



ATP 2020 Global Conference

gone virtual

**Item Bank Hygiene:
Is Your Item Bank Squeaky Clean
or Is There Dirt in the Crevices?**

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Association of
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The intelligent voice for testing

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Presenters

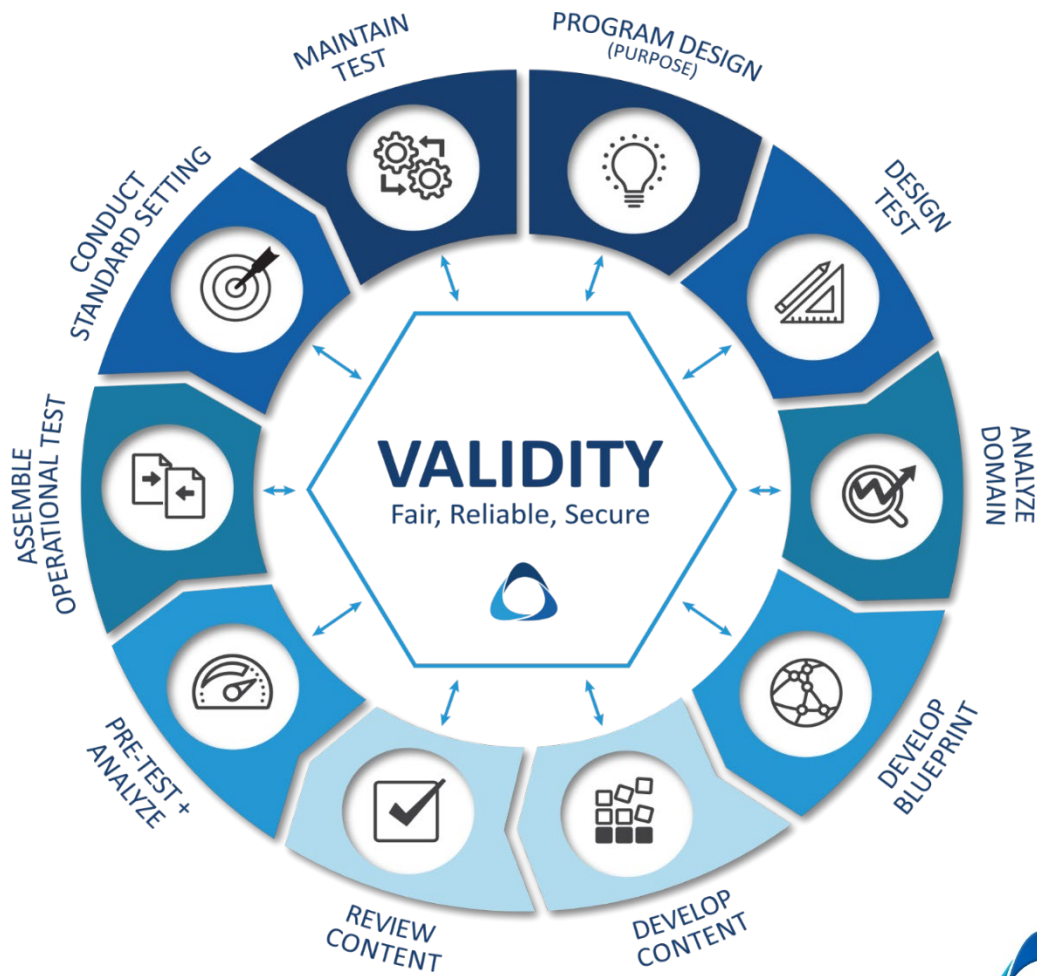
- Alpine Testing Solutions:
Susan Cooley, Program Manager
Laura Brooks, Program Manager
- NCARB: Michelle Cohn,
Assistant VP, Examination
- F5 Networks: Heidi Schreifels,
Exam Development Manager



Alpine Testing Solutions

- Assessment and Test Development Services
 - Consulting
 - Program Design
 - Test Design
 - Domain Analysis
 - Blueprint Development
 - Content Development & Review
 - Pre-test and Analysis
 - Operational Test Assembly
 - Standard Setting
 - Security & Exposure Analysis
 - Test Maintenance
- Candidate Management via CertMetrics™

Alpine Testing Solutions



National Council of Architectural Registration Boards

- NCARB, in collaboration with licensing boards, facilitates the licensure and credentialing of architects to protect the health, safety, and welfare of the public.
- 55 boards – U.S. states and territories
- Programs for licensure candidates and professional reciprocity

Architect Registration Examination® (ARE®)

- Required by all 55 licensing boards
- 20,000 candidates currently testing
- 35,000+ administrations/year
- 6 separate divisions, pass all within 5 years



