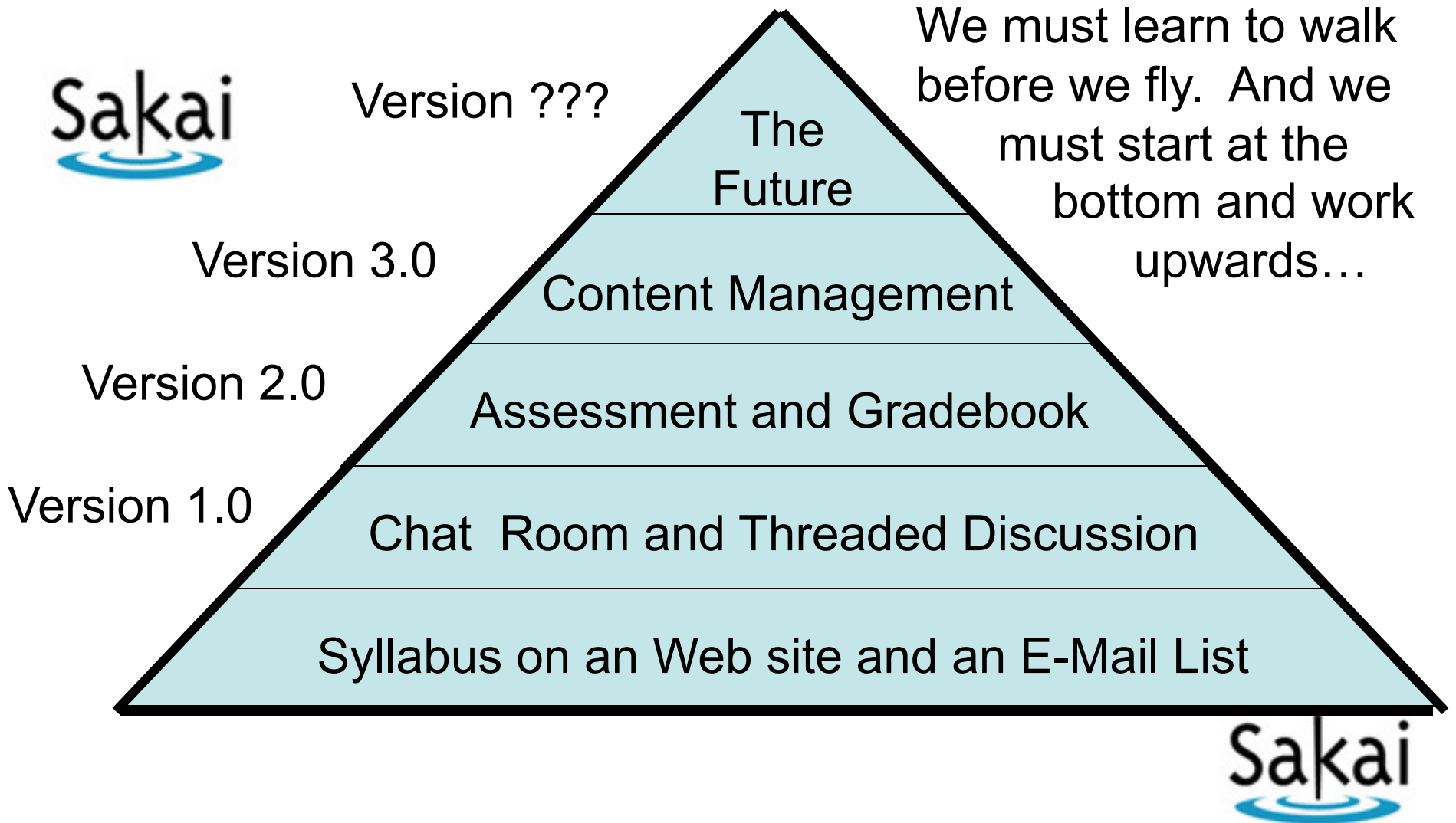
# Sakai: Empowering Point Solutions

- By providing a stable base of (possibly boring) capabilities, Sakai will empower and support the activities of innovative point solutions.

- Though the Sakai Educational Partners Program (SEPP) point solutions can begin to cluster together and form new stable bases for new innovation to launch from

