Assessment System
Architecture and Technology
Phase 1 Report

Workshop Deliverables

Prepared in support of the
SBAC Enterprise Systems Technology
Architecture Phase 1 Summary Report

for the
Smarter Balanced Assessment Consortium

20 January 2012

Content

1. Introduction

This document reflects the outcomes from a series of workshops conducted by the SMARTER Balanced Assessment Consortium. Three workshops were held over three different weeks to capture the needs, requirements and desires of the Consortium in the design of the overall assessment system. These structured conversations had the ultimate goal to provide the necessary information to define the enterprise architecture for the assessment system.

The workshop participants included individuals from the SBAC Members and outside experts in the assessment and technology field; making up the collaborative. The following represents the workshop schedule and topics discussed:

- Week 1 – Scoring, Distributed Scoring, Reporting and Portals/Dashboards
- Week 2 – Item Authoring, Item Banking, Digital Library and Interoperability
- Week 3 – Test Creation, Test Delivery Platform, Adaptive Testing and Integration Framework

The documents that follow are not complete documents or thoughts. These simply represent the conversations that occurred during the three weeks. Follow-up conversations were held to further discuss several components.

2. Concerns, Probability and Impact Table

At the start of the workshops, a discussion was held to determine what the concerns of the participants included. A following conversation occurred to determine what the probability of the concern would happen as well as what impact it would have on the overall assessment system.

CONCERNS	PROBABILITY	IMPACT
Multiple implementation render coordination and integration	H	H
Item parameters drift because field test and operational test delivery platform differ	H	H
Technology / capacity issues will prevent schools from accessing the software	H	H
Many educators and administrators are “technology immigrants”	H	H
RFP may end up costing more based on decision we have made on architecture	H	H
Development of proposed architecture exceeds expected costs	H	H
Not enough time for adopters to plan for adoption	M/H	M/H
System outages - caused by uncoordinated change management	M/H	M/H
Interoperability will be a major hurdle for States (sync with existing systems)	M/H	M/H
No time for comprehensive usability testing	M/H	M/H
Inconsistent UX	M	M
No profit motive - no sustained innovation	L	H
Not having pilot State / region all through period A & B	L	H
States not engaging often and early	M	M/H
State / region resistant to adoption grow uncertainty	M	M/H
Architecture not able to accommodate emerging trends	M	M
Scope changes	M	M
Constant conflicting priorities (some states may like more technically depth, others breadth)	M/L	L
Availability of test design from architecture input	M	L
Perception of inclusiveness by community	M/L	M/L

3. User Roles and Goals

In order to understand of all the potential users of the system, an activity took place to determine what the users were as well as the specific goals of the user. Three groups representing scoring, item creation and test creation and delivery participated in this activity.

Process	User	Goals
Scoring		
	Student	Understand where I am in my current year Be college-/career- ready Know how my achievement compares with that of my peers Know if I am completing my requirements Know what I should be doing next
	Parent	Make sure my child's goals are being met and I have visibility into that progress Contribute towards and enhance my child's learning Collaborate with teachers and school staff Want to know how to help my child
	Teacher (long-term sub)	Monitor student progress Maximize student performance Plan intervention and curriculum Collaborate with other teachers Know whether the program meets its goals Communicate with parents about student progress

	Teacher (short-term sub)	Not be a babysitter to the students Quickly get back on path Get information on what my tasks are for the duration of the substitution Understand where the class currently is
	Special Education Teacher	Options for different input/output devices to accommodate needs of my students Want visibility of my students' performance with other teachers May have a different breadth of assessment Bypass the system if system doesn't handle exceptional cases
	Principal	Want to know how my school is doing Want to know how my teachers are doing Collaborate with other principals Communicate to authority the school's progress and goals
	Elementary School Principal	Track school progress Able to drill down / facilitate dialog around reports Present monthly progress reports to cabinets Looking for performance data for teacher performance reviews Engaged parents
	School Psychologist	Assess academic strengths and weaknesses Provide psychological services to students

	Proctor	Give test & monitor students during tests Ensure state / school procedures are followed Initiate students' test sessions
	Higher-Ed Placement Officer	To place students in colleges or to properly remediate classes Review admissions criteria for their colleges
	Intervention Specialist/ Tutor	Review reports Review student-level data Access resources
	Juvenile Justice	Determine if students are performing in their schools Act as a proxy in students' home schools
	Guidance Counselor	Help students choose past High School choices Direct student data to colleges or military
	Pre-Report Production Psychologist	Act as bridge between scoring and reporting Analyze reporting, audit data to verify information is/remains accurate
	Database Manager	Ensure systems can talk to each other Configure, calibrate student data

	Human Scoring Vendor, Scoring Director	Monitor raters' performance Train raters Provide information back to schools Maintain scorers' performance Conduct range finding to create rater training and certification documents Certify human raters Manage scorer adjudication processes Receive and return scores as required by contract Alert client of unusual responses (plagiarism, cheating, disturbing content)
	Scorer	Get feedback on my scoring Improve at evaluating student work Score responses as trained in time expectations
	AI Scorer	Train engine to score responses to items that are already hand-scored Produce reports on performance of AI engine on responses Monitor AI scoring operationally, for score quality and performance
	AI/Human Scoring Director	Manage, ensure proper flow of data between different scoring processes (AI, human, AI + human) Ensure scores are returned as required by contract (valid scores, timely scores) Produce reports on quality of scoring (AI, human, AI + human)
	Program Evaluators	Evaluate district programs Review statistical data to evaluate interventions

	Local Board	Make comparisons among schools within and across districts Evaluate principals and teachers Use summary data to help set policies
	US ED Evaluator (Accountability)	Evaluate SBAC Evaluate adequate yearly progress (AYP) Report to the board or superintendent
	Policy Makers	Evaluate teachers, staff, and users of the system Look for audience to support funding opportunities Compare and contrast state-to-state performances
	Media	Get information on relevant school or district performance Produce interesting stories
Item Creation		
	Item Reviewer	Ensure the item is unbiased, does not disadvantage certain groups, and is free of insensitivity Ensure that items are of the appropriate grade level and standards, fair to all students, and accurate to all constructs Work with item organizer or developer of item if there is a required change or revision
	Item QA	Ensure item layout is correct: screen design, grammar correction, layout and style, animation (such as drag and drop), supported by X browsers Test the item

	Content Specialist	Item specification, selection, assignment Participate in item review Ensure accessibility Manage translation
	Item Tagger	Ensure item has appropriate metadata Tag accessible elements so special education students can consume the item
	Item/Task Originator and Developer	Get item and tasks into the system as efficiently as possible Identify the constructs, give specification on an item Improve an item to make the item better, e.g. language, content, accessibility Identify stimulus to create items Make sure I have copyright to the item I create Provide input on accessibility issues Formulate templates or models from which items are produced Get feedback from cognitive lab review to see how well the templates worked and improve the process over time
	AI Reviewer	Review items for their AI scorability Suggest changes to enhance scoring
Test Creation and Delivery		
	Delegated Authority	TBD
	Test Creator	TBD
	System Proctor	TBD

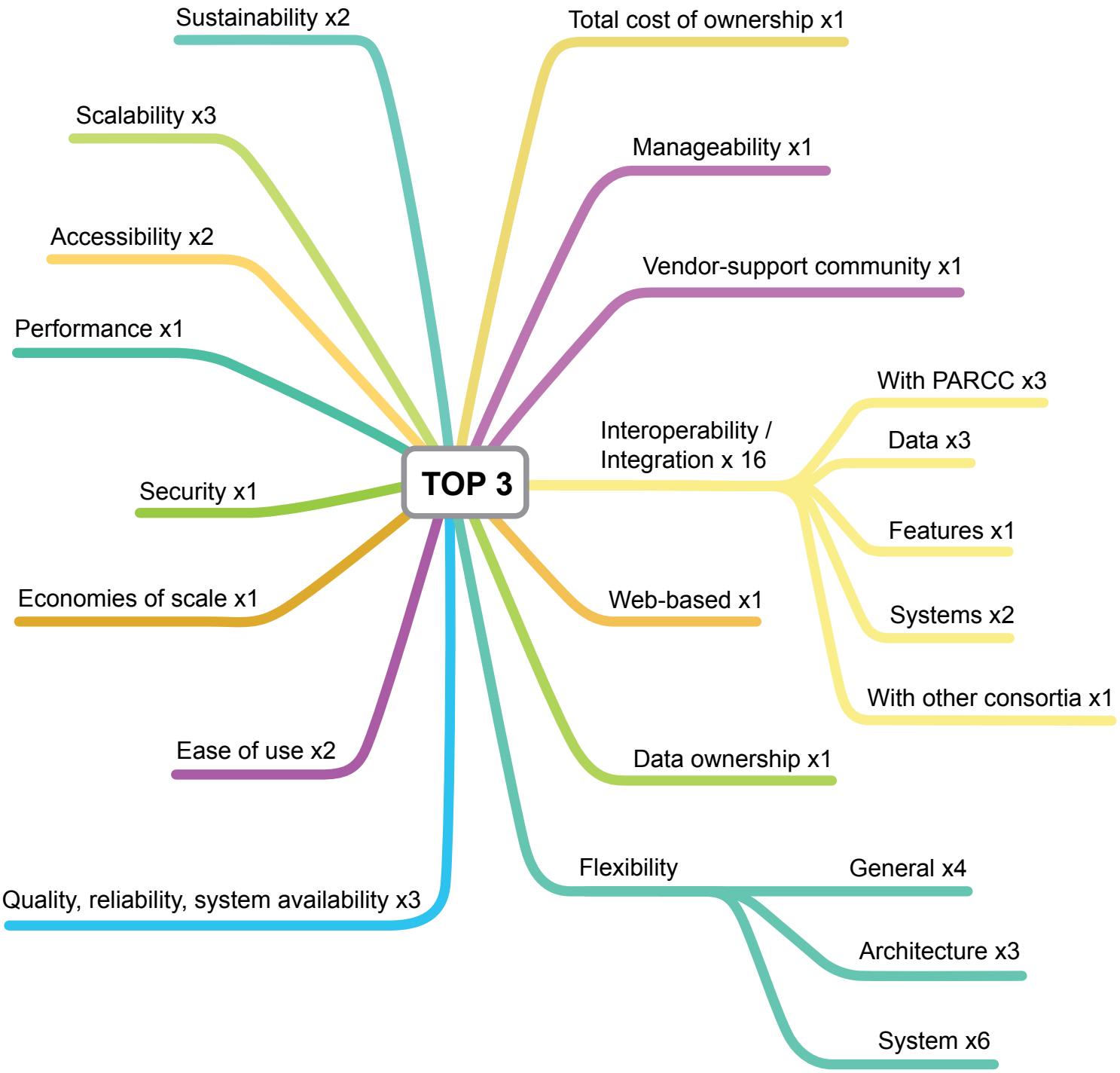
4. Top Three Priority Exercise

Each workshop was presented with the exercise to name the top three priorities for the overall system. The following list represents each priority provided.

- Access to assessment data with instructionally sensitive level of detail
- Adaptive engine
- AI scoring to keep costs low and reduce scoring time
- Being competitive: the difference between adopting and following policy
- Calibration application – mechanism to calibrate tests
- Comparability for linear and CAT tests
- Computer-adaptive, unconstrained by grade levels
- Easy blueprint creation
- Exchange of best practices for common core instruction (collaboration)
- Extensible item types renderers
- For canned reports, only use canned reporting functions that everyone agrees have the most value. More complex reports should be left to the state
- Item path – authoring to student to growing to long-term data use – including adaptive issues
- Meaningful/actionable reports that provides actionable information and results to teachers
- Performance summaries for each student and classroom
- Reporting capability standards
- Reporting
- Should be focused on "live" dashboards that teachers can use to guide instructional and classroom mgmt. decisions
  (eg: student grouping for projects or for remediation/enrichment).
- State reports intended for compliance purposes should be a side effect (design for analysis and let the compliance reports be preset views of the "cube" of data)
- SIF/APIP/Tagging criteria
- Student test delivery standards
- Teacher-created items have a very different workflow, and if this is not well understood we could have a threat to assessment validity
- The architecture should support the capture of very rich student response data generated from constructed-response and performance tasks. This supports not only scoring, but the ongoing R&D necessary to evolve such items and the adaptive algorithms that can identify what's next in near real time for students
- Use/incorporate high-quality tech-enabled items
- User defined interim testing options (ability to define own test blueprint)

The data was then compiled. A summary of data includes:

- Feature requests x23
- System design items x10
- Items that are concerns x3
- One item said "TBD"



5. Epics – Functional Requirement

These were captured during the user goals identification workshop and from the top three priority exercise. An epic is large feature, or a grouping of smaller features. These groups include a requirement that accomplishes a single identified goal in software development. Epics are sometimes referred to as stories. The following are the epics that were identified.