Practice
Management

Project
Management

Programming
& Analysis

Project Planning
& Design

Project
Development &
Documentation

Construction
& Evaluation

ARE Item Development Committee

- 50 volunteer SMEs
- 1-year appointment
- 500-600 items/year

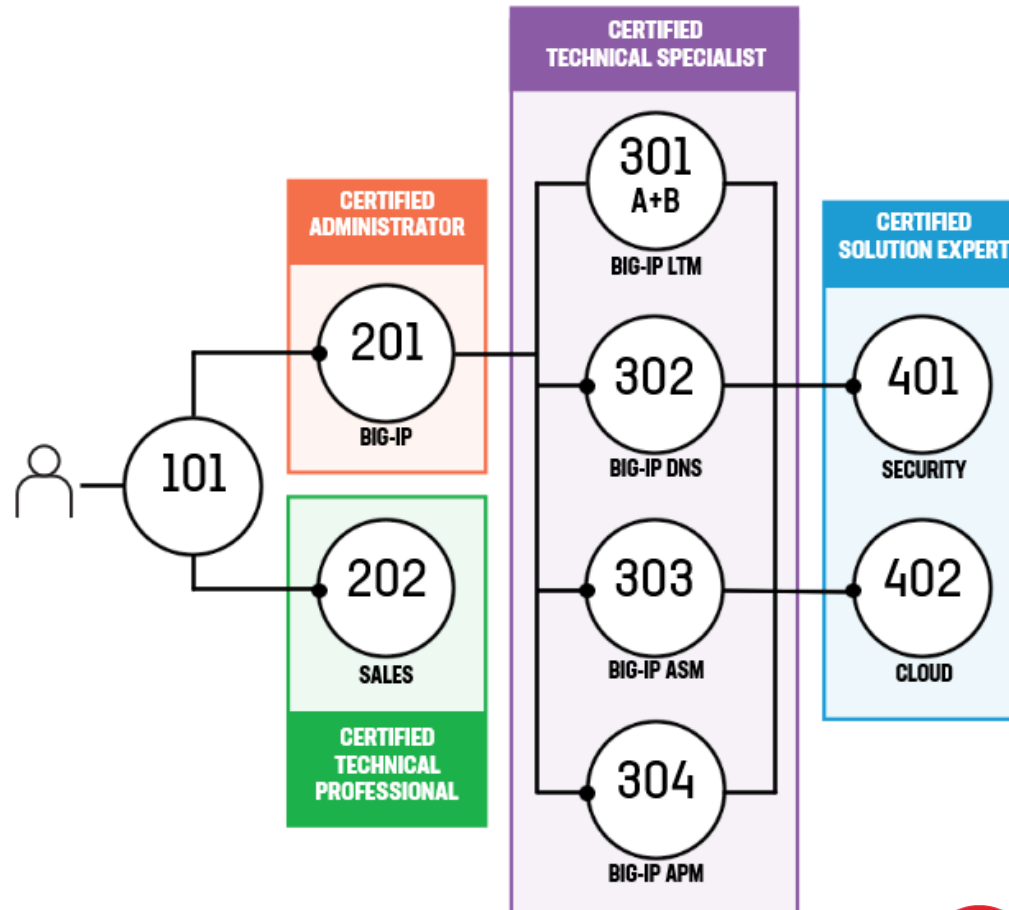


- 3-4 in-person meetings/year
- Homework and webinars

F5 Networks

- F5 Certified Professional Program Track
- Closed program
- Currently have 10 exams
- Incorporated practice exams
- Section level development and feedback
- Scaled scores

F5 Networks Certification Program



certified

F5 Networks Exam Development SMEs

- F5 Certified volunteers
- Global community
- New SMEs for every exam workshop



- 4-5 in-person exam workshops / year
- 12-14 SMEs / workshop
- 300 items per exam

Overview of Pool / Item Review

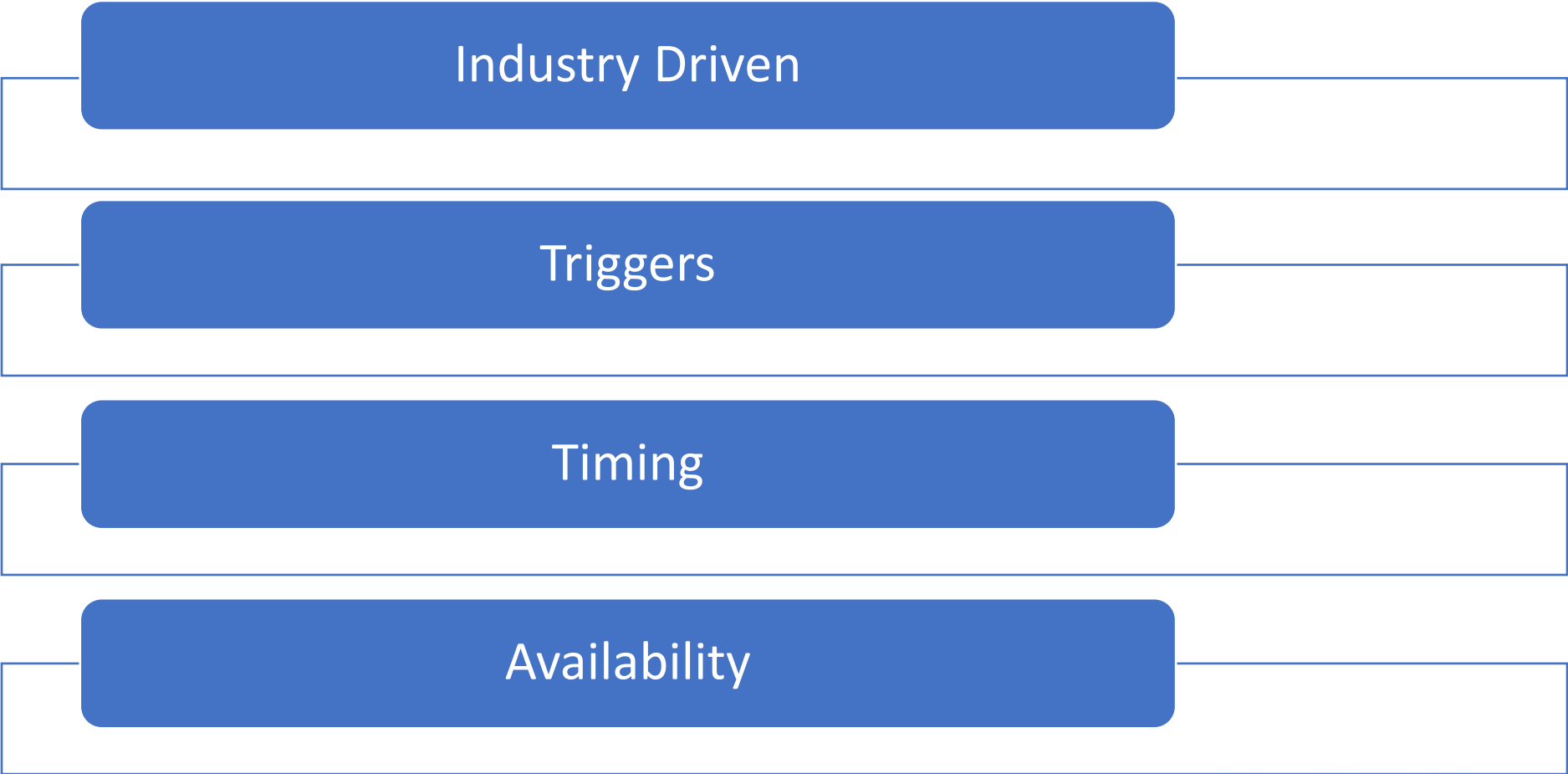
- Systematic review of all the items in the bank
- Establish guidelines to ensure consistent and repeatable reviews
- Recruit multiple reviewers to ensure consensus
- Establish parameters to save items