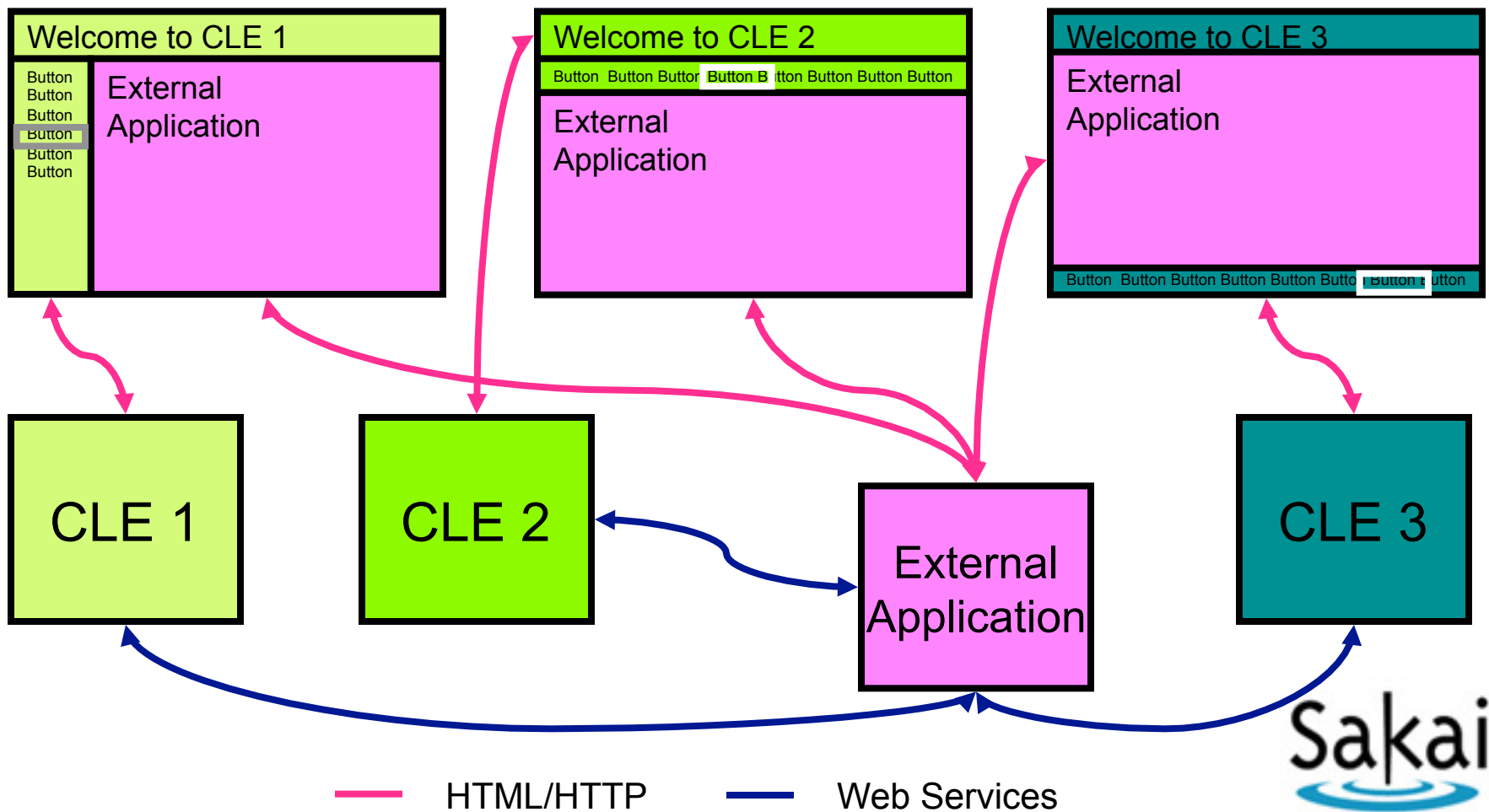- With sufficient standards, the choice of a LMS/CLE will not be so crucial

# IMS Tool Portability Project

- Started as a SIG for Sakai to interact with commercial LMS companies

- Approved 11/2004

- Blackboard, CETIS, MIT, Sun, Indiana, WebCT, University of Michigan …

- Goal: By Alt-I-lab in July 2005 to have demonstrated a single application working in Blackboard, WebCT, and Sakai.

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# By July 2005 - Demonstrate



**Welcome to CLE 1**
Button Button Button Button Button Button
External Application

**Welcome to CLE 2**
Button Button Button Button Button Button Button Button
External Application

**Welcome to CLE 3**
External Application
Button Button Button Button Button Button Button Button

CLE 1

CLE 2

External Application

CLE 3

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— HTML/HTTP     — Web Services

# How it Works

**Header**

Button
Button
Button
Button
Button
Button

**Tool Area**

① ⑤ ⑥

**CLE Environment**

Web Services

⑦

Launch Control

④

② 

**External Web Application**

Application Code

Session And Services Bootstrap ③

—— HTML/HTTP

—— Web Services

# Summary

- Sakai is "unfreezing" the LMS market in a number of important ways
- By gathering open source efforts together, we collectively "show up on radar".
- By solving the basics of the CLE space, Sakai provides a launch platform for true innovation in approaches to T & L
- By investing in standards efforts, Sakai insures the the forward progress will be across-the-board and not just for the adopters of Sakai.

# Observations

- Hype does not last - Sakai must deliver solid software before the Sakai hype starts to fade

- The management and leadership within Sakai are very driven - we have a structure where the board is made up of very active customers

# Thank you for your time..

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