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Are you considering ISO-9001 or AS9120 as your Quality Management System?

What's your next move toward QMS excellence?

Date: June 2012

Block #1

Introduction

Disclosure

- George Ringger is the Accreditation Manager for ASACB's ISO program
- Michele Dickstein is the President of ASACB
- ASACB is an accredited (ANAB) registrar
- ASACB is accredited for ISO 9001 audits and is in the application process for the Aerospace QMS – 9100, 9110, 9120

For those of you pondering **the benefits** in adopting either ISO-9001 or AS9120 as your Quality Management System.

Topics to be covered include:

- cost/benefits,
- external/internal motivations,
- company/customer value, and
- the next steps to be taken toward certification.

Outline

- Block #1: Introduction
- Block #2: What is ISO 9001?
- Block #3: What is AS9120?
- Block #4: Cost / Benefits
- Block #5: External / Internal Motivators
- Block #6: Company / Customer Value
- Block #7: The Next Steps to be Taken

Block #2

What is ISO 9001?

What is ISO 9001?

- INTERNATIONAL ORGANIZATION OF STANDARIZATION
- Registrars issue certifications
- American National Standards Institute
- Registrars conduct regularly scheduled audits

What is ISO 9001?

Is an international standard for quality management systems.

- It is customer focused.
- It contains requirements and guidelines for establishing and maintaining a quality management system.

ISO 9001

Is comprised of the following 8 clauses:

1. Scope
2. Normative references
3. Terms and definitions
4. Quality management system
5. Management responsibility
6. Resource management
7. Product (and/or service) realization
8. Measurement, analysis & improvement

The Objectives of the ISO 9001 Standard are to...

- Achieve, sustain, and improve product/service quality by managing the processes that create them
- Give the organization confidence that customer requirements are being met
- Give the customer confidence that products and services are consistent
- Provide or sustain market entry

ISO 9001 Isn't ...

- **A Panacea.** It alone won't solve all problems related to quality.
- **Prescriptive.** It tells you What, not How.
- **All we need to do.** It only specifies minimum requirements for an effective quality system.
- **The Ultimate Goal.** Our competitive edge depends on our ability to constantly improve and strive for excellence.
- **Sufficient.** It requires supplementation with more specific and detailed customer and/or sector specific requirements.

ISO 9000 Status today…

- **400,000+ Companies registered in over 150 countries**
- **35,000+ Companies registered in the U.S.**
- **20,000+ U.S. Companies pursuing registration**
- **DoD & many other “sectors” or industries have adopted ISO 9000 based standards**

The benefits include…

- Improved consistency of service & product
- Higher customer satisfaction levels
- Improved productivity and efficiency
- Cost reductions
- Improved communications, morale and job satisfaction
- Competitive advantage, increased marketing and sales opportunities

Dun and Bradstreet findings:

85% of registered firms report:

- Higher perceived quality
- Greater customer demand

95% report:

- Greater employee awareness
- Increased operational efficiency
- Reduced scrap expense

Block #3

What is AS9120?

IAQG
International Aerospace Quality Group (IAQG)

Who are they and Why AS9120?

A Global Organization

Whose purpose is:

To establish and maintain a dynamic cooperation, based on trust between international aerospace companies, on initiatives to make significant improvement in quality and reductions in cost throughout the value stream.

IAQG International Members

Asia - APAQG

- AIDC (Aerospace Industrial Development Corp.)
- AVIC I
- AVIC II
- Fuji Heavy Industries, Ltd.
- Hawker de Havilland
- IHI Co. Ltd.
- Indonesian Aerospace
- KAI (Korea Aerospace Industries)
- Korean Air
- Kawasaki Heavy Industries, Ltd.
- MHI