Why conduct a Pool Review?

- Reviewers ensure items are still viable and accurate
- Reviewers analyze item performance via statistics



Timelines and Triggers



Why NCARB does a pool review

- It's the right time
- Test Spec updates
- Content updates
- Technology changes



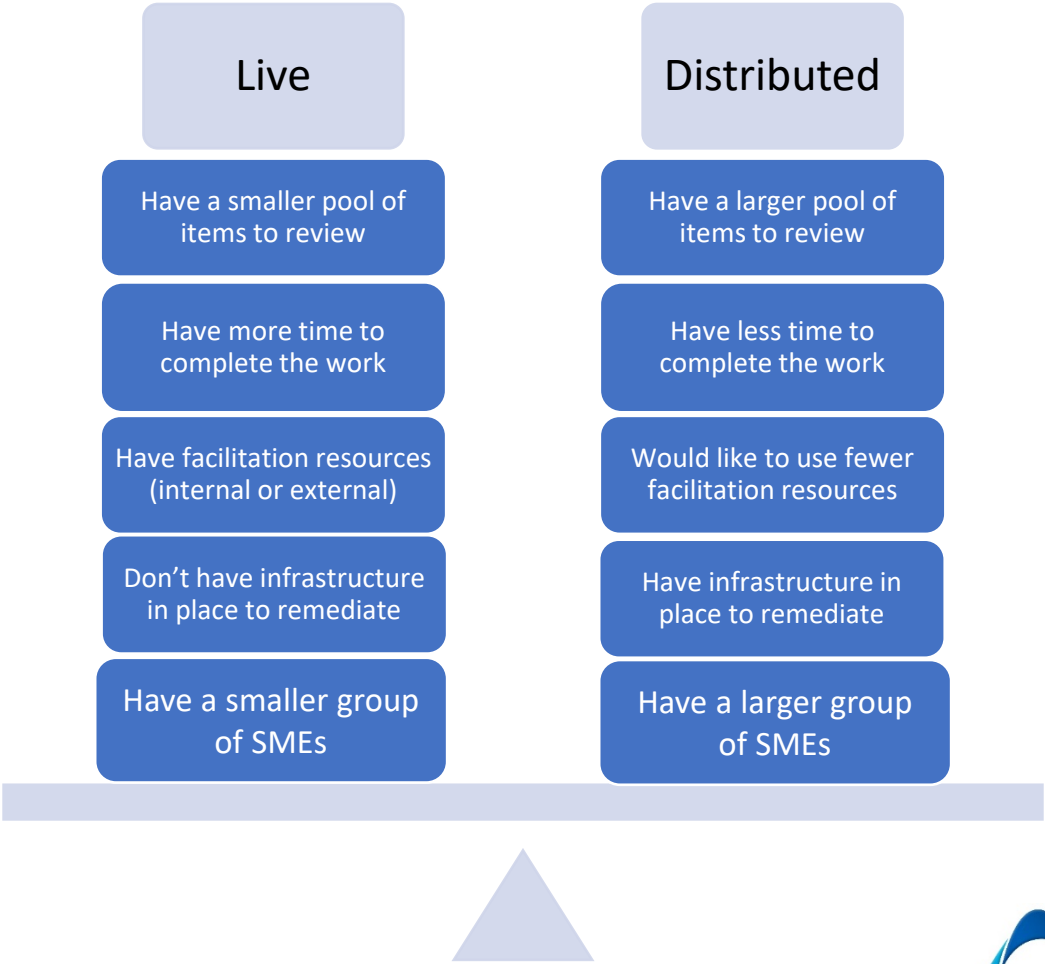
Why F5 does a pool review

- Rapid changing of technology
- Security
- During exam refreshes
- Ensure exam blueprint alignment
- Maintain quality and integrity of our items