Student

- Take tests
- Access resources
- Access practice items and model responses
- Trust that my information is secure
- Gets results quickly
- System is customized to my needs
- Can access my information any time

Parent

- School has accurate information on my child
- See expectation for my child
- One-stop-shop for information
- See how the school/teachers are doing, see history compared
- Be notified of ways to help my child learn
- Be notified if my child “goes of the path”
- Receive information in different ways – redundancy
- Receive information customized to my needs (eg. Language)
- Access with existing hardware
- Allow me to see assessments before my child takes the test
- Want to know how test results will be used and in what form
- My child could take charge of his/her learning

Teacher (Long-Term Sub)

- Administrate tests
- Drill down student profiles
- Create tests
- Give formative and interim tests
- Understand SBAC system components
- See instructional professional development
- Create educational plans tailored & effective to student
- Deviation from standards, enhancement or acceleration
- Individualize to student
- See information on how my class is doing
- How well are my teaching materials meeting my students' needs
- Verify whether students have learned info up until certain point
- Control over-assessments
- Offering differing levels of functionality/help based on my level of expertise and content knowledge
- Understand variability in assistance between elementary vs. HS
- Know about the test program scheduling
- Have appropriate access to data at diff levels
- Get info about incoming students and history so that I can prepare
- Have access to non-achievement data
- Assessment info is understandable for all parties

Principal

- Primary summary info on plans
- Understand explanation of results
- Interpret results
- See teacher-level data
- Evaluations (out of scope)

Elementary School Principal

- Building-level test administration
- Teacher performance reviews & performance data

School Psychologist

- Report review
- Look at attendance data

Proctor

- Access student records on behalf of students
- Ensure students receive the correct tests

Juvenile Justice

- Access real-time reports

Pre-Report Production Psychologist

- Report equating and calibrating
- Conduct report analysis

Database Manager

- Concerned with data integrity
- Facilitating / using the interoperability –loading / configuring students
- Data transforming between systems
- System maintenance

Human Scoring Vendor

- Range finding
- Score anchor papers
- Onsite or distributed scoring
- Scoring – able to integrate w/platform to get data I need; put data back in
- Reporting vendor – extract data

Scorer

- Monitor scores that come out of AI scores
- Score things that can't be scored by machine
- Factor in historical information in scoring because things change over time

Media

- Access to reporting to see relevant school and district performance
- Access to comparison data

Scoring Director

- Understand discrepancies between AI and manual scoring
- Identify patterns in the scoring

6. Personas

Once user roles and goals had been identified, personas were generated. Personas intend to provide specific information about a user, including background information, some demographics and the motivation of the user.

These personas are fictional. The personas identified represent a sampling of users for the SBAC assessment system and do not represent each extrapolation of user. For example, several students are identified instead of creating personas for every possible representation of a student. The purpose of the personas is to ensure that the enterprise architecture can manage the necessary requirements of each application within the architecture.

Alvin

Basic Information

- 7TH Grade Student
- Public Middle School
- Boise, ID

Background

- Uses FB all the time
- Owns a smartphone
- Interests: video games, soccer
- Does not like to read
- Medium proficiency
- Passes his classes/tests
- His parents are engaged in his education

Motivation

- Does not want to be harassed
- Peer acceptance
- "More likely to do more if he could earn something" à leads to progress (game theory)

Simone

Basic Information

- 11TH Grade Student
- Hispanic High School
- San Diego, CA

Background

- Level 3 ELL Student
  - Has some academic issues due to her English skills.
  - Has been in the US for the past 2 years
  - Oldest of 3 daughters
  - Speaks Spanish at home
  - More proficient in English than her parents
  - Heavy texter, not a smartphone user
  - Above average student in her school
  - Would have advanced proficiency if not for her English language skills
  - Has an active guide at school who helps her navigate/get value out of the system

Motivation

- Wants to pass the high school exit exam
- Wants to be the first in her family to complete college
- Would like to get a stable career
- "Fitting in" is big on her mind
- More likely to use a system that shows her program to mastery via the interim system

Theodore "Teddy"

Basic Information

- Age 45
- D.O.E as Math and Science Curriculum Consultant
- Lives in West Valley, UT

Background

- Consultant for 3 years
- Has 3 children: 17, 4, 3
- Uses Skype to call his kids
- Wife teaches dance
- He is a scorer
- His job is mapping state standards onto Common Core State Standards (CCSS)
- Former high school math teacher for 15 years
- Believes in making common core stronger
- Overworked, on the road a lot, does a lot of webinars

Motivation

- Successful implementation of CCSS
- Believes he can help students
- Feels a strong link to his former colleagues
- Feels he could make more impact
- Took a pay cut to be in this role
- Wants to see more students graduate/ready for college
- Wants to be more effective covering a broad range of levels
- Outside of his comfort zone *
- Reaching out to content experts (esp. to subjects *), inside/outside his state
- Wants to show teachers how to use the system
- Active participant in the community

Chanti

Basic Information

- Age 38
- Elementary School Principal
- Greenwood, SC

Background

- Has been principal for 2 years
- Was a teacher for 12 years
- Earned degree in Elementary education from USC
- Later earned her Masters of Ed. D
- Has never left Greenwood, SC (outside of college)
- Has 2 kids: 12, 11
- Has 26 friends on FB
- Uses a blackberry issued by the school
- Knows every kid by name
- Very committed to her profession

Motivation

- Principal is not her last stop
- Very connected to the community
- Cares about her teachers
- Believes in personalized learning and technology
- Her school lacks the technology emergence
- Concerned about the true growth of her kids (100 of them at her school)

Ella

Basic Information

- Age 41
- Hand-Scoring Manager
- Works for ACME, Inc. (Vendor)

Background

- Working in state contract: MS
- M.A. in English language
- Has 7 years in hand-scoring, worked her way up
- Manages up to 30 other scorers, the scoring process
- Works on a Dell desktop at work
- Feels confident in her team
- Gets confused by MS-Office updates
- Does not have “smart” tv with internet browsing at home
- Reads traditional print books
- Would not machine score
- Skeptical about A.I. scoring
- Feels passionate about her job
- Attends range-finding meetings
- Client interfacing: vendor sends scores from the state
- Works for office assessment
- Manages/aware of rater training exercises
- Has a son with language disability
- Believes the system
- Under pressure to score in quantity + quality + shorter time
- Worried about her job: machine scoring
- Acts as liaison between DOE and suspected cheating/altered papers
- Has a low tolerance for machine mistakes
- Spends her evenings helping her son with his homework that he has to write.

Motivation

- Secret ambition: to write a novel
- Keeping her job
- Wants company to produce high-quality scoring
- Wants to demonstrate that human scoring has a place
- Does not have/use the systems at home
- Understands the value of including constructive-response and multiple-choice assessments
- Does not believe other scoring methods can achieve to her levels
- Has strong opinions on prompts (questions)
- Resisting the increasing requirements on paper tests

Roger

Basic Information

- Age 40
- Works for Vendor
- Lives in Nova Scotia

Background

- Has been working for item-creation vendor for 13 years
- Taught for 7 years as an elementary ELA teacher
- Writes for ELA content
- Gadget savvy, builds his own computer
- Works while he is on the move, can reconnect to continue his item creation

Motivation

- Wants to be able to travel, have flexibility to do personal travel. Works from home.
- Interested in how kids learn
- Reads about the latest theories and research
- Wants to contribute and appreciate the opportunity afforded by this new system

Naomi

Basic Information

- AgeE 30
- Item/Task Originator
- Middle School Math Teacher

Background

- Teaching math for 5 years, taught common core for 2 years
- Knows differentiation
- Completed online item writing
- Submitted sample items to the consortium
- Has a desktop computer at school
- Works long hours as a teacher
- Has a dog

Motivation

- Does not like the items that she had seen
- Works collaboratively with her colleagues to derive items, which she enjoys
- Sees this as additional income during the summer
- Wants to develop her professional network outside of her school, because she lives in a small town
- Wants to improve her assessment skills

Freddie

Basic Information

- Item Developer
- Consultant for a Vendor

Background

- Specializes in Flash technology
- Has no experience in content development
- Background in graphical design
- Needs direction from content specialists
- Benefits from collaboration – more collaborative than the typical software developer

Motivation

- Likes to define short-term projects
- Needs to be part of something creative
- Likes being attached to the education field
- Likes to brag about his accomplishments
- Very “intense” in his manner of working

Trudi

Basic Information

- Content Specialist
- Senior Level in Test Development Company

Background

- Provides content leadership
- Works with accessibility professional to solve issues

Motivation

- Has an enormous amount of pride in her work
- Feels responsible for the quality of her product
- Wants to escape the political environment in schools
- Likes to feel independent
- Thrives on the cyclical heroism in her job
- Thrives in the interpersonal and collegial interaction

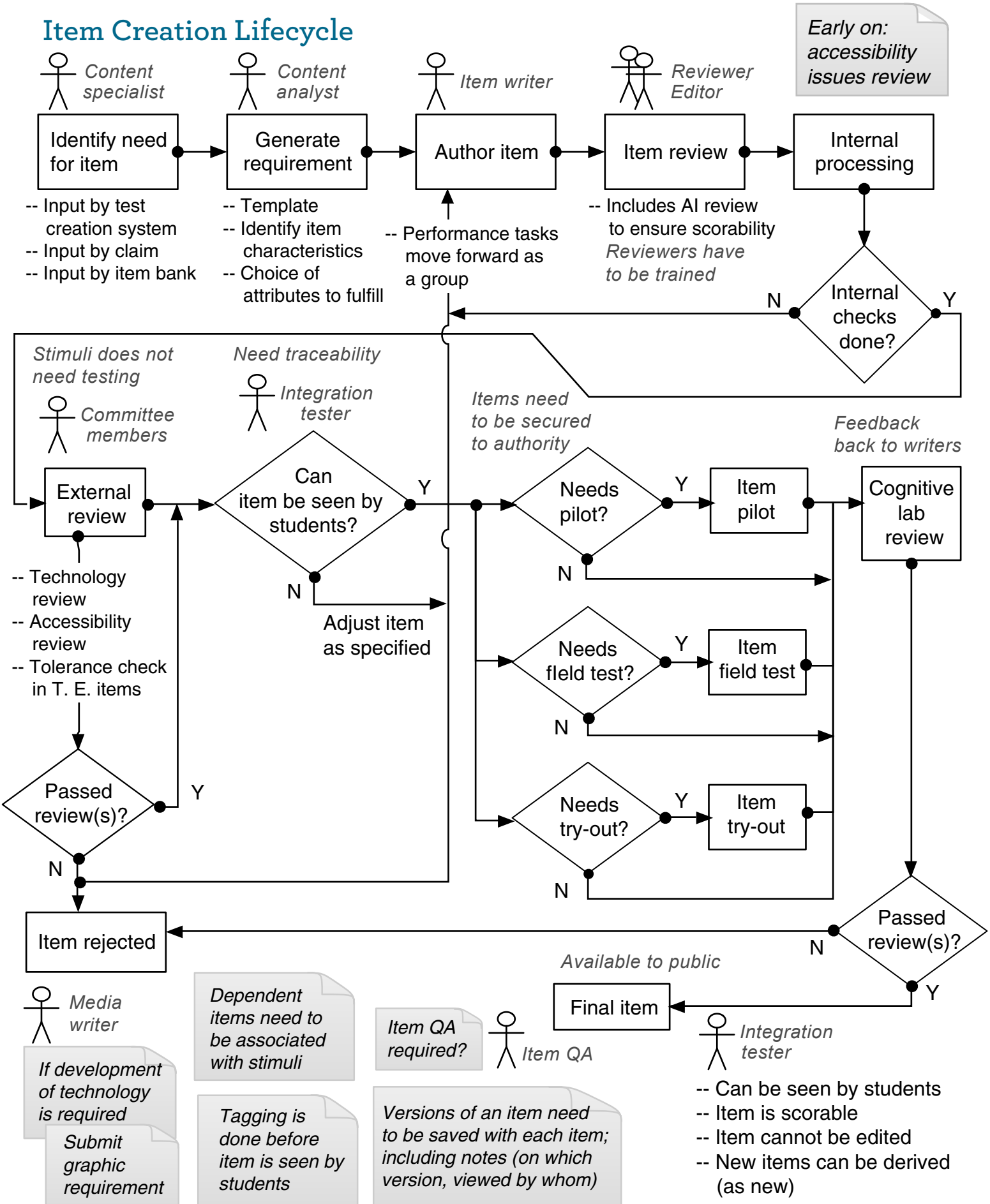
7. User Scenarios

This section contains the following user scenarios generated in the SBAC architecture workshops:

- Item creation lifecycle
- Scoring
- Test creation and delivery

A user scenario is a tool that provides a broad understanding of typical user interaction with the components in a system. While the tool does not provide an exhaustive illustration, it does provide valuable insight for making architectural decisions. The diagrams and flows intend to provide the business requirements and logic for the scenarios.

