PRISM TRAINING BRIEF

Training Topic:

Internal Evaluation Program (IEP)

What is an Internal Evaluation Program?

Let's begin with a definition: Internal evaluation is a process of quality review undertaken within an institution for its own ends. So, put another way, it's a self-examination with the overall objective of improving the way a company operates. Improvement is something every company is interested in, right? In aviation, there is the added benefit of discovering and eliminating errors that, undetected, could become causal factors in an accident or incident. That's definitely something every flight department is interested in.

A well executed Internal Evaluation Program (IEP) is also one of the best ways to identify what's broken in an organization in a non-adversarial manner, because of its internal nature. It's a continuous process of self-assessment, if you will.

To sum it up, a successful IEP examines necessary focus areas to determine if an operation is effective and efficient, and increases the operation's commitment to quality.

Now for a bit of good news: As an ASOS program subscriber, you are supplied with monthly checklists that define scope and standards for your IEP. The scope determines exactly what parts of the operation are to be evaluated. Think of the scope as the IEP map, depicting what direction to go. The standards are derived from ARG/US determined best practices for the business aviation industry, and from actual audit results. By using actual industry audit results, your IEP checklists are created with established focus areas pointing to discovered industry deficiencies. Internal evaluations should extend beyond regulatory compliance, and strive to evaluate all facets of an operation. In other words, dig deep!

This Safety Training Element will describe a step by step approach to IEP implementation, with some examples and discussion along the way.

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Step 1: Construct the policy

Determine who will be responsible for administering the IEP. What is meant by administering? Creating the IEP audit schedule, assigning auditors, tracking checklist completion, assigning a corrective action plan (CAP) for any findings, processing audit information to determine trends and root cause, providing feedback to the organization, and documenting throughout. Place a detailed description of the specific administrative procedures for your IEP in your SMS Manual, and make sure it accurately indicates how your IEP is executed. Be specific!

Describe the role of senior management. How will they interface with the IEP process? Management review of IEP progress should occur at least annually; depending on the size and scope of your operation, every quarter may be more appropriate. If you have a safety committee, or safety action group, what role will it play in the IEP? IEP results should be reviewed by the committee; consider using the resident expertise contained to validate findings, perform root cause analysis, and determine the legitimacy of corrective actions.

Stipulate the appropriate culture. The benefits and importance of the IEP must be communicated and emphatically emphasized by senior management, and made abundantly clear to all personnel. Intimidation and punitive attitudes will derail any IEP; uncovering deficiencies is its purpose. Placing blame and fingering pointing is contrary and disruptive. Remember the objective: making the operation more effective and efficient.

Step 2: Setting up the Audits

The checklists you are provided via the ASOS safety management system are designed to be used monthly, alternating between operations and maintenance focus areas. Circumstances may arise that require deviation from this schedule; not a problem, just stay on track according to your own schedule as described in your own policy and catch up when necessary.

Determine who will be conducting the evaluations, or audits, using the provided IEP checklists. Selecting the auditors is a critical part of creating and sustaining a successful IEP. Experience, training, and personality are critical qualities in an auditor role. Experience is one of those “you have it or you don’t” qualities. Training can be accomplished in a formal course setting, via OJT with another experienced auditor, or using appropriate distance resources (websites, books, etc.).

Just try not to send someone into an audit with nothing but an IEP checklist, a smile, and high hopes; it may not turn out well.

Advisory Circular 120-59A has these recommendations for auditor training:

Auditor Training and Qualifications. If feasible, the certificate holder should specify that IEP auditors have training and/or experience in recognized quality management auditing, systems analysis, root cause analysis, and risk assessment, as well as evaluation principles and techniques. Any one or combination of the following could accomplish training:

(1) In-house prepared courses.
(2) College courses.
(3) Home study course materials.
(4) Industry seminars and workshops.
(5) Selected FAA courses.

Some recommended distance resources: The Quality Auditor's Handbook by Don L. Freeman, and the American Society for Quality (asq.org).

Bottom line: train an individual in auditing and quality concepts in the most practical and appropriate manner before conducting an internal evaluation.