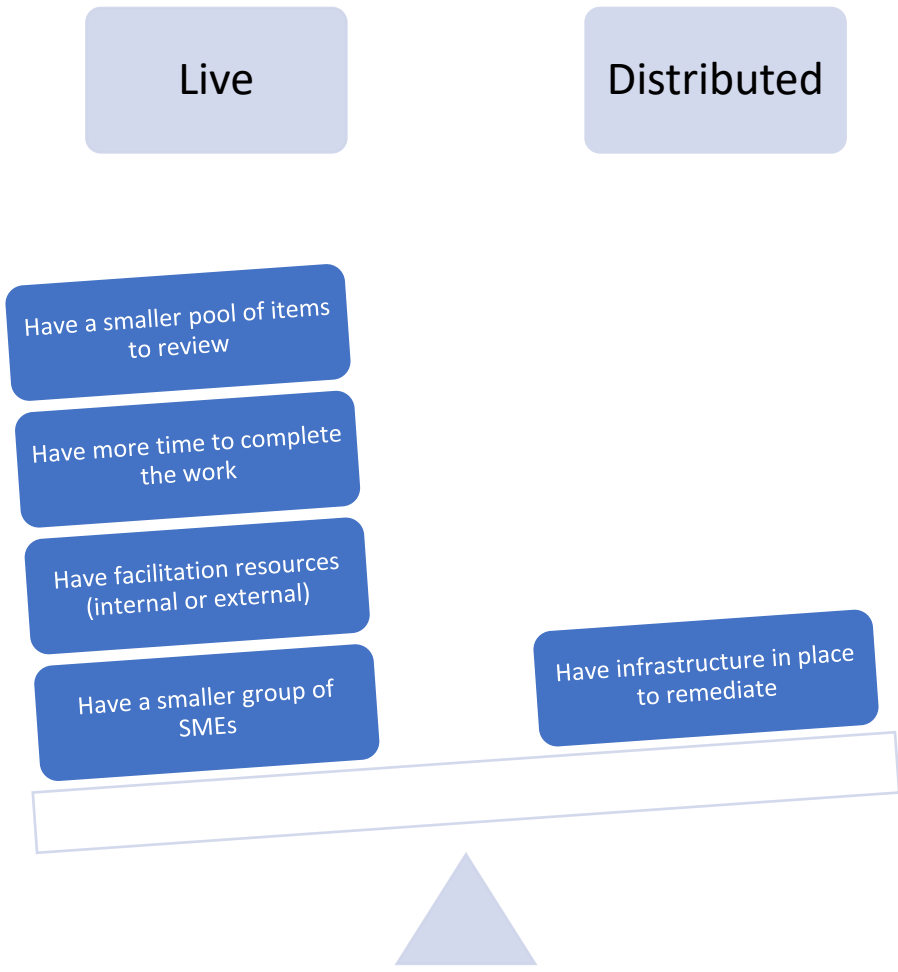
Approach to Pool / Item Review

- Establishing a committee or timeframe
- Which items should be reviewed?
- How will items be reviewed?