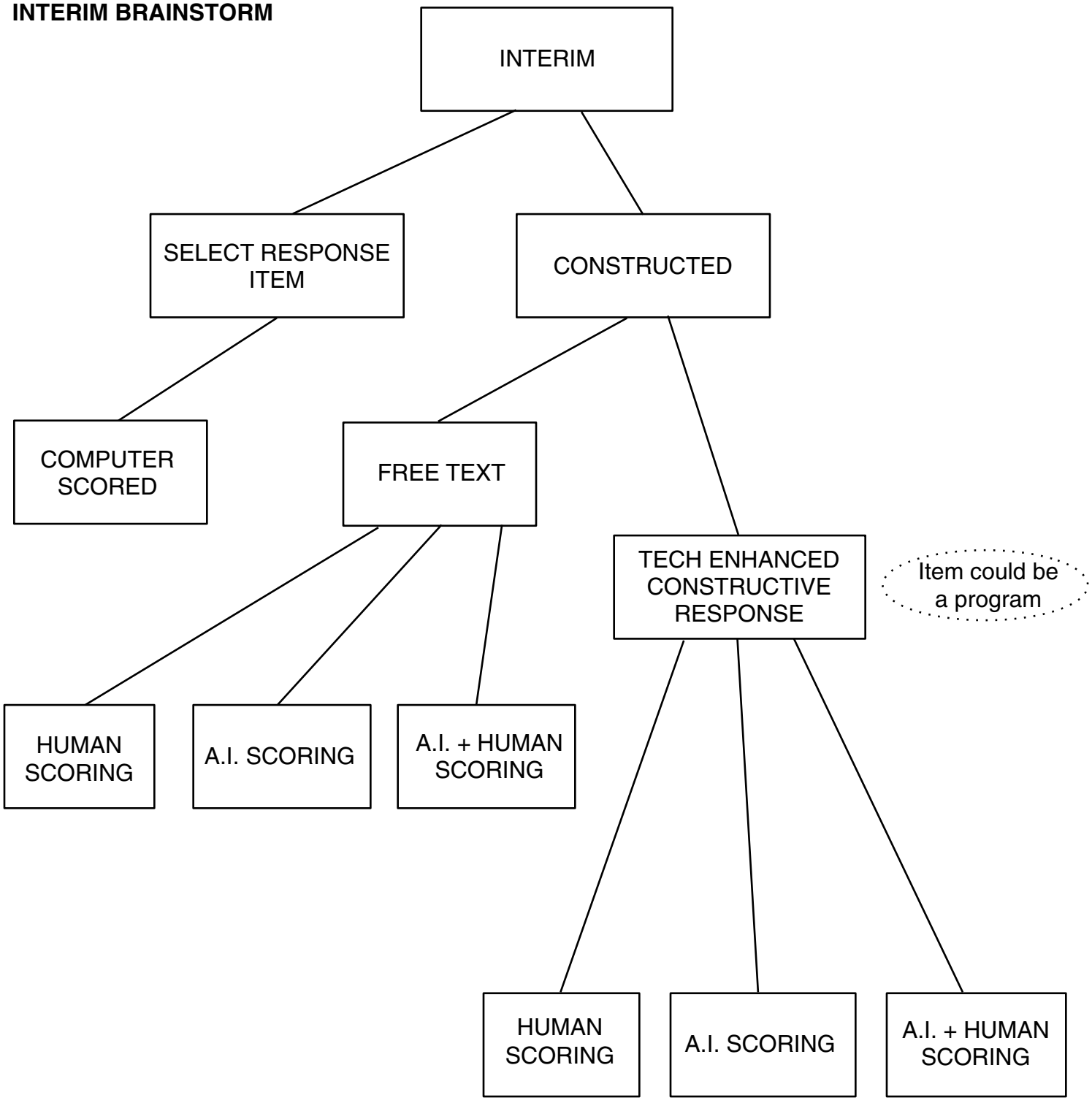
Item Creation Lifecycle



Scoring - Interim Assessments

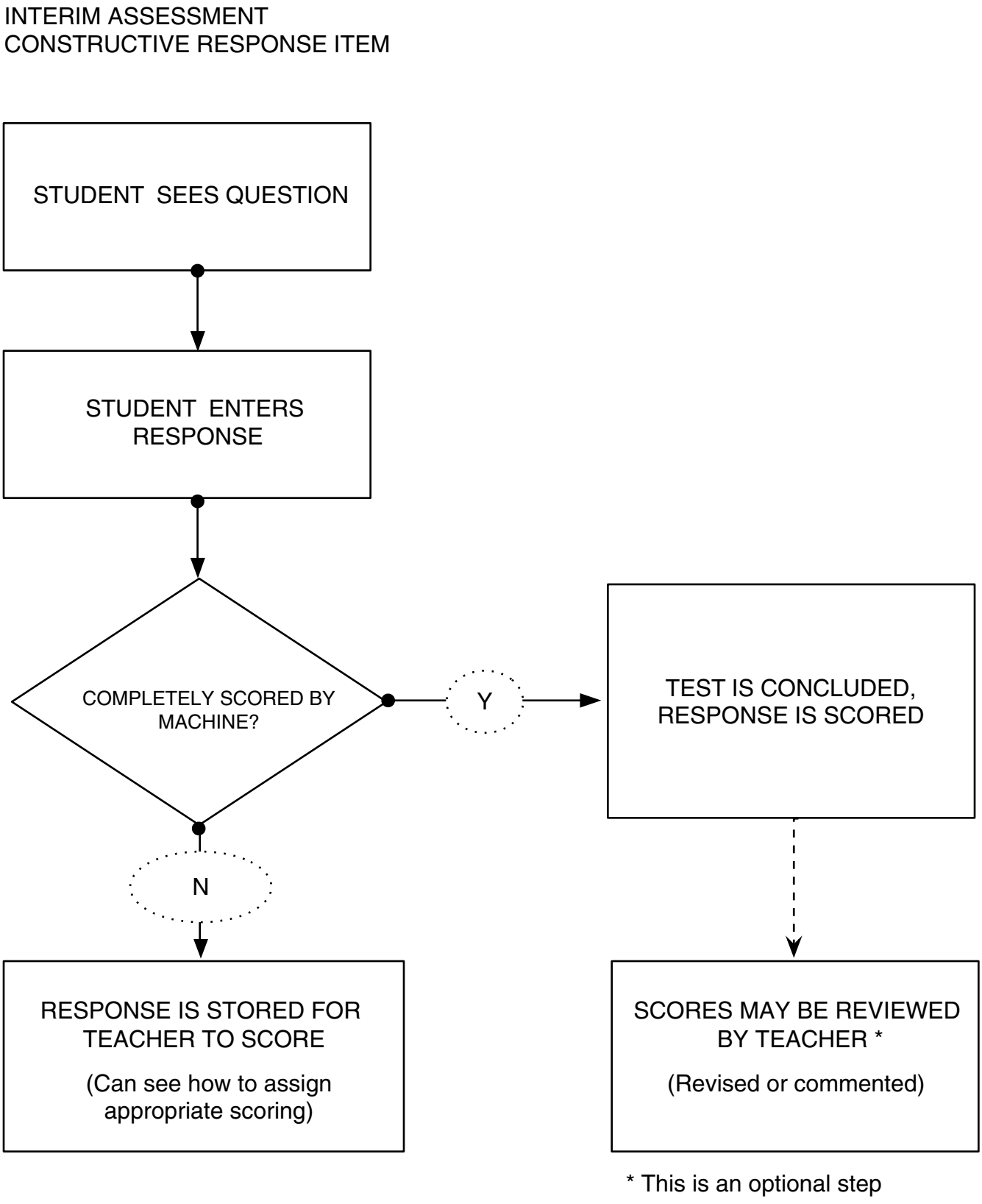
This shows the initial breakdown of interim tests to help identify which business process to further investigate.

INTERIM BRAINSTORM



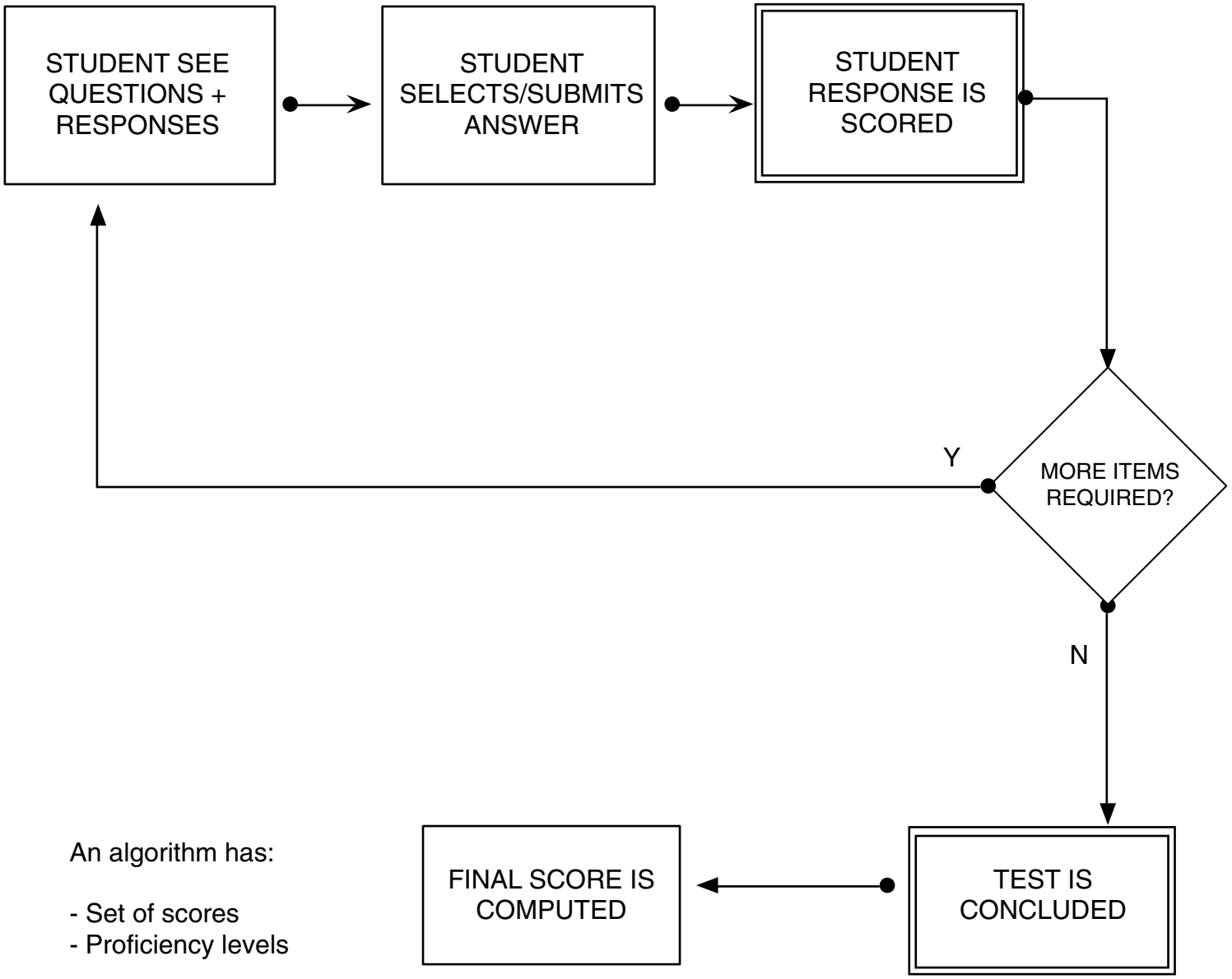
Each of these areas was then elaborated on to create user scenarios and highlight points that are of architectural concern.

Interim Assessment – Constructive Response Item



Adaptive Interim – Selected Response Item

ADAPTIVE INTERIM - SELECTED RESPONSE ITEM



An algorithm has:

- Set of scores
- Proficiency levels

Teacher Creates an Interim Test – Human Scoring, Constructive

TEACHER CREATES AN INTERIM TEST - HUMAN SCORING, CONSTRUCTIVE

TEACHER

TEACHER IDENTIFIES NEED FOR A TEST

TEACHER SPECIFIES CONTENT DOMAIN OF TEST

- Subject area
- Grade level
- Sets of content standards

TEACHER SPECIFIES ADDITIONAL CRITERIA

TEACHER SELECTS TEST ITEMS

TEACHER ADMINISTERS TEST

STUDENT TAKES TEST

TEST IS SCORED

TEST RESULTS ARE REPORTED

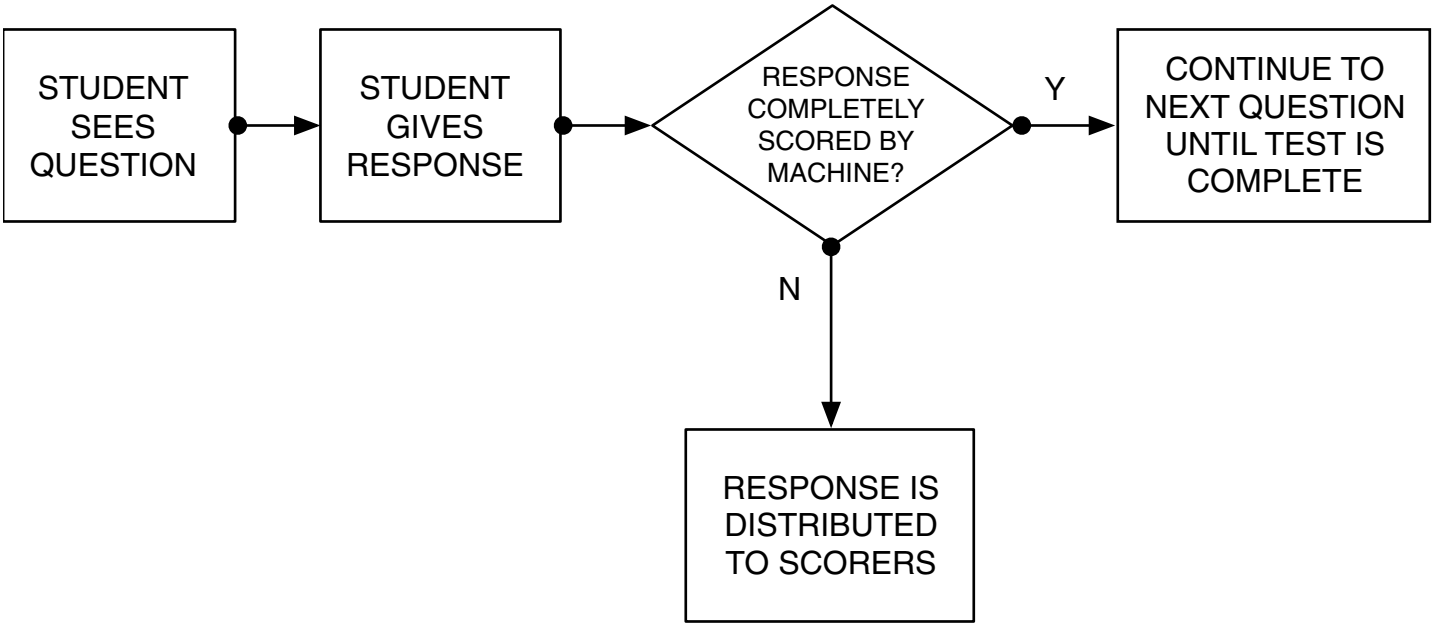
(Exported/Published in a particular format)