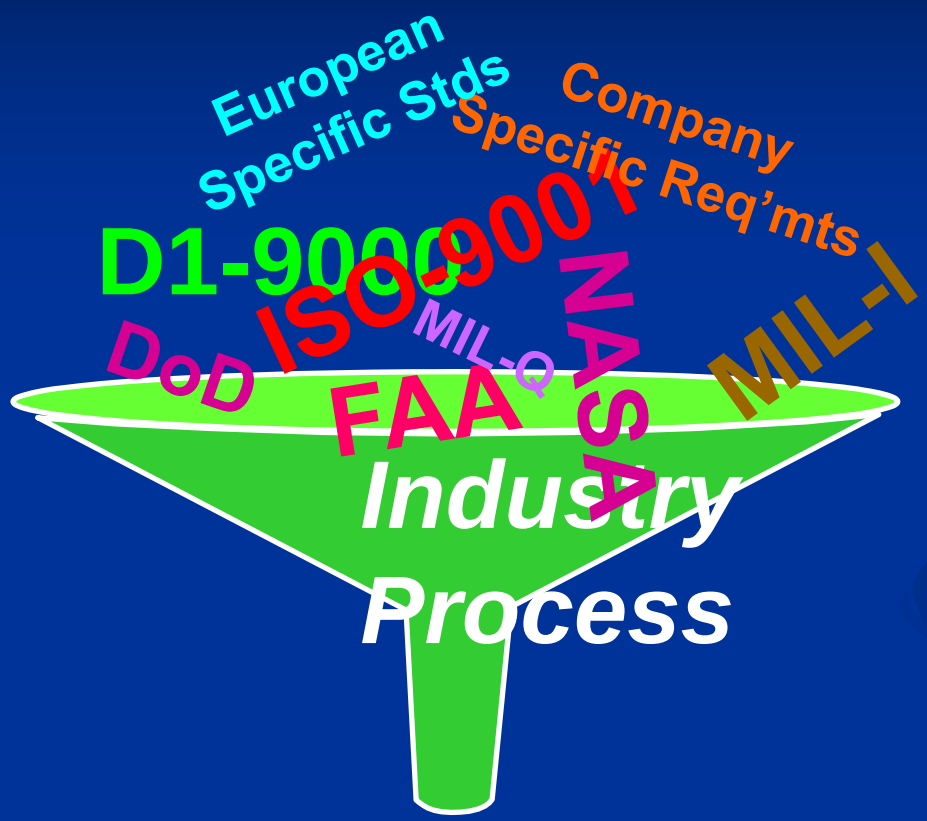
Europe - EAQG

- Advanced Electronics Company (AEC)
- Airbus
- Airbus Military
- Alenia Aermacchi
- AgustaWestland
- Astrium
- Avio
- BAE Systems
- Cassidian
- Dassault Aviation
- ELBIT Systems
- Eurocopter
- Fokker Aerospace
- GE Aviation Systems
- HEGAN
- Israel Aerospace Industries LTD
- Liebherr-Aerospace
- MBDA
- Meggitt
- Messier-Bugatti-Dowty
- MTU Aero Engines
- PFW
- RAFAEL
- Rolls-Royce
- Saab
- SAFRAN
- SAGEM
- SNECMA
- Sonaca
- THALES
- Turbomeca
- UAC (United Aircraft Corporation)
- Volvo Aero
- Zodiac Aerospace

Americas - AAQG

- ATK
- Ball Aerospace
- Boeing
- Bombardier Aerospace
- Embraer
- GE Aviation
- Goodrich Corporation
- Gulfstream
- Honeywell Engines and Systems
- Lockheed Martin Corporation
- Northrop Grumman
- Parker Aerospace
- Raytheon
- Rockwell Collins
- Rolls-Royce
- Spirit Aerosystems
- Textron
- Triumph Group
- UTC (United Technologies Corporation)