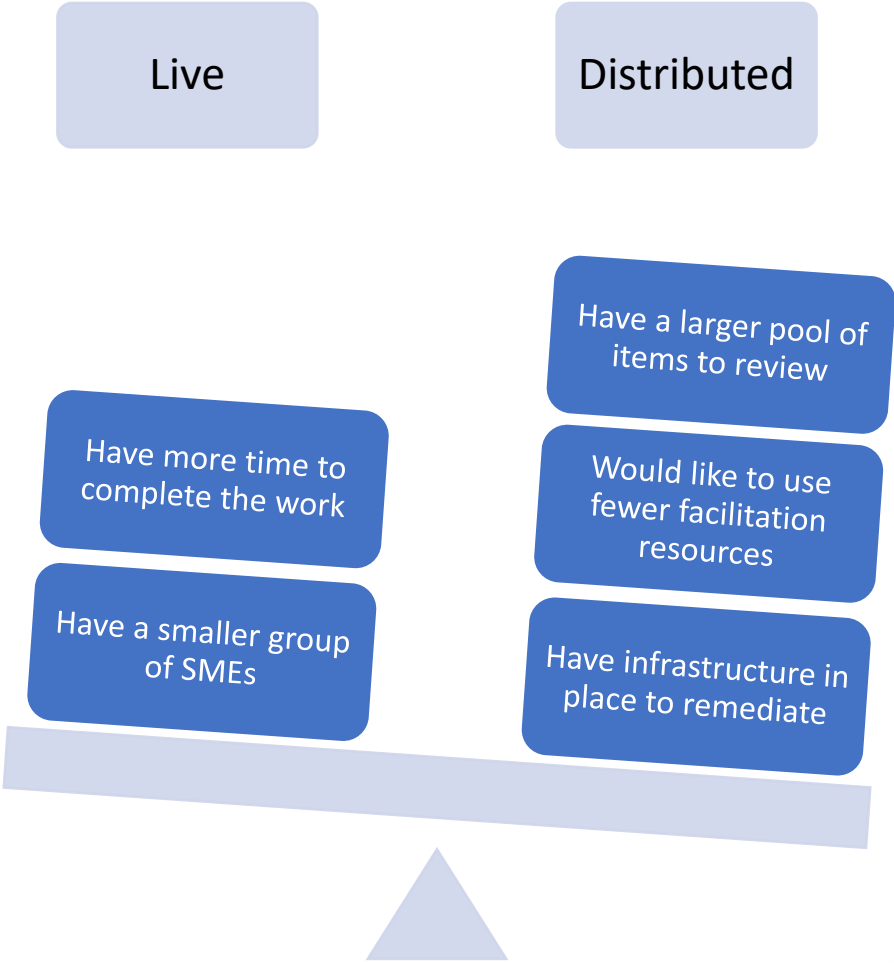
Approach to Pool / Item Review



Approach to Pool / Item Review



Approach to Pool / Item Review



NCARB Approach

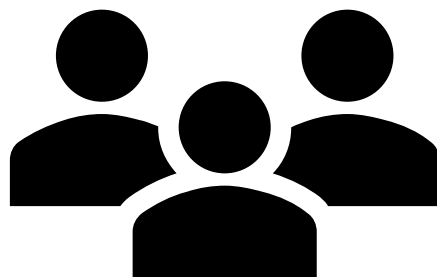
- Goal: Consistency in item bank
- Assume: It's okay to lose items!