TEST RESULTS ARE MONITORED

- Item
- Student Info

Summative – Computer Based Scoring

SUMMATIVE, COMPUTER-BASED SCORING



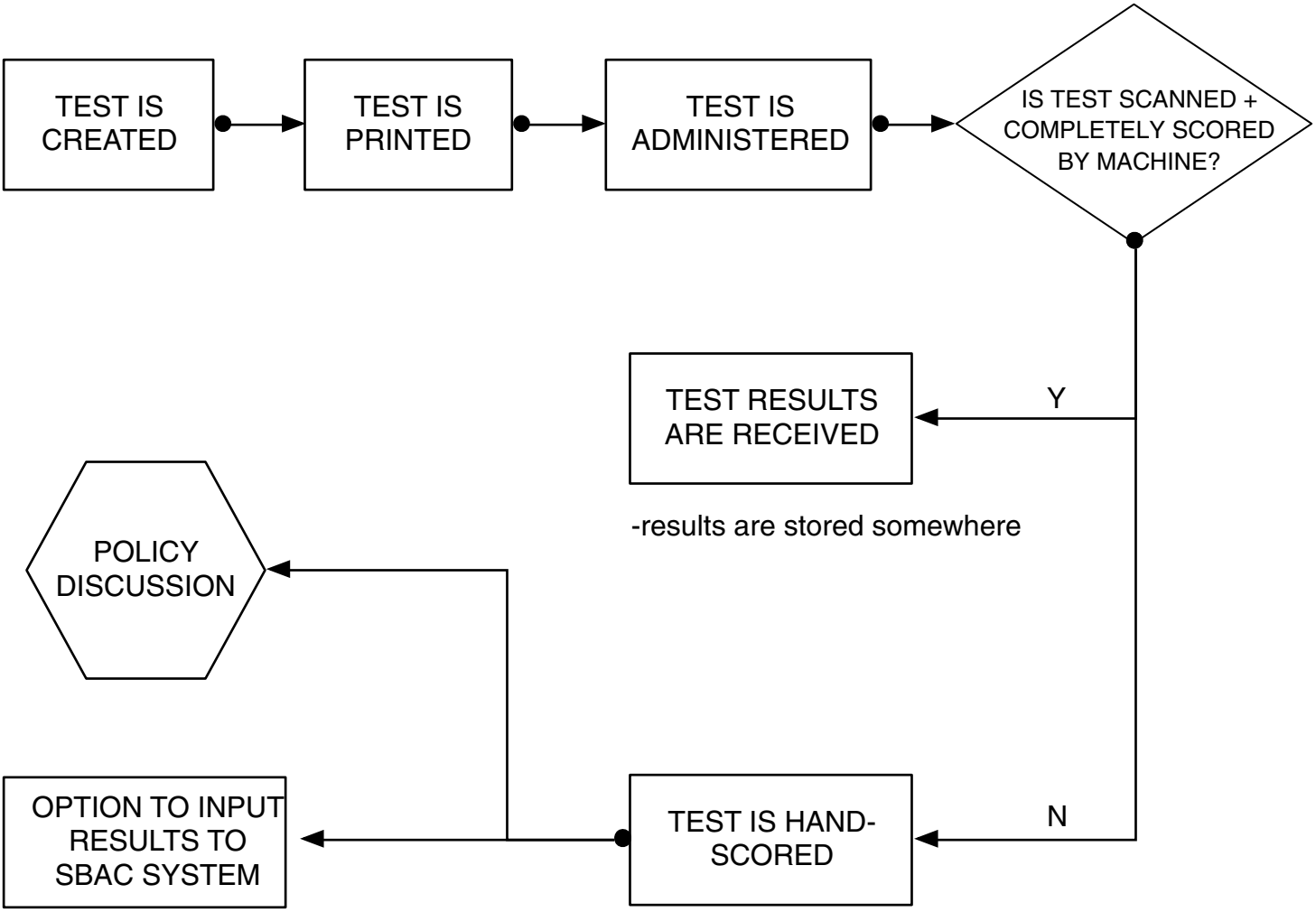
- Distribution of read-behind scorers
- Monitoring

Assume computer-based scoring same as “AI scoring”

Need to take into account latency times here and ensure architecturallyt thast they will not interfere with C.A.T.

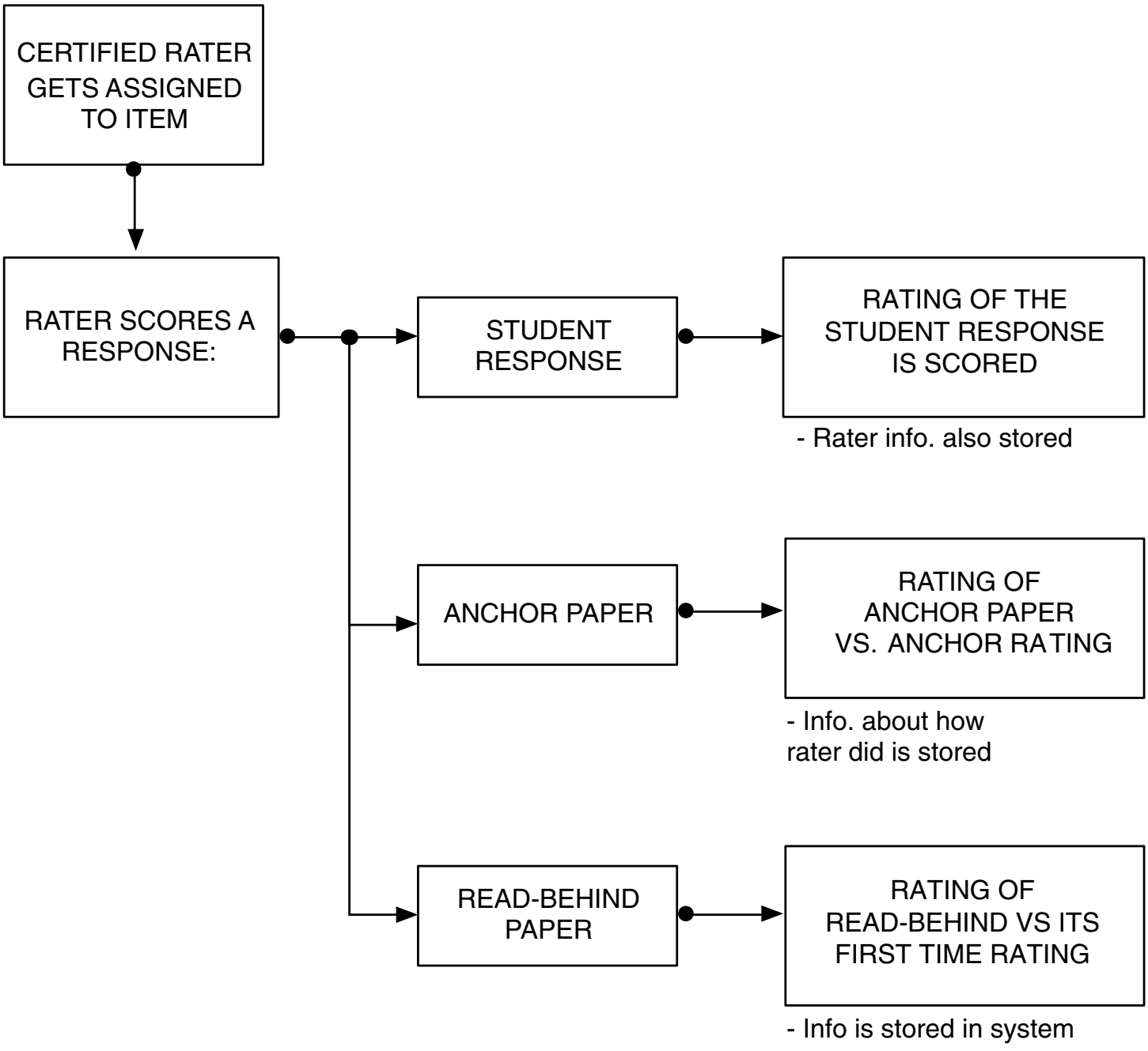
Primary, Paper-Based Interim Test

PRIMARY, PAPER-BASED INTERIM TEST



Monitoring – Performance of Rater-Summative

MONITORING - PERFORMANCE OF RATER-SUMMATIVE



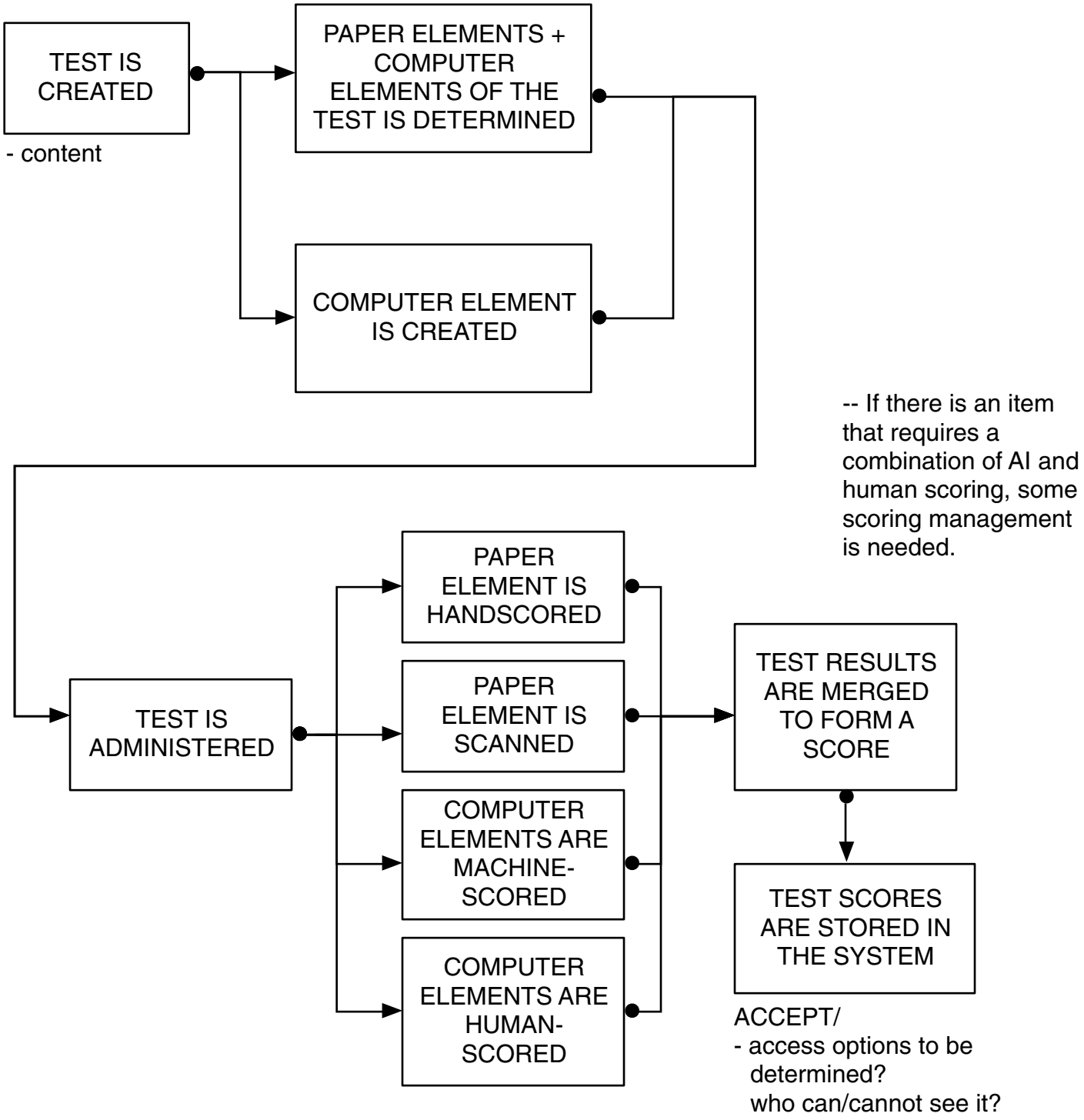
-- May need to distinguish between read-behind and second-read

-- Need to deal with adjudication rules for producing scores of record

- Non-quantitative data is also captured:
- Accuracy of rating
- Speed of rating

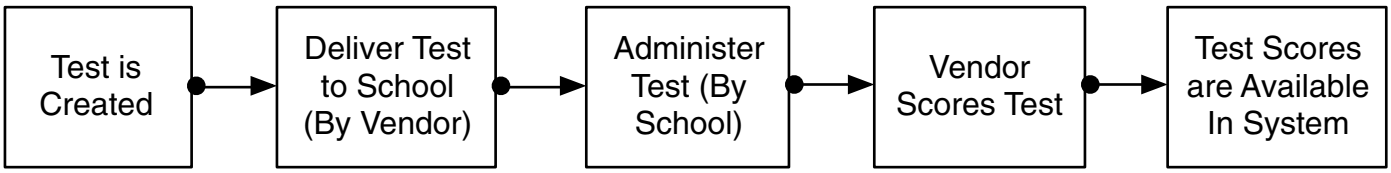
Mixed Paper-Based + Computer-Based Interim Assessment