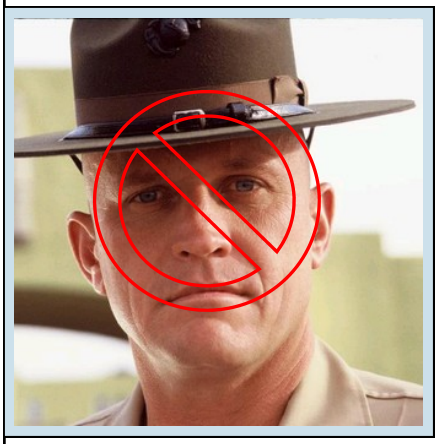
Lastly, personality; we all have one. Some are just not suitable for effective auditing. Select someone who tends to be easily intimidated, and they may never uncover any deficiencies. Select someone who is a tad overbearing, and individuals involved may shut down. The reality is you may have to go with what you've got. Every organization and individuals have shortcomings, so select the best possible option considering the factors mentioned.

Should the auditor evaluate their own work? Never, if possible. This may be a difficult challenge for a small flight operation. The reality may be the safety officer/ manager must conduct most or all of the IEP audits, simply because there is no one else available. In that situation it's critical to have a second set of eyes thoroughly review each audit. Another possible role for the safety committee, or safety action group.

In certain situations, **a Special Emphasis Audit** may be appropriate. For example, recent industry news has just highlighted a particular weakness in an operation similar to yours. Proactively, you decide to immediately conduct an internal evaluation to determine if your operation has this same weakness. Hypothetical scenario: an aircraft crashes after takeoff in icing conditions. It is determined the crew was not using anti-ice holdover tables, and were over the holdover limit on takeoff. This may prompt a special IEP to determine if the holdover tables your operation is using are correct and current, and the SOPs are comprehensive regarding flight in adverse weather.

Step 3: The Personal Dynamics of Conducting the Audit

The auditor must be prepared. The first time the auditor sees the IEP checklist for the assigned focus area should not be when commencing the audit. A thorough review of the focus area details, and familiarity with the IEP checklist establishes credibility.



Set the tone. Show up to audit the focus area on time, according to the agreed schedule. Projecting a positive attitude and understanding the perspective of those responsible for the areas being evaluated are essential for a productive experience. The auditor must strive to eliminate any misconceptions ("You're here to criticize my work") and develop positive synergy throughout the organization. A portion of the audit will require document and manual examination, and a portion will require interaction with the individuals responsible for the focus area. Keep in mind, the auditor is on their turf, so to speak. It's undeniably invasive, to certain extent. That's why the tone is so crucial. An IEP is not about dragging anyone down, it's about improving the operation. That message must be constantly conveyed.

Let's face reality: no one likes to have their work examined. Imagine when it's done by someone who has little idea what they are talking about, with a bad attitude to boot. It can destroy the IEP and damage the safety culture.

Step 4: Working the IEP Checklist

The IEP checklists provided from the ASOS SMS are designed to examine the processes internal to a specific focus area. Through this process examination, systemic weakness can be discovered. Each question asks the auditor to assign a score, in order to quantitatively evaluate that specific question subject. The questions also contain an explanation paragraph in italics, to help guide the auditor.

The auditor must decide the most effective method of examination for each question. Usually a combination of "show and tell" is most appropriate. Paperwork items should be examined for accuracy, organization, and compliance. Documentation should contain evidence of the process employed, and indicate its functionality. The person responsible for the process should also be interviewed to gain their impressions and insight. Remember, the objective is to dig, not scratch. Each question may take a significant amount of time to complete.

Let's run through a specific example. A question on the Operations 2 IEP checklist

asks, “Is there a defined Emergency Response Team identified? Is there documented training regarding the functioning of the ERP? Have ERP drills been conducted?” It might be tempting to think “OK, we’ve got an ERP manual, and it lists the Emergency Response Team. I know we’ve sent training briefs around, and I saw a drill going on about 6 month ago. We’ve got all three, so I’ll score it a 4”

WRONG ANSWER.

Remember: dig, not scratch.

Let’s make a list of the items that should be examined to properly answer the above questions.