NCARB Approach

Pool Review Committee

~~Existing Item Writing Committee~~

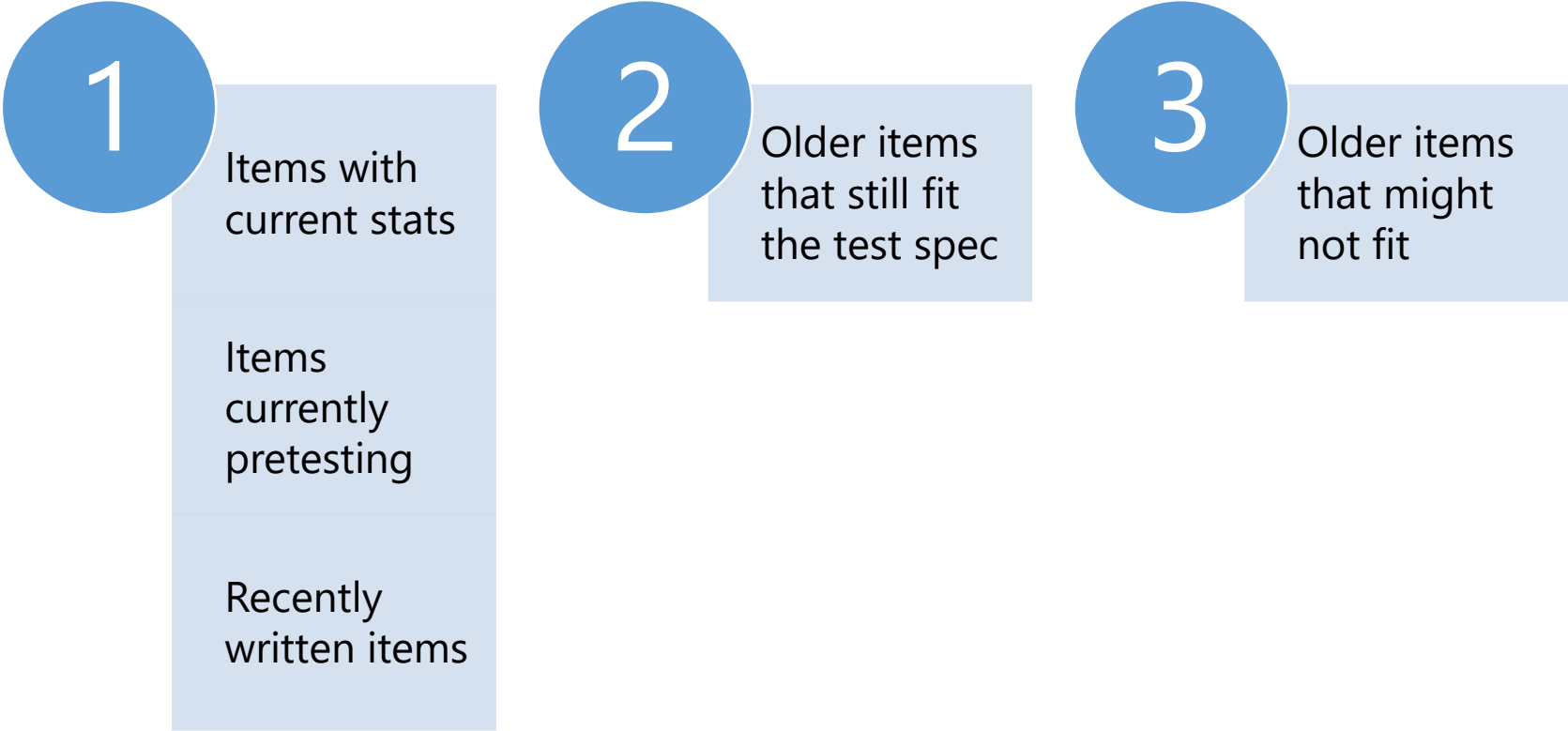


- In-person meetings
- Homework

Timeline: 1 year

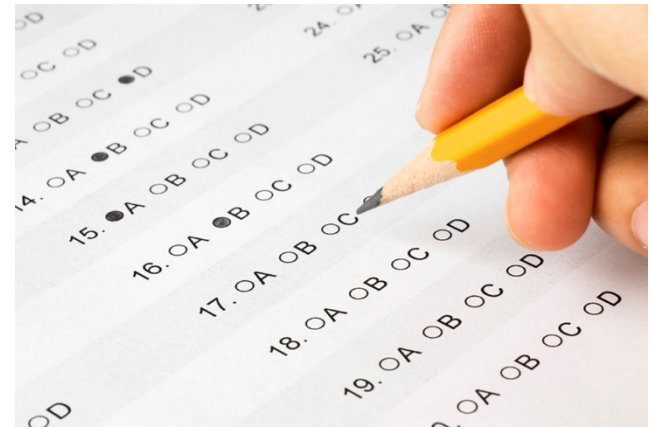
- Extra meeting
- More SMEs

NCARB Approach



F5 Networks Approach

- Conduct item review in conjunction with an item writing workshop
- Review, Reject, Revise
- Intent is to keep items that are relevant and discard those that are not relevant or do not align with new blueprint
- Any extra items kept can be used on practice exams

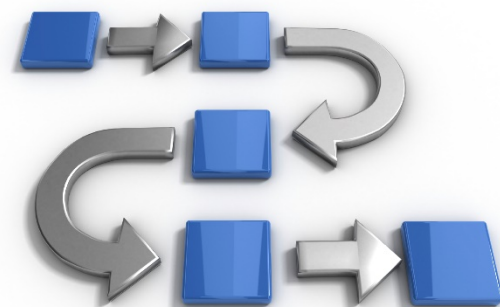


F5 Networks Approach

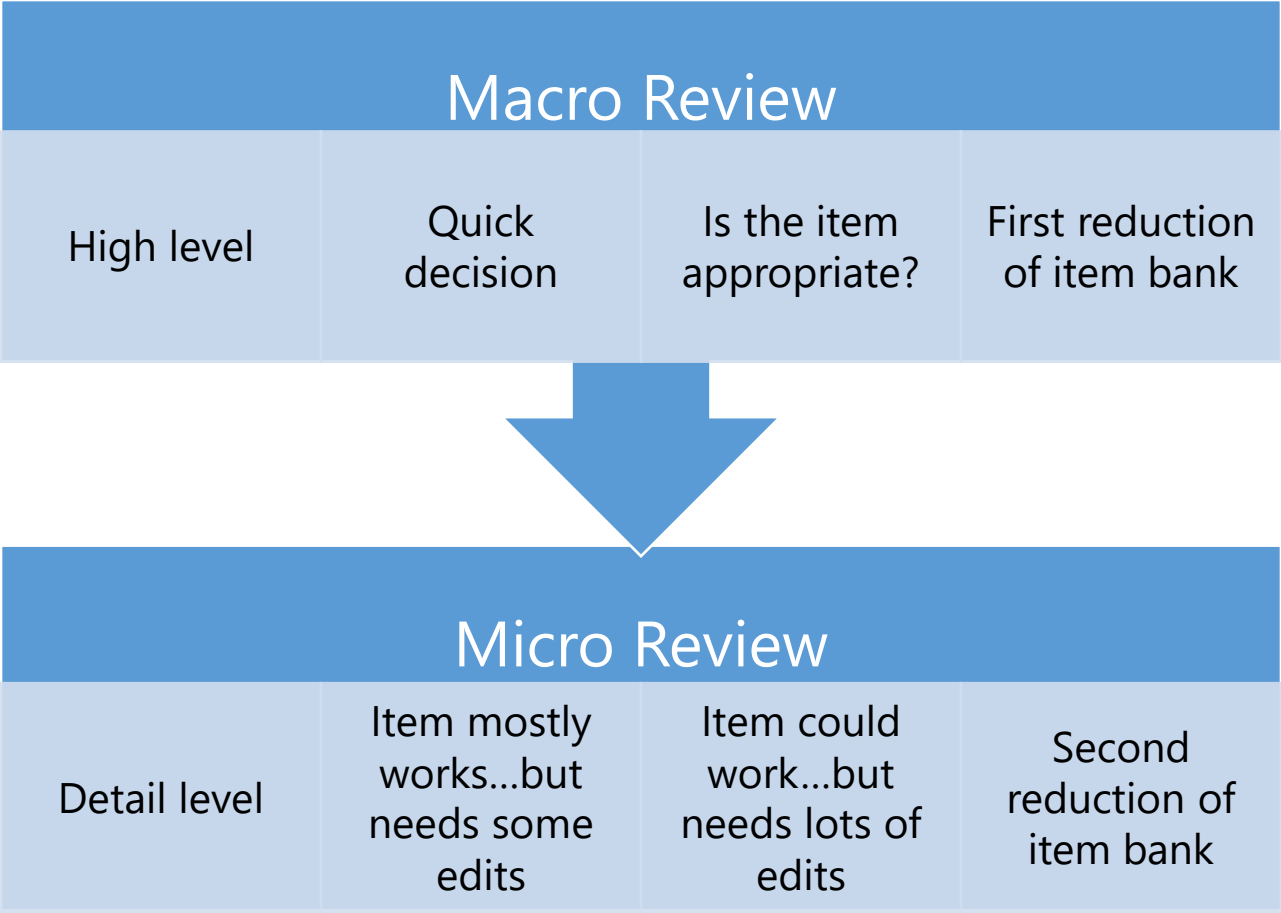
- Health Check on current operational exam items
- Copy “Kept” items into new bank
- Declassify items
- Import new blueprint
- Leave operational exam item bank untouched

Process Details

- General recommendations
- Item Bank / Item Versioning
- How will item reviews and final decisions be recorded?
- How will remediation occur?
- What will be your item update policy (degree of change)?
- Other considerations?