MIXED PAPER-BASED +COMPUTER-BASED INTERIM TEST



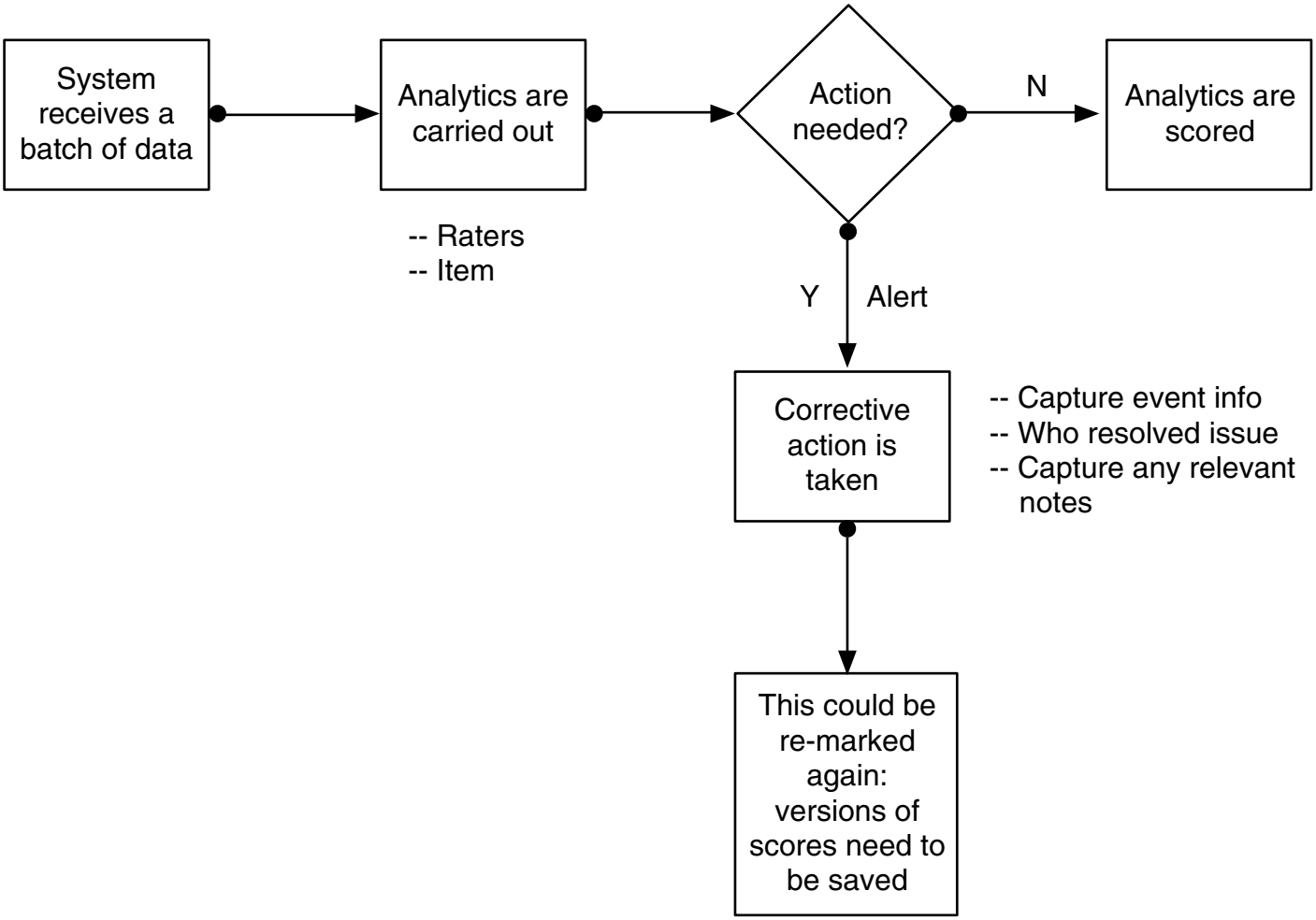
Paper-Based Summative Test

PAPER-BASED SUMMATIVE TEST



Monitor Vendor-Scored Summative Test

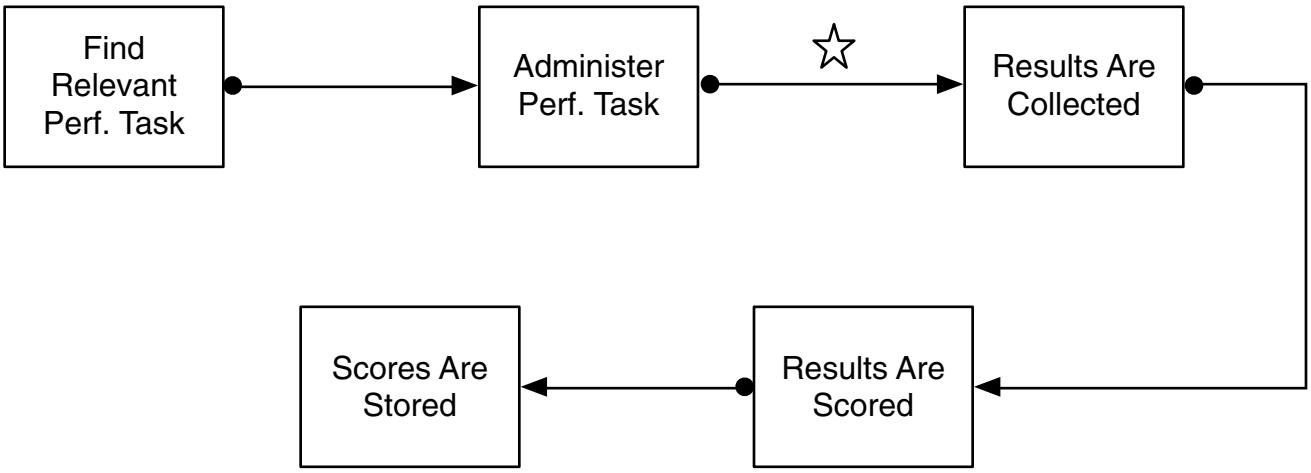
MONITOR VENDOR-SCORED SUMMATIVE TEST



Note: We often rely on HS vendors to do this work and report their statistics on rater monitoring

Performance Task - Interim Assessment

PERFORMANCE TASK - INTERIM ASSESSMENT

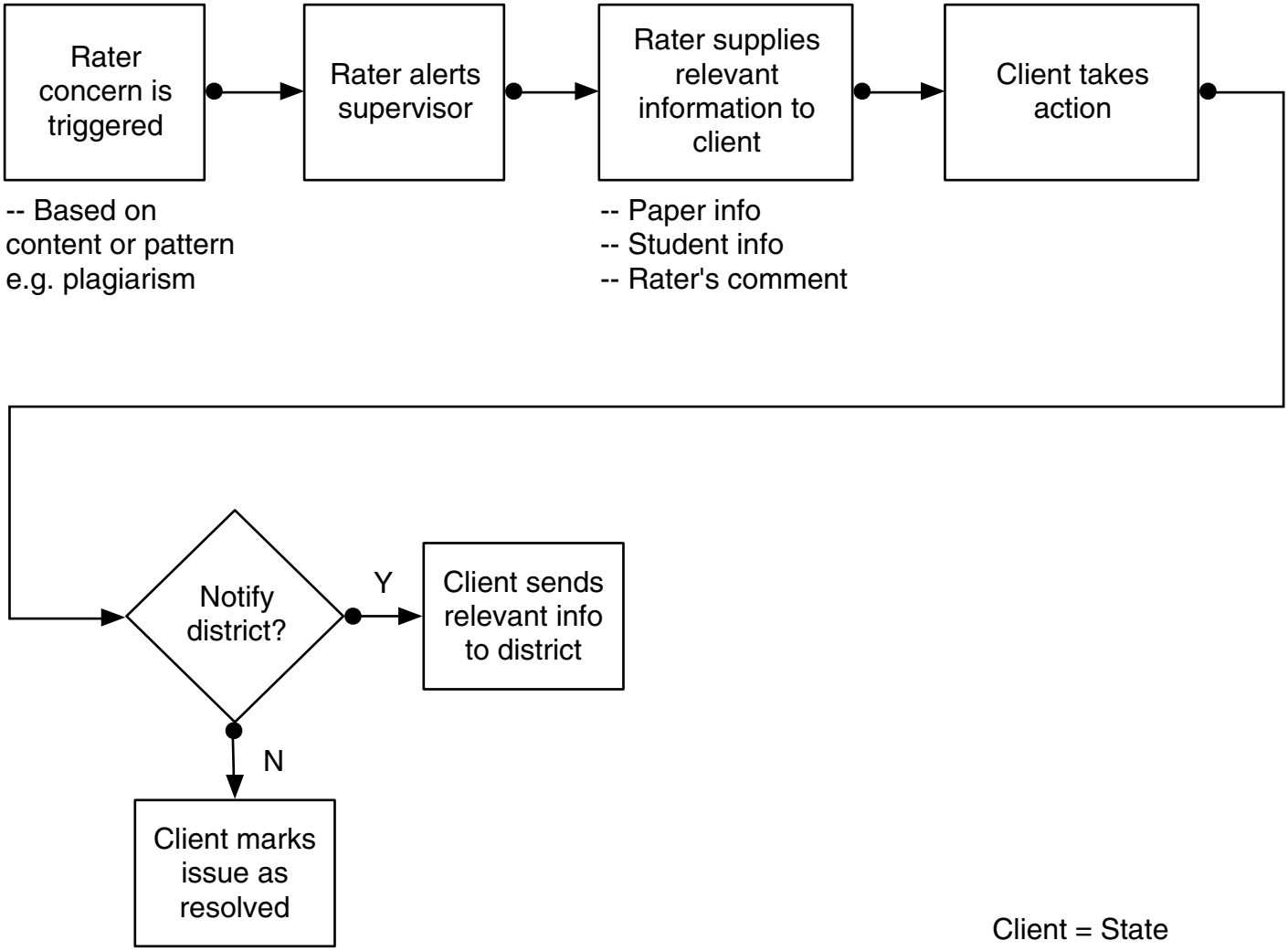


☆ See constructive response for scoring / selective

There will be a mix of AI and human scoring, with AI scoring some parts of tasks and humans scoring others. This will require the architecture to accept different scoring sources.

Monitoring – Crisis Papers

Monitoring -- Crisis papers

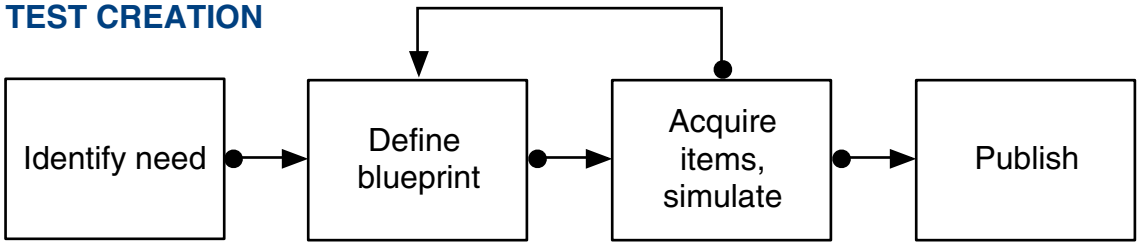


Test Creation and Test Delivery

To help the group understand the processes of test creation and test delivery, we used this diagram to loosely illustrate the steps involved. The following diagrams break these steps down into more elaborate details.

UNDERSTANDING TEST CREATION & TEST DELIVERY

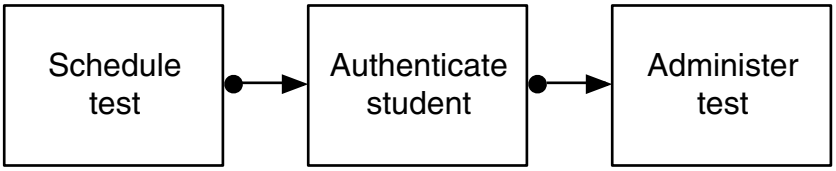
TEST CREATION



Ready the test

-- Things that need to be set up to deliver tests

TEST DELIVERY



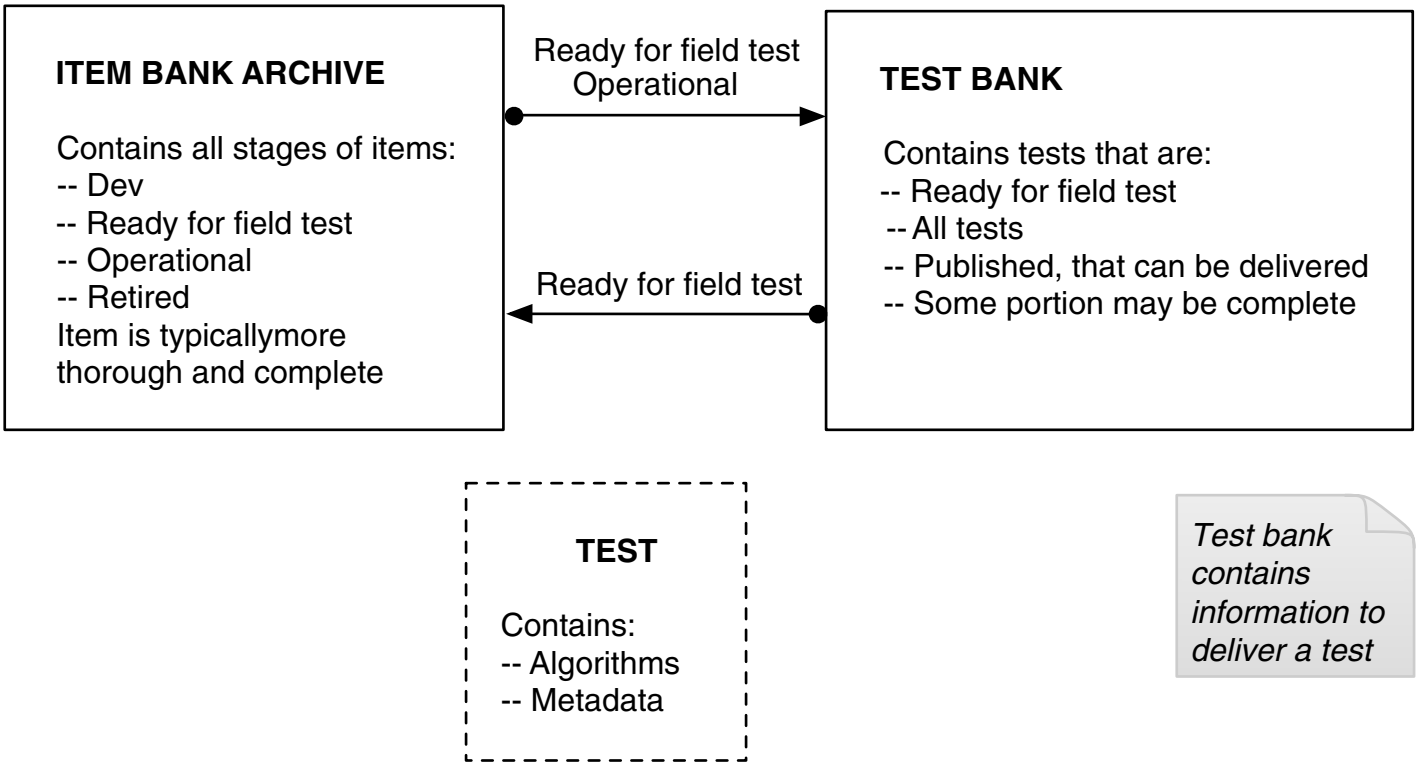
-- Include registration

-- Apply program characteristics

Scoring & Reporting

We explored how states may use the SBAC test creation and delivery system differently. While not comprehensive, the group provided six examples of typical SBAC system set up, and explored who may use these set ups. The dots under each state are color-coded. For example, State 1's set up has test item bank and test delivery system.