The Need to Standardize Aerospace Quality System Requirements



AS900

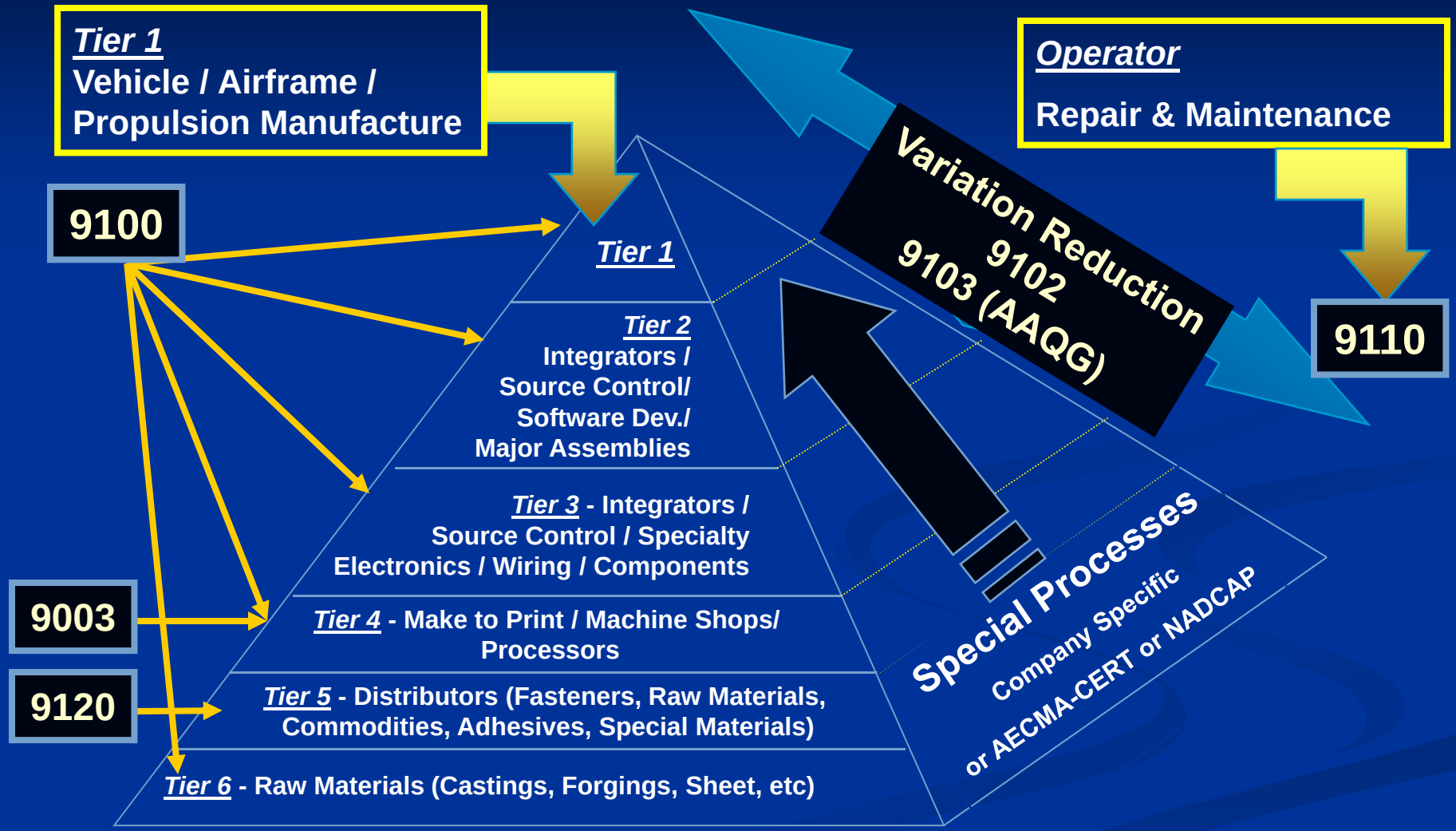
EN9000

AS9000

AS 9000 is a Family of Standards

- AS9000 Aerospace Basic Standard
- AS9004 Direct-Ship Practices
- AS9003 Inspection & Test Quality Systems
- AS9006 Deliverable Aerospace Software
- **AS9100 QS Design, Development, Production, Installation, & Services**
- AS9101 Checklist Quality Systems Assessment
- AS9102 First Article Inspection Requirements
- AS9103 Variation Management of Key Characteristics
- **AS9110 QMS – Requirements for Maintenance Organizations**
- **AS9120 QMS – Requirements for Distributors**
- AS9131 QS for Non-Conformance Documentation
- AS9132 Data Matrix Coding Quality Requirements for Parts Markings
- AS9133 Qualification Procedures for Aerospace Standard Parts

Aerospace Supply Chain



AS9120 – Aerospace Quality Management System Standard

- Defines quality system for aerospace distributors
- Uses ISO 9001 as a base
- Adds aerospace expectations
  - Includes Civil Airworthiness Authority considerations
- Defines “what” – not “how to”
- Published jointly in Europe, the Americas & Asia
- Reduces variation across the supply chain

BLOCK #4

Cost / Benefits

Look at Total Cost – Not Sale Price!

Total Costs (15 to 25% of Sales)

Traditional Costs:

- Waste
- Customer returns
- Inspection costs
- Testing costs rejects
- QC Dept. expenses

Additional Costs:

- Pricing or billing errors
- Re-inspection costs
- Inventory segregation costs
- Lack of planning
- Additional purchases
- Excessive overtime
- Premium freight costs
- Excess inventory
- Loss of market share
- Expediting costs
- Complaint handling
- Late paperwork
- Excessive systems costs
- Delayed receivables
- Credit/debit memo costs
- MRB costs
- SCAR tracking costs

The cost of doing nothing…

- Stagnant vs increased sales
- Lower vs higher profits
- Higher vs lower employee turnover
- More difficult vs deeper market penetrations
- Lower vs higher customer satisfaction

QMS Implementation Costs

- Non-recurring costs:
  - QMS development and roll-out
    - Top Management & Employee Time
    - Consultant Costs
    - Training
- Recurring costs:
  - Registrar costs (3-year cycle)
  - QMS maintenance

Block #5

External / Internal Motivators

External / Internal Motivators

External Motivators:

- Customers:
  - Airlines
  - OEMs
- Regulators:
  - FAA/NCAA/DoD
- Market forces:
  - Commercial Aviation
  - Military Aerospace
  - Civil Aerospace

Internal Motivators:

- Customer satisfaction
- Increased profits
- More efficient processes
- Process standardization
- Decreased operating costs
- Reduced RMAs
- Lower employee turnover

Block #6

Developing Company / Customer Value

Gaining an Advantage

- **What is a competitive advantage?**
  - Providing a product or service that is different than competitor offerings in such a way that customers perceive it to be more valuable.

- **How do customers perceive value?**

  The value equation: Value = Benefit–