NCARB Two-Part Review



NCARB Macro Review

Does the **content** match the test spec?

Does the **cognitive level** match the test spec?

If not...is there a **better objective**?

Is it **relevant to the current practice** of architecture?

NCARB Micro Review

What the
candidates see

Stem

Key

Distractors

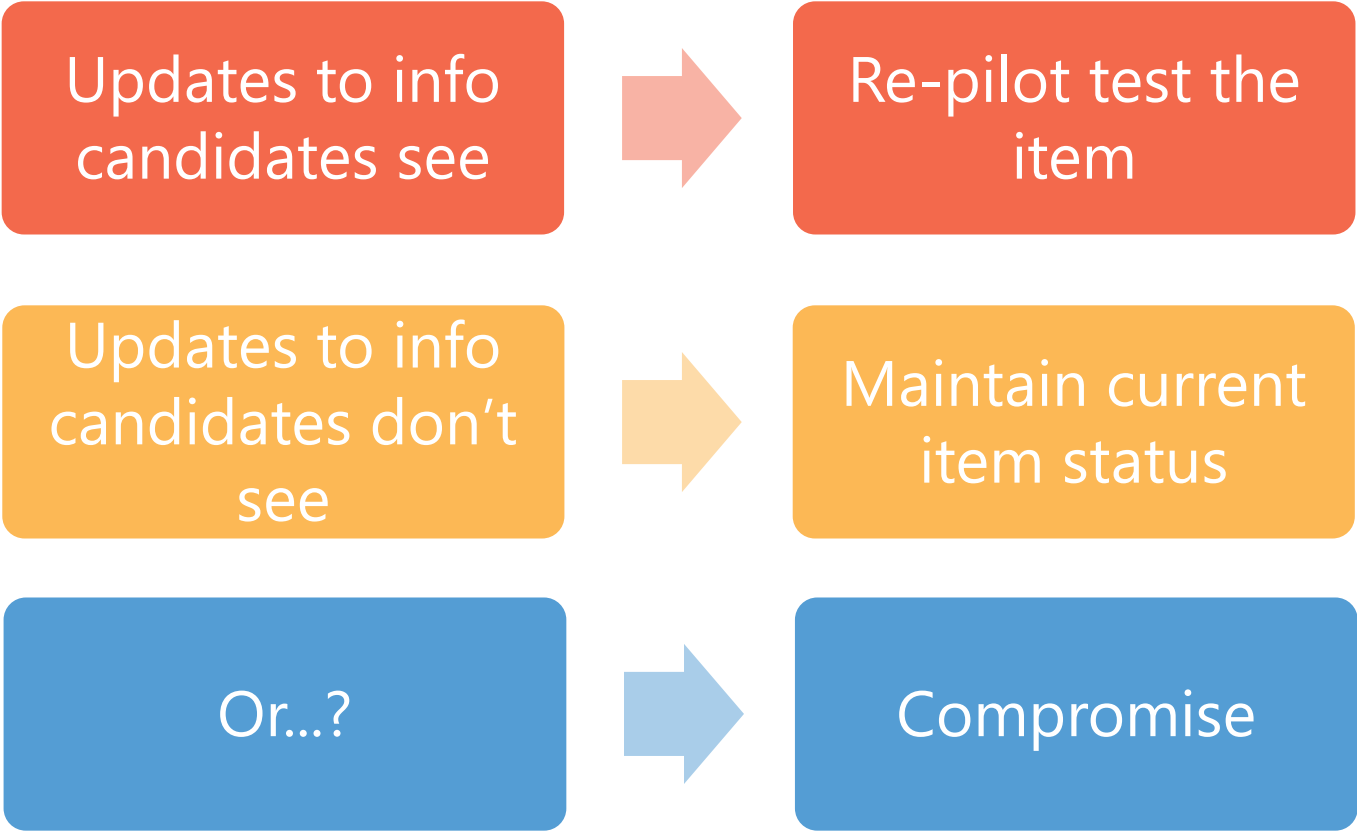
Graphics, Exhibits,
Images

What the
candidates don't
see

References

Rationales

NCARB Degree of Change



F5 Networks Process

- During exam refreshes
 - Every 18-24 months
- Item reviews include
 - Relevancy
 - Technology changes
 - Appropriateness for MQC
 - Mapping to new blueprint objectives
- Try to save enough items for practice forms
- Remediation occurred during a facilitated process
 - One person only making changes to items
 - Reduces security risks; no remote access to item bank