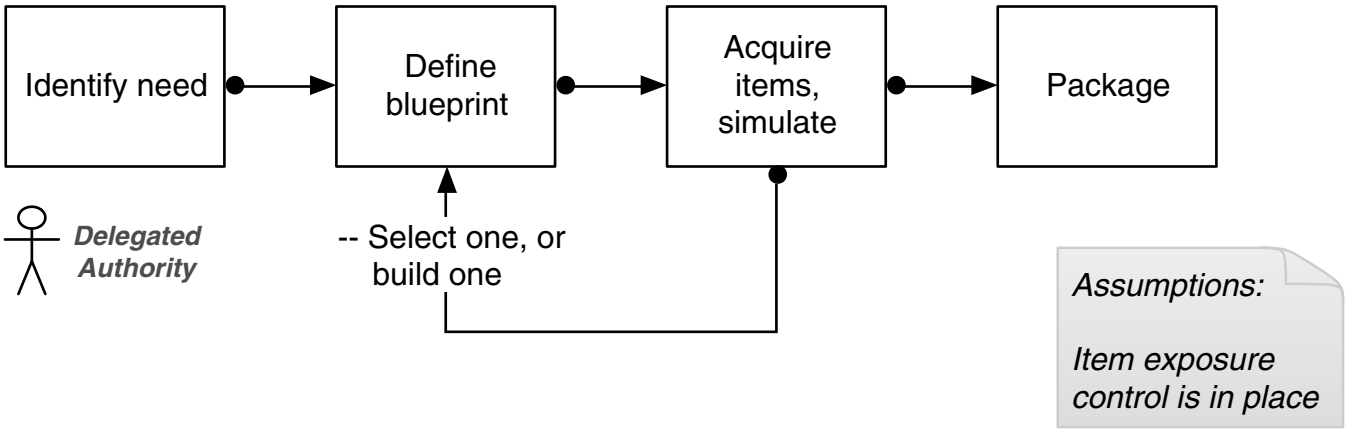
UNDERSTANDING TEST CREATION & TEST DELIVERY (CONTINUED)



Test Creation – SBAC Owned

This diagram represents both interim and summative test creation.

TEST CREATION - SBAC-OWNED SYSTEM



Test Package

Contains

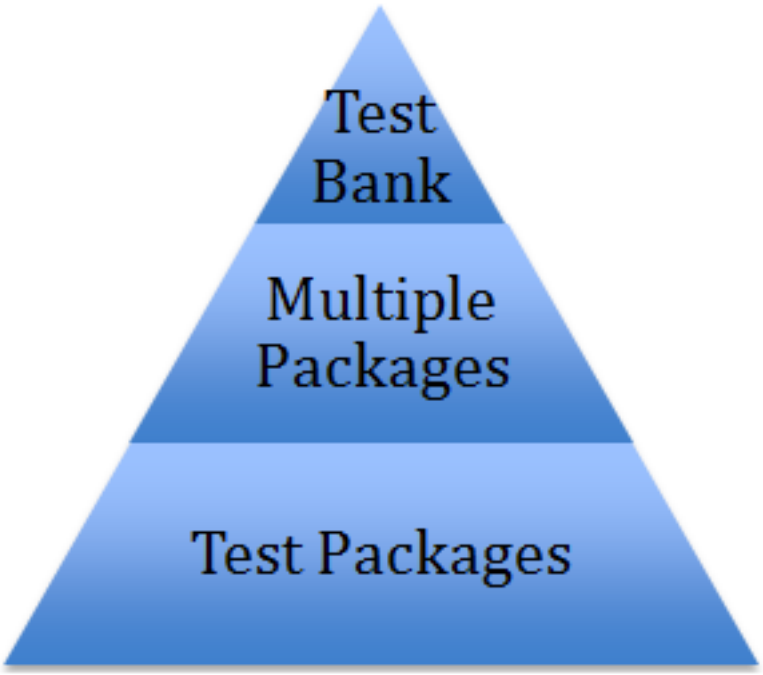
Eligible items: operational and field test items. Eligible items could be defined as operation and field test items. Eligible and operational items are not mutually exclusive.

- Test design: test definition or manifest (used in the technical creation of the test)
- Order of test: order of items as specified in a test.
- Media assets
- Item metadata
- Multiple packages to prevent security compromises. Multiple packages can contain components of the same test.
- Blueprint
- Test items
- Structure
- Blueprint, test items, structure are not mutually exclusive with the other items on the list.

Test Bank

Contains

- Test packages
- Items (that are ready for test)
- Test definitions



Blueprint

This illustrates what a blueprint may contain. If we imagined a table of contents for a blueprint, it would contain the items shown below.

- Table of Contents
- Grade level
- Subject area
- Grade-level subcategories
- Allocation of content across scoring categories
- Functional and non-functional
- Quantities (number) of test items
- Quantities (number) of graphics
- Duration of test

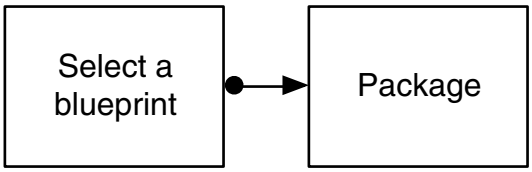
- Skills assessed
- Define categorization
- Grouped items
- Description of pilot space
- High-level information on scoring
- Define implementation constraints (does not contain exceptions)
- Accessibility
- Design and style manual: references the styles to use for this test and the subgroup

Test Creation – State, LEA or School

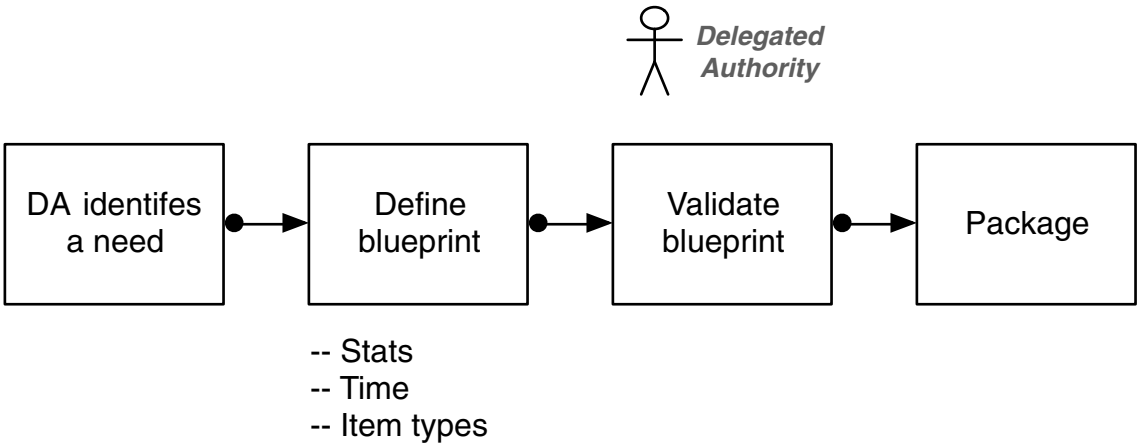
Two scenarios are represented in the diagram. One is for a blueprint and one is when there is no blueprint. The "no blueprint" scenario was discussed for formative assessment.

TEST CREATION - STATE OR LEA OR SCHOOL

WHEN THERE IS AN AVAILABLE BLUEPRINT



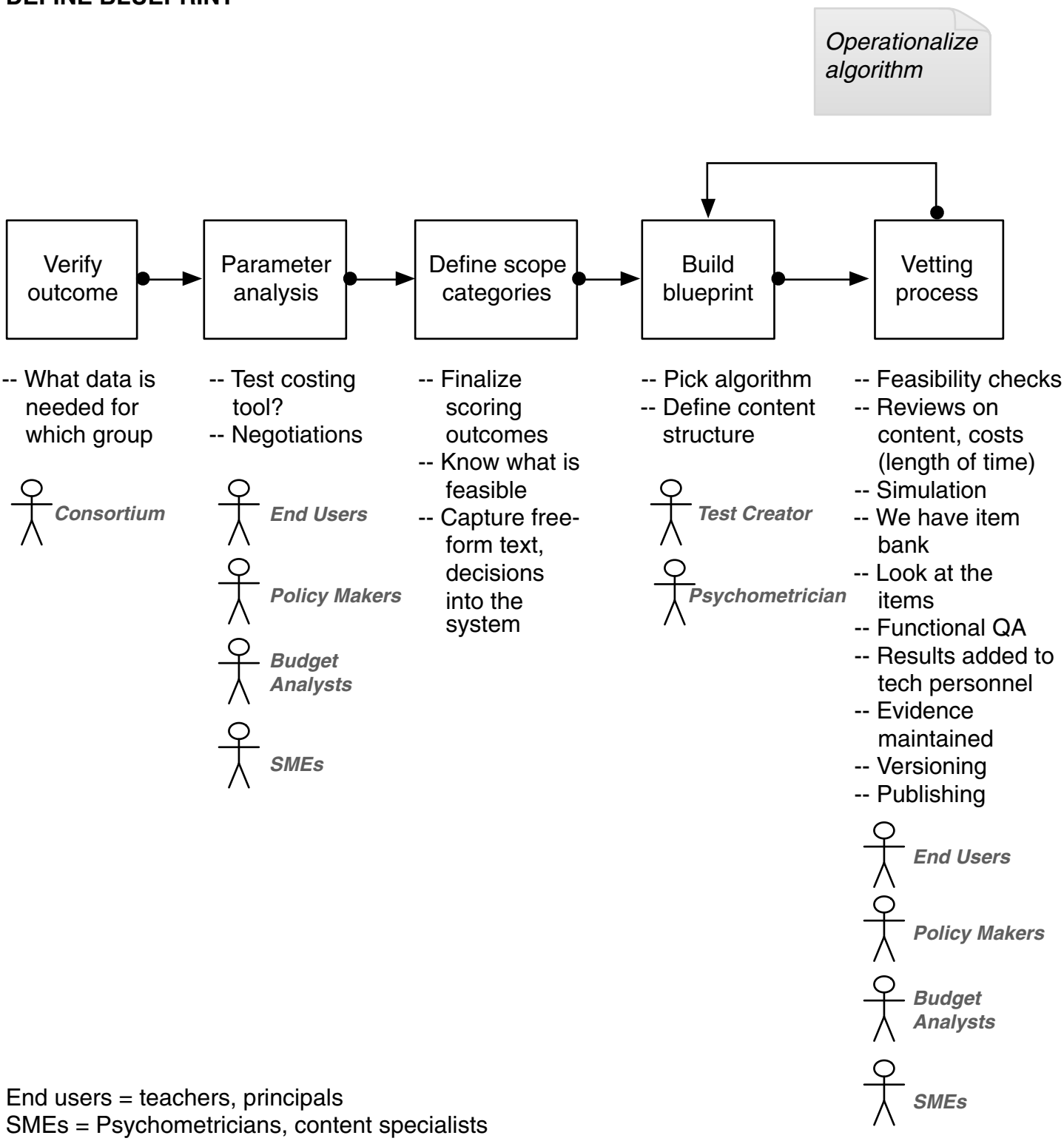
WHEN THERE ARE NO AVAILABLE BLUEPRINTS



Define Blueprint

This describes how a blueprint is defined. The stick figures illustrate the users who are involved in each process above.