- Does the ERP Manual contain an up-to-date Emergency Response Team list?
- Are the personnel on the Team logical choices?
- Are there back-ups, if needed?
- Do the team members know they are assigned this post?
- Is the membership list posted in appropriate locations to allow for notification in the event of an accident?
- What ERP training has been documented?
- Are the training materials adequate?
- Has each member received enough training?
- Question each member to assess their preparedness.
- Examine all documentation regarding ERP drills.
- How often have drills been conducted?
- Has each team member been through a series of drills?
- Do the drills display signs of progressing complexity? This is critical in order to fully evaluate your response capability.
- Do the drills involve outside entities to enhance coordination?
- Does each drill have a lessons learned, and a list of corrections required? Have these corrections/modifications been instituted?
- Do the team members feel the drills are effective?
- Is the next drill scheduled? If yes, at an appropriate interval?

That’s quite a bit of digging to thoroughly evaluate the focus area of the question, but that’s what it takes. The auditor must devote a high level of scrutiny to each question; introspection is not easy.

Step 5: Evaluating the Response

There's no avoiding the fact that the auditor's judgment plays a major role in evaluating the focus area. It requires both objectivity and subjectivity, in varying ratios. One constant, however, is the mantra "The proof is in the pudding," or "Seeing is believing." There has to be proof, or documentation; it's the only way to verify actions. Documentation should always be well organized and presentable, and be able to stand as a matter of record. The auditor must be consistent in judgment, and take copious notes and score the question area, as these will be the basis for developing a corrective action plan for any identified deficiencies, or findings. These finding represent potential organizational weaknesses, or holes in the cheese, using the Dr. James Reason "Swiss Cheese" model (shown later). There's no point in covering –up or ignoring problems; it's akin to lying to yourself, but from an organizational perspective.

Step 6: Processing the Finished IEP Checklist

After the auditor has completed the checklist, it should be turned over to the administrator for processing in accordance with the company's stated SMS policy. Each question should be completed with a score assigned, and notes depicting the details of the auditor's evaluation. Retain these completed checklists in a file, or binder. The administrator must now begin the task of recording and processing the results. The auditor has submitted valuable information, and it must be utilized effectively.

If your company has access to the SMS Toolkit on the ASOS website (Premium subscription required) enter the checklist results into the IEP Manager. Otherwise, record the results in some type of tracking sheet to organize the IEP results.

Each finding (discrepancy) must be analyzed and a corrective action plan be developed. The finding may require validation, especially if the auditor has some doubt concerning the relevant standard as it applies to the IEP checklist question. Resources in the company or external research are both appropriate to vet results that have any degree of uncertainty. As previously mentioned, this may be a good role for the safety committee. It is entirely appropriate at this point to perform a risk assessment for significant findings, and determine if significant risk is present resulting from the discovered "hole in the cheese."

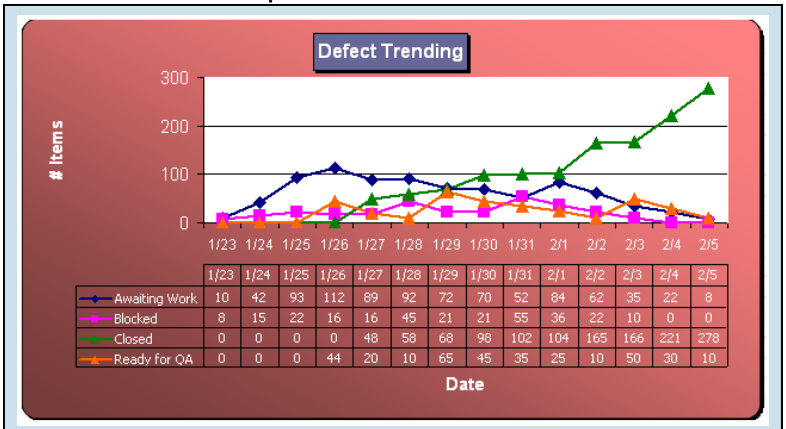
A corrective action plan for each finding should include the responsible party, and an assigned due date to complete the action. The responsible party for the functional

area associated with a particular finding should also be responsible for correcting that finding. Consider performing a root cause analysis to determine what really caused the problem. Using the previous example of the ERP question, let's say no evidence of response team training could be located or observed by the auditor. Simply creating a corrective action plan that requires training be conducted within 90 days may solve the immediate problem, but why wasn't the training done as required by the company ERP? Digging towards the root cause, it is discovered that the Safety Officer is new, and has had no formal training for the position. It is also noted that the emergency response team had three members with less than 10 months tenure. Now you're closer to discovering the real problem.