F5 Network Degree of Change

Changes to the
item stem or
distractors



Re-pilot test the
item

No changes and
can be mapped
to new objective



Maintain current
item status

Not relevant or
current to
industry



Delete item



certified

Tools and Policies

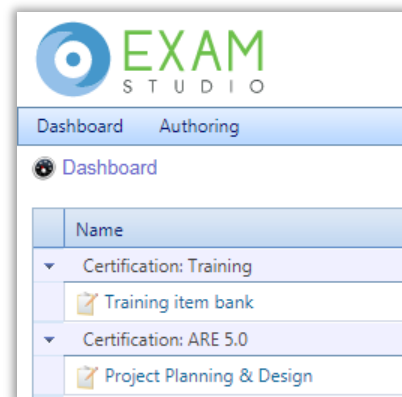
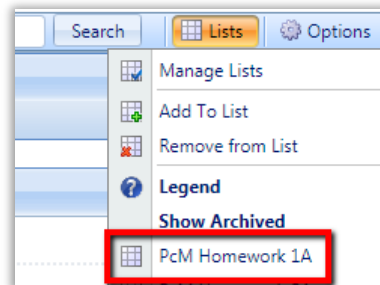
- Both programs use ExamStudio for item banking
- Does test delivery vendor matter?
 - Live delivery versus exported content

Working in ExamStudio

- SME Roles and Permissions

- Item lists

- Custom reviews



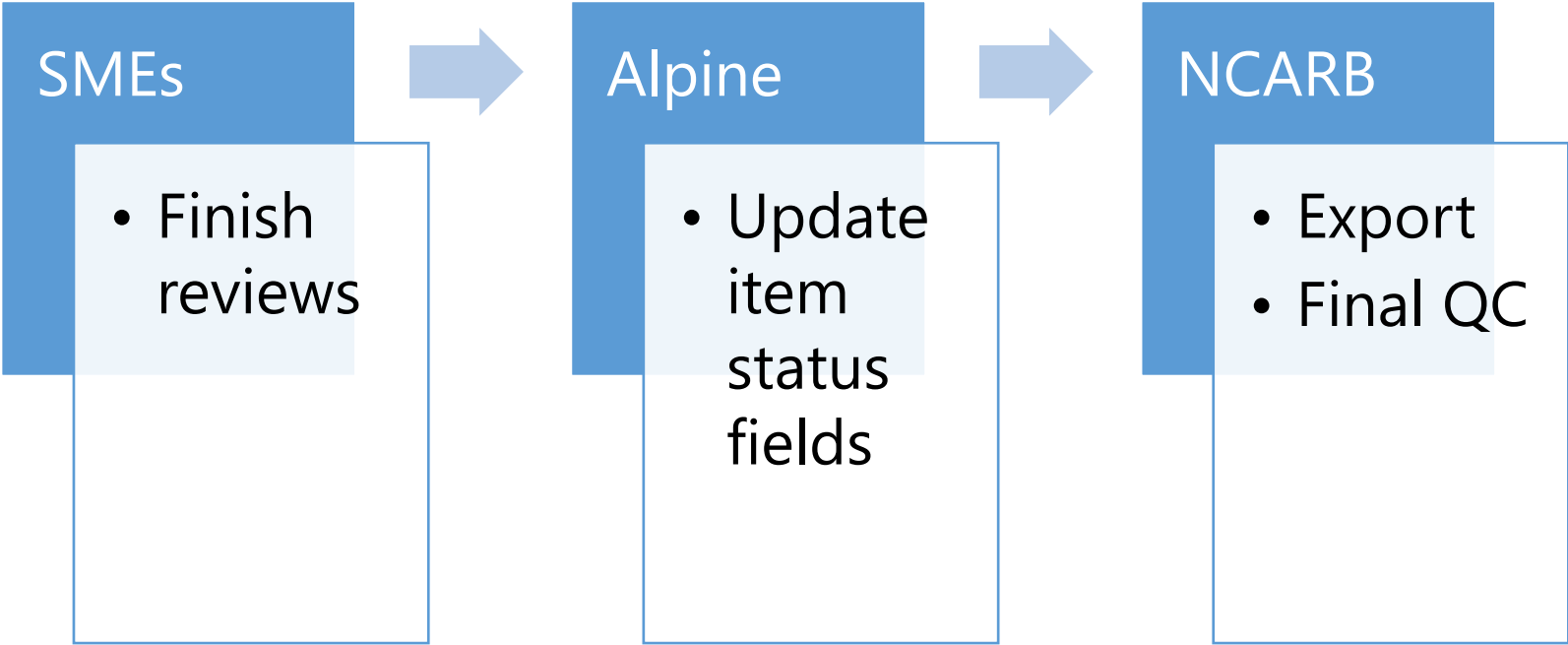
PR-1.1: Content Match	Does the item content fall within the test spec content area (objective, section, division)?
PR-1.2: Cognitive Complexity Match	Does the item content fall within the test spec content area (objective, section, division)?
	Yes
	No
PR-1.3: Better Objective Match	Is there a more appropriate objective for this item, within the same division, for both its content and cognitive complexity level?
PR-1.4: Relevance	Is the item relevant to the current practice of architecture?

Working in Excel

- Tracking items
- Crunching responses
- Tracking progress

$$\begin{array}{r} \text{SME 1} \\ + \text{SME 2} \\ \hline = \quad ? \end{array}$$

NCARB Completion



F5 Networks

- Kept items copied to new bank and items stored in an unclassified objective
- Create new bank due to version control anxiety
- Items can be changed, but need re-pilot tested
- Items that cannot be mapped to new blueprint are deleted
- Importance of continued security

Lessons Learned / Best Practices

- Ask for recommendations from your psychometrician
- Keep communication lines open
- Technology is your friend

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Questions?

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