DEFINE BLUEPRINT

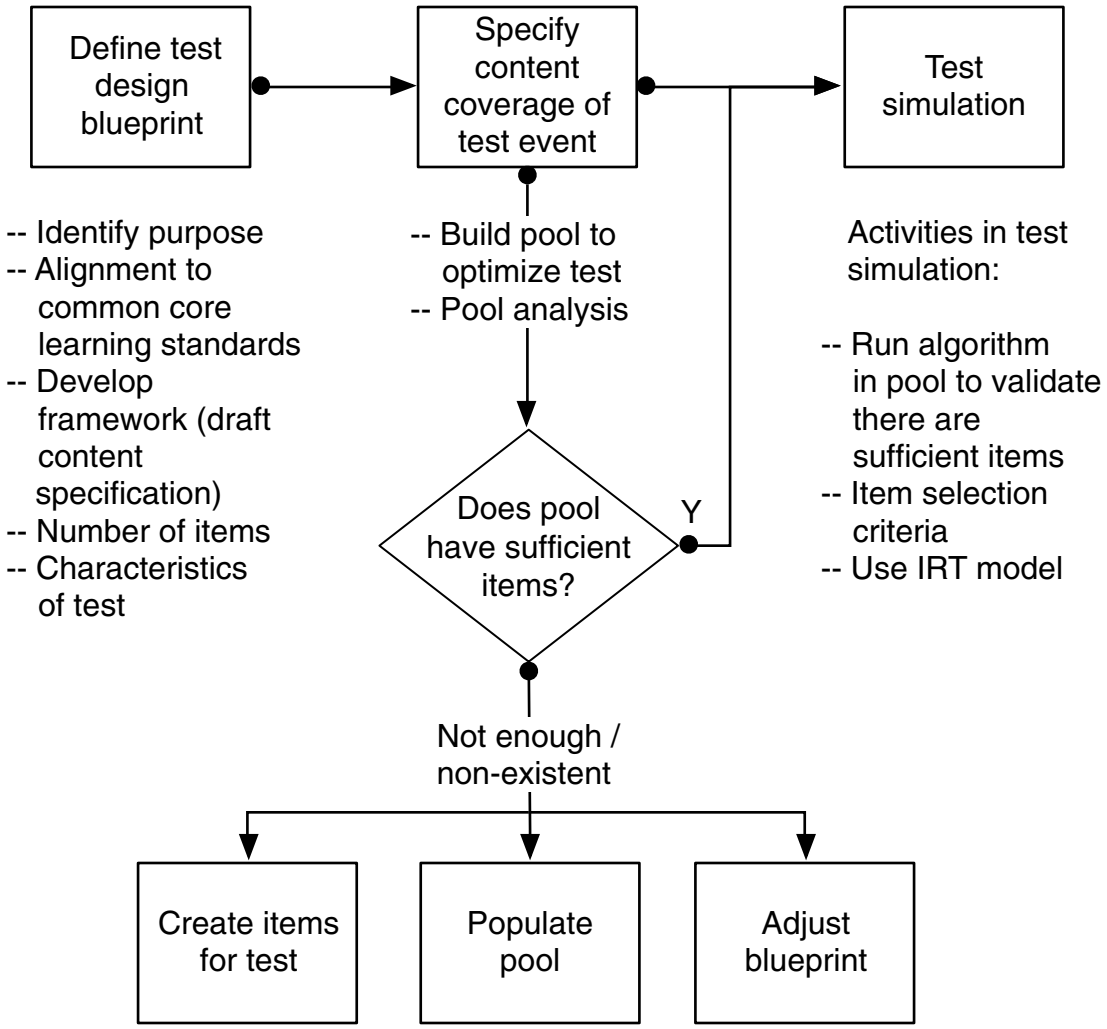


End users = teachers, principals
SMEs = Psychometricians, content specialists

Test Creation

This illustrates the steps to create a test.

TEST CREATION - ADAPTIVE TEST, SUMMATIVE



Test Simulation

The purpose of a test simulation is to ensure that the test blueprint contains sufficient items in the item pool to build the test. Simulating a test provides information and prompts a call to action, should the pool not have sufficient items of the specified criteria. Simulating a test does not test the content (items) itself.

Activities involved:

- Testing the algorithm
  - Delivers blueprint consistently
  - Specifies pool depth
  - Reporting on optional pool
  - Provides statistical functions of test
  - Validates expected result
  - Tests item-by-item or multi-stage
  - Tests for latency
- Testing the pool
- Testing the student results
- Employing a selection and scoring algorithm
- Adding timing data to simulations. With a mix of CR and MC items, you must know how the expected response time will factor into the overall test length.

Types of Tests

- Linear
- Adaptive
  - Staged adaptive (testlet)
- Paper-pencil test
- Item adaptive
- Cognitive diagnosis (adaptive)
- Pick vs. Do – Student picks an answer, versus performs an activity that is required for a score

Ready the Test – Steps Involved

READY THE TEST - STEPS INVOLVED

Goal: Reduce irrelevant varieties across students

Goal: Don't let taking the test get in the way of the results

Ready the proctors

-- TAMS
-- Tutorial
-- Practicing giving the test
-- Role permissions

Ready the students

-- Make them familiar with how to run test
-- Experimenting with accessibility options
-- Practise tests
-- Not secure items
-- Practice item bank

Ready the environment

-- Check if hardware is ready to run test
-- Check software
-- Check internet connections

Ready the helpdesk

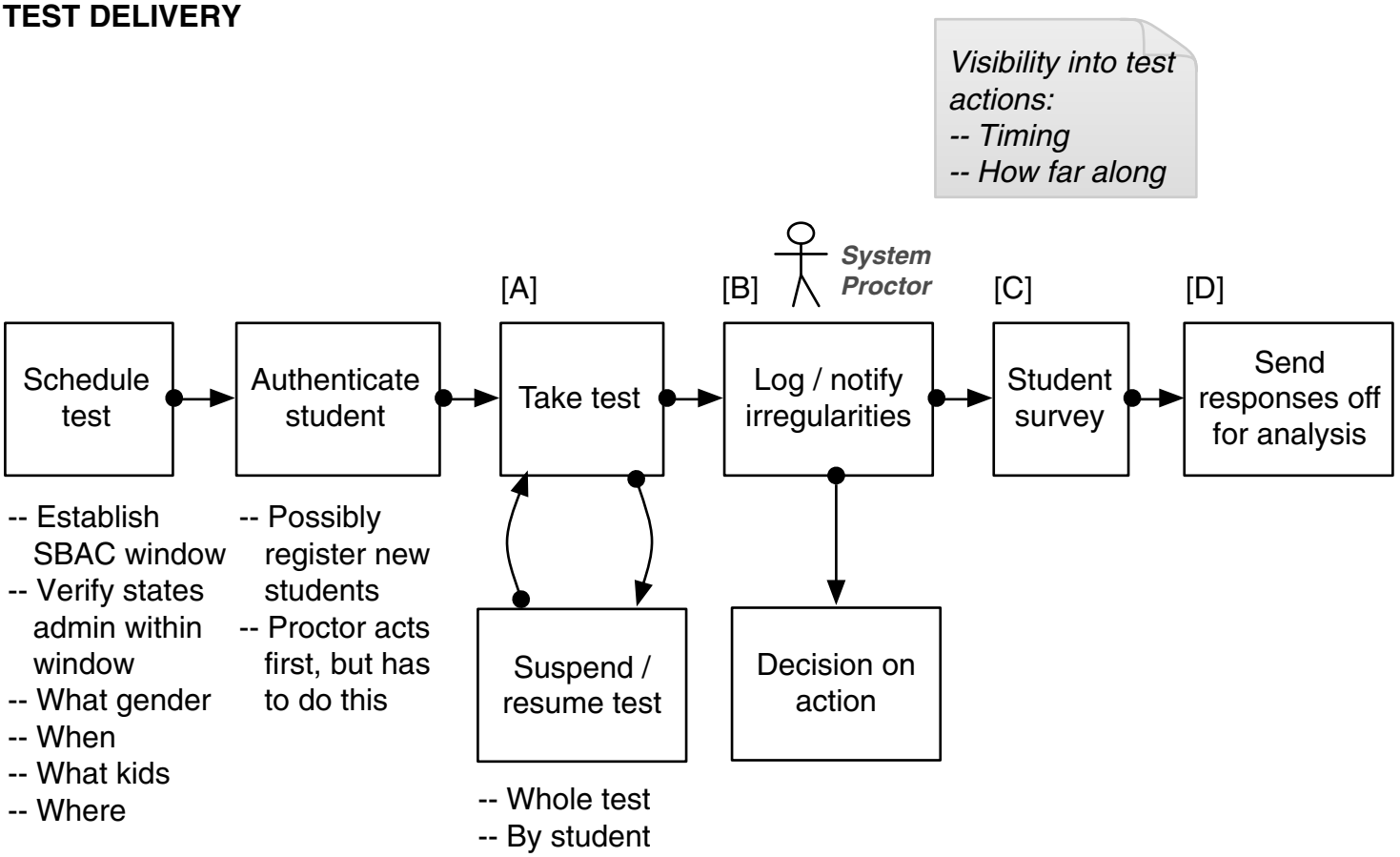
-- Provide support with as little human interaction
-- Diagnostics
-- Pre-emptive help/fix

Ready the IT infrastructure

-- Notifcation
-- Network setup
-- Checklist

Test Delivery

TEST DELIVERY



Configurable options:

[A] Student could see whether they have answered correctly

[B} Can configure if irregularities need to be logged

[C] Configure whether students take the survey or not. Can switch on / off for both interim or summative

[D] Can configure whether the test responses are send off for analysis, for example, to vendors.

Choose test from list of valid for range

Get list of students'
--Accessibility info
--Ability

Get eligible proctors

8. Interim vs. Summative Assessments

In order to provide clarity around interim and summative assessments, a discussion was held to determine what is the same between interim and summative assessments and what is different. Consensus was made around each of these points in the following table.

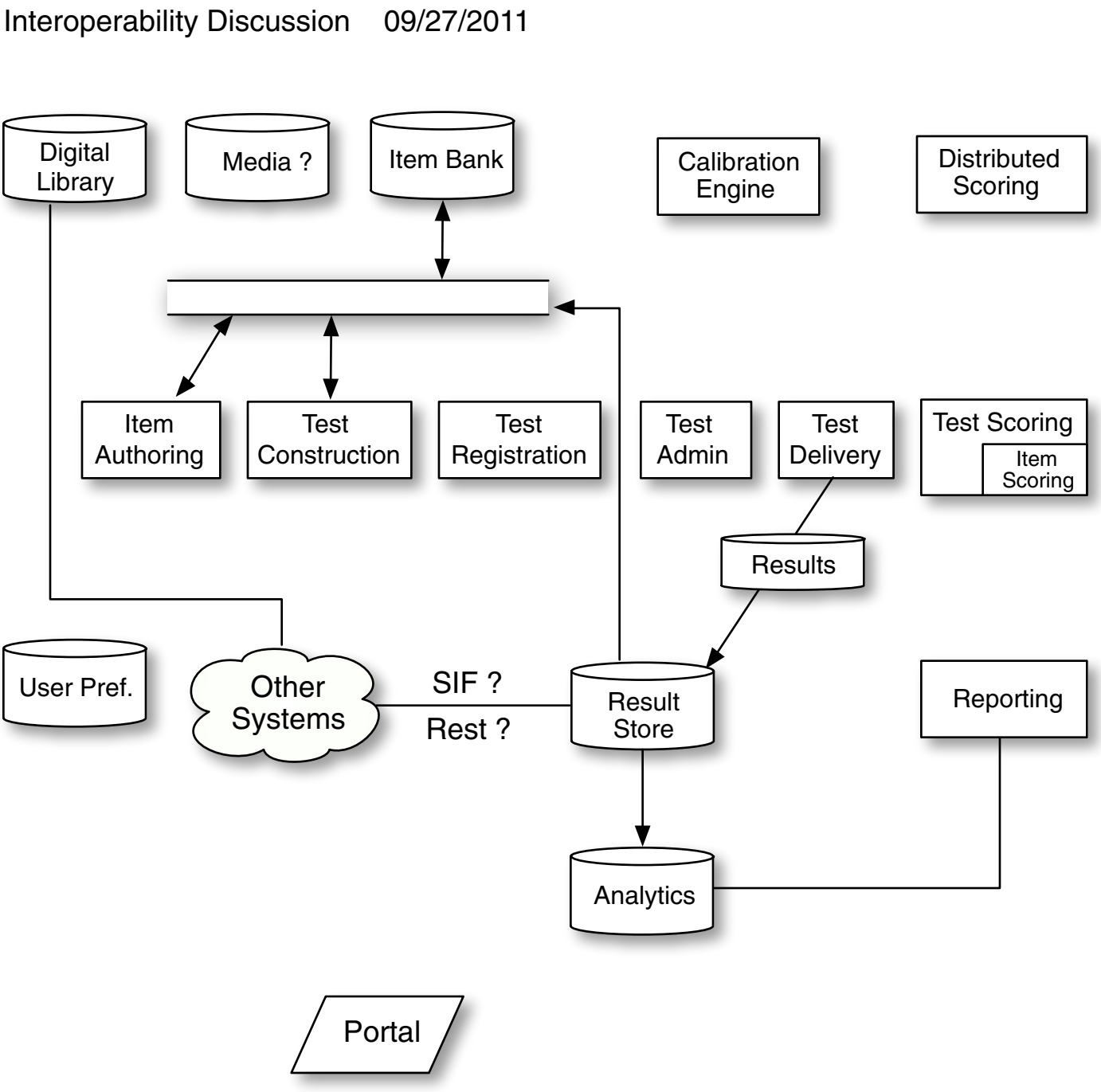
Interim is the same as summative	Interim is different from summative
*Reflects student understanding of CCSS+	Purpose is to inform instruction more than summative++
Adaptive +++	less high stakes/relaxed stakes+++
On same psychometric scale++	*Non-secure/diff security ++++++
It's another theta hat-estimating ability	*Voluntary for states (subscription, OSS, Creative Commons)+
Assesses same constructs+	*Greater flexibility for customization++
Type and level of items+	Needs flexibility in picking/constructing blueprints+
Look and feel	*Flexibility classroom level+
Delivery system	*May be fixed form or unstructured
Item bank and test bank could be same	*Options for mini-summative or informative (e.g., students could see if they get questions right)
Produced and authorized by SBAC	State option+
Feedback on student performance	*Administered more often during year+
Computer delivered	Time synchronization harder (when taught and when tested)
*Overall Structure	Possibility to integrate other administration options (clickers, iPads)
*Process of item creation, test assembly, test delivery and reporting	Specifications
Monitor item exposure	Results are used for different purposes
"mostly" disconnected from instructional modalities and models	Smaller concurrent population
Flexibility for alternate delivery systems	Teachers may score own students' work
	*Teacher ability to customize and choose items
	*Based on local curricula and instruction units+
	Initially will need to populate with a pool of items. Operationally—interim items will be items released from summative

Interim is the same as summative	Interim is different from summative
	Uses non-secure tasks
	Reporting detail
	Level of precision / diagnostic orientation vs. classification orientation
	Use of information differs+
	Interim provides actionable information on student. Teacher is also recipient
	*Don't need as much item metadata
	Could be diagnostic-predictive of summative
	Type of feedback to teacher and parent / stu
	*Local deployment options
	Student data tracked over course of yr
	Interim may focus on a narrow set of assessment targets
	Different tolerance for item exposure
	Test experience is not secure
	Could be different media +
	Alignment to CCSS and alignment options for local standards
	*Support k12 all content areas
	Ability for students to develop portfolios of work
	Undefined (by SBAC) testing windows
	State-defined Proctor authentication+
	Looks forward (predictive) more than backward (reactive)
	*Option for making tests with various item pools, teacher's own items, or both
	*Differences in frequency
	Initial size of bank is smaller
	*Contains teacher-created items
	SBAC value decisions needed: Item source issues, scaling, calibration of items, use of diff tools, , Rights of items (DRM), what is being reported

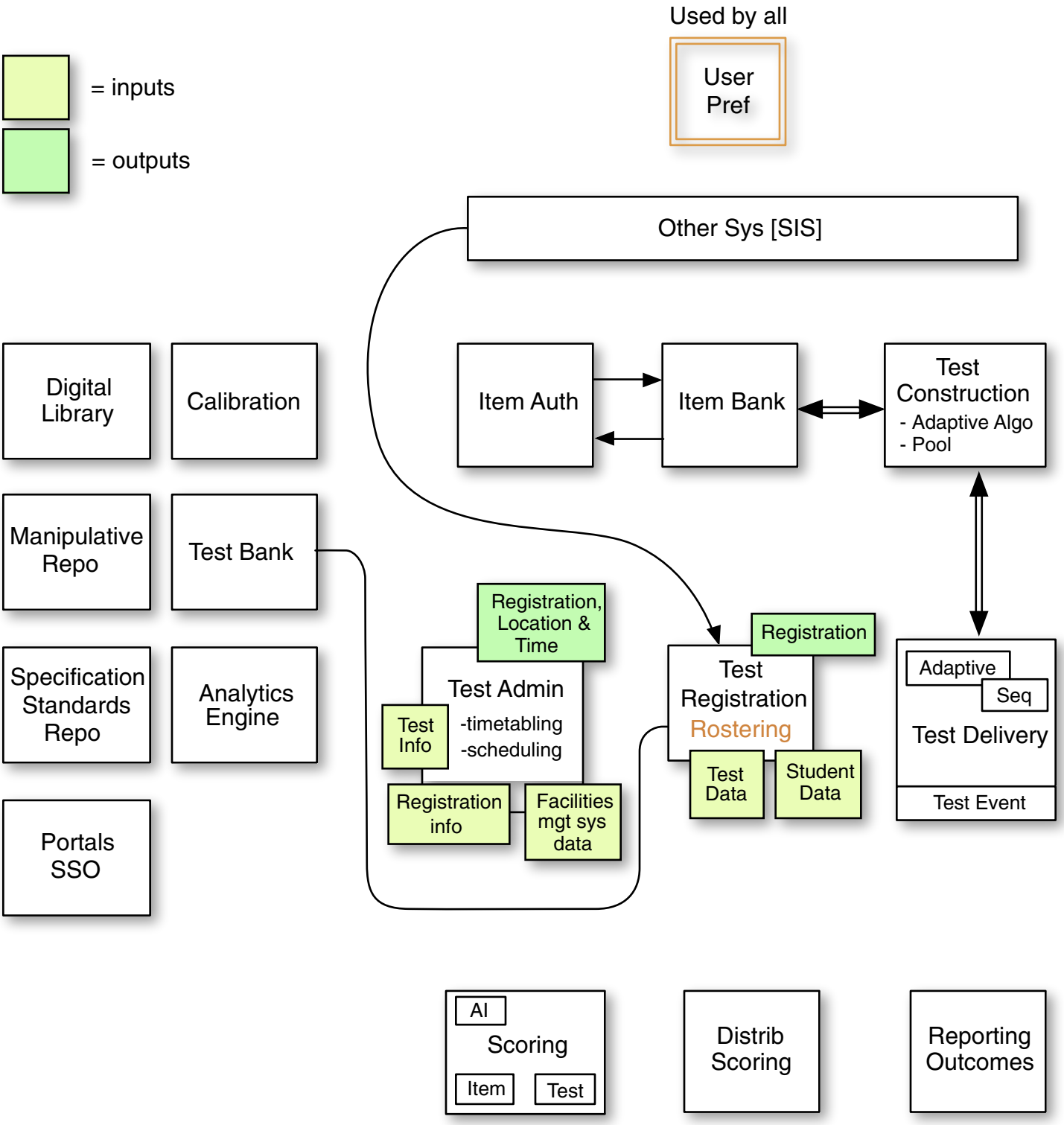
9. Architecture Outputs

As preliminary conversations during the workshops, initial discussions were held around some beginning architecture outputs. These conversations centered on interoperability. These diagrams do not represent the final interoperability and integration recommendations and were simply used for illustrative purposes in determining needs between the various applications.

Interoperability Diagrams



Interoperability discussion diagram 2

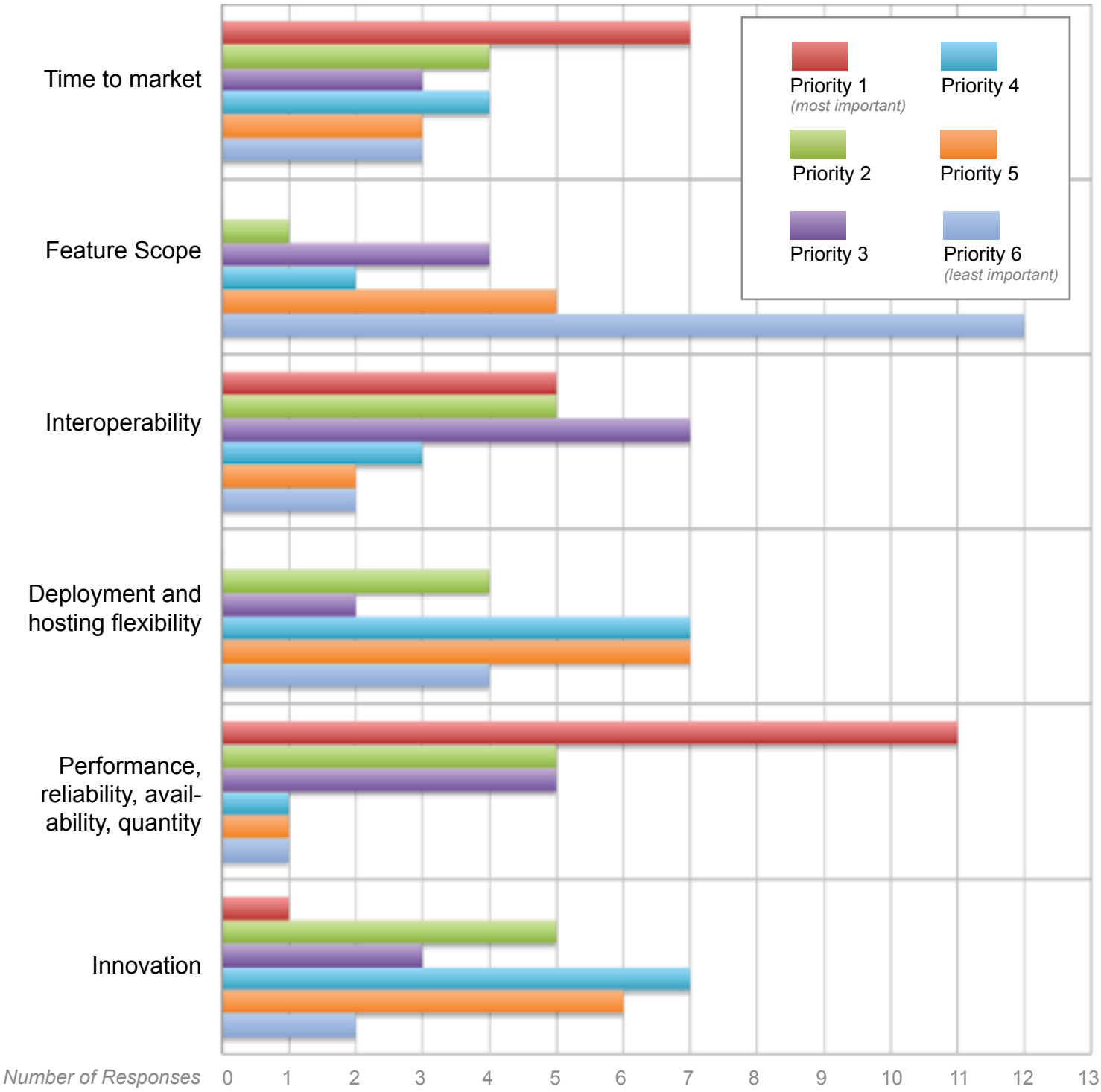


10. Priorities

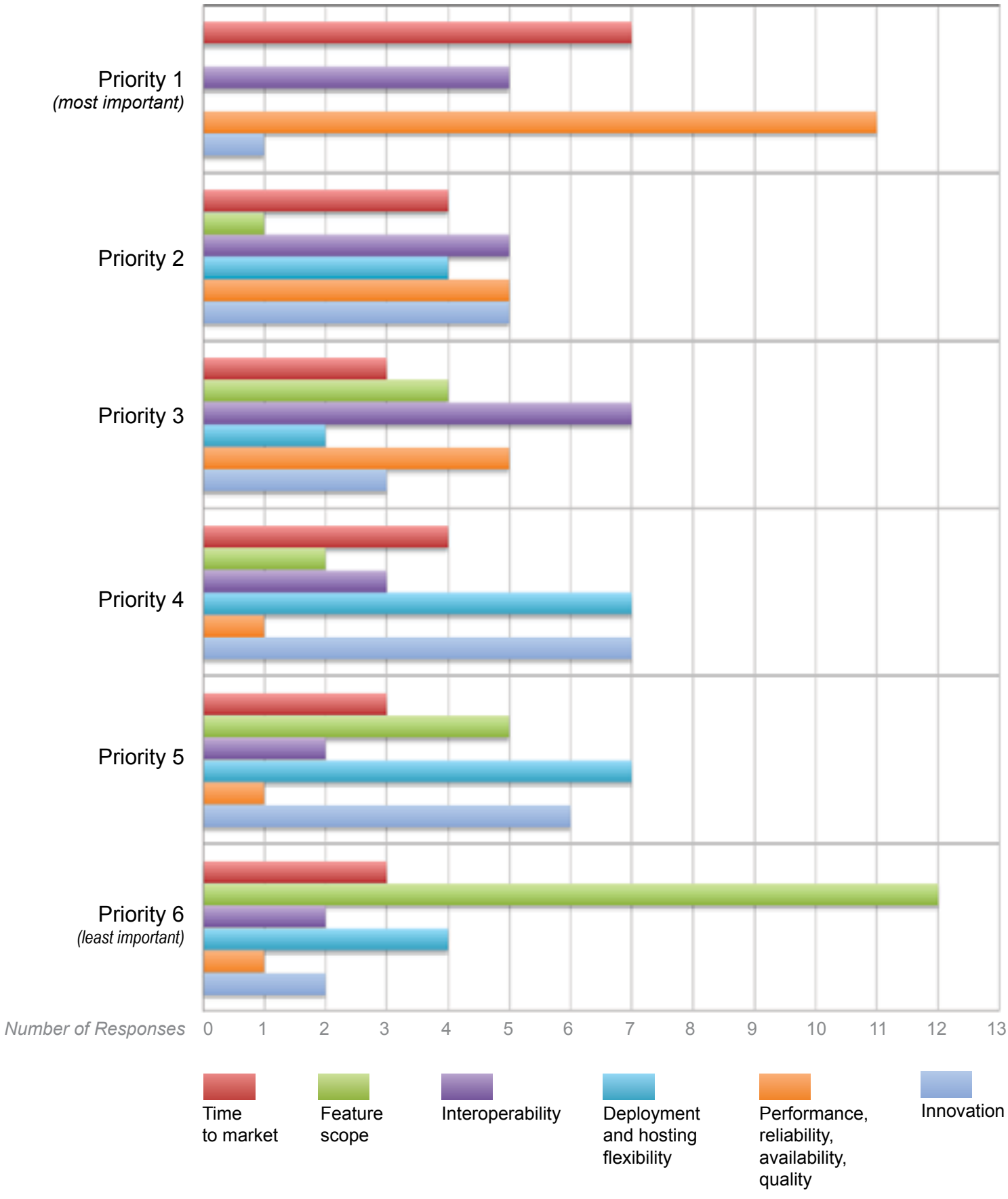
We asked each person to come up with what they felt were their top three most important aspects of the architecture. The intention was to feed this into a sliders exercise at some point in the future. These are purposely anonymous. In preparation for the sliders activity, we asked SBAC members to prioritize a list of items.

From the survey, these results were compiled:

SBAC trade-off sliders responses (graph 1)



SBAC trade-off sliders responses (graph 2)



From the results, a discussion was generated to determine the priorities. These below represent the importance of the dimension relative to cost.