Step 7: Tracking and Trending

As an Internal Evaluation Program matures and continually generates information, it's critical to capture that SMS input and turn it into an SMS output. Without question, managing the data is challenging, but necessary. This requires an organized repository that facilitates analysis and tracks corrective actions. The objective is to continually monitor for deficiency trends in the operation, and support proactive strategies by developing and executing tactics that consistently improve the organization.

How is this done? If you are using the ASOS SMS Toolkit, this function is accomplished by entering your results in the IEP Manager. If not, create a tracking sheet that lists the finding and date, assigns corrective action with a due date, corrective action taken, and closed date. Corrective actions should also be examined at a future date with an assurance check, to verify the fix is working as planned. Consider reporting the results periodically, using a summary of the information in the tracking sheet. For example, create a report for a quarterly safety committee meeting, and high level management. Once the tracking sheet is created, deficiency trends can be extrapolated to aid in identifying widespread problems. Categorize each finding by a "macro" of some kind, like "Training" and "Safety Culture" for example. If a category becomes populated with multiple findings, it can indicate a pervasive area of concern.



	1/23	1/24	1/25	1/26	1/27	1/28	1/29	1/30	1/31	2/1	2/2	2/3	2/4	2/5
Awaiting Work	10	42	93	112	89	92	72	70	52	84	62	35	22	8
Blocked	8	15	22	16	16	45	21	21	55	36	22	10	0	0
Closed	0	0	0	0	48	58	68	98	102	104	165	166	221	278
Ready for QA	0	0	0	44	20	10	65	45	35	25	10	50	30	10

Let's look at the ERP example discussed earlier. When the Operations 2 IEP checklist is completed and entered into a tracking manager, there are several findings related to ERP training. These findings are validated and assigned for corrective action, and placed in the "Training" category.

When preparing for a safety committee meeting, a cumulative summary report of the IEP category results reveals a trend item in the training category: there are multiple findings in this category in Maintenance and Operations. Digging deeper into the tracking sheet reveals IEP findings associated with on-the-job training for mechanics, pilot training for recently acquired electronic flight bags, and security training for international operations. The addition of the ERP training has solidified this trend, and identified the need for further examination. Clearly, a systemic training problem exists throughout the organization and has been identified by the Internal Evaluation Program.

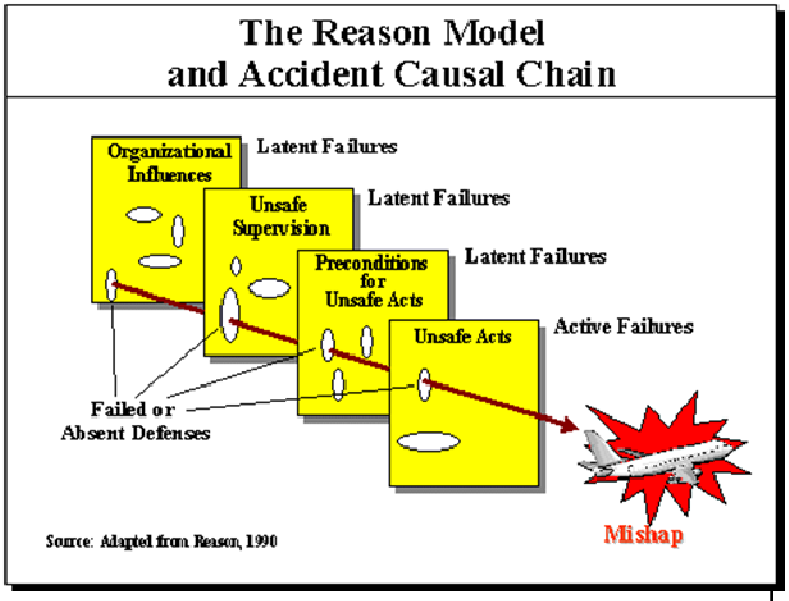
This is an SMS output.

Summary

An IEP is designed to systematically and proactively search for weaknesses, and seeks to verify that key processes and controls are in place across the full spectrum of operational safety. Comprehensive system audits identify opportunities for improvement, which ultimately enhance safety through establishment of predictable and reliable business processes.

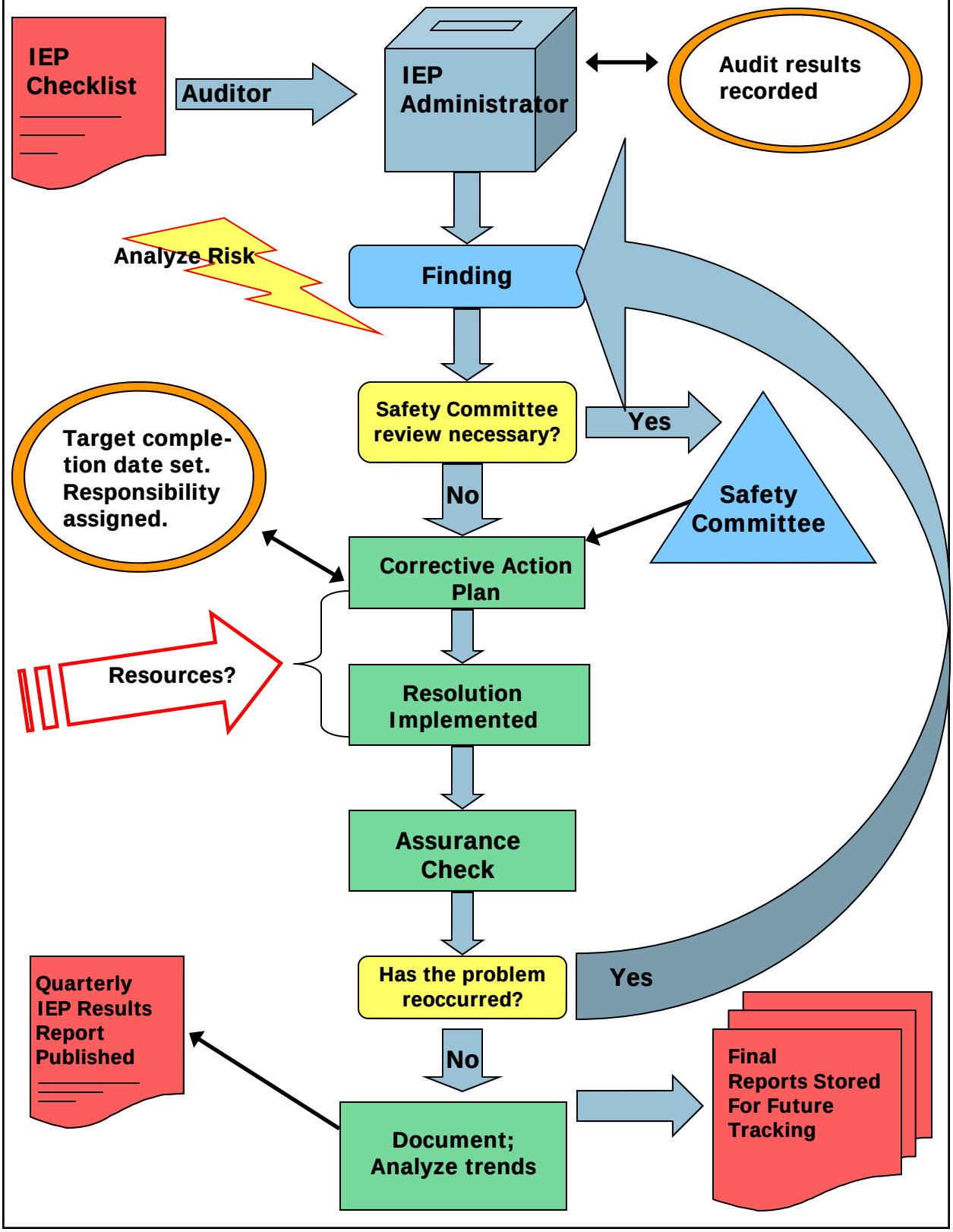
The ICAO SMS manual states it sagaciously:

"While internal audits are often thought of as tests or "grading" of an organization's activities, they are an essential tool for safety assurance, to help managers in charge of activities supporting delivery of services to control that, once safety risk controls they have been implemented, they continue to perform and that they are effective in maintaining continuing operational safety."



Bottom line: The time and effort put into an internal evaluation program will return dividends.

IEP Finding Flow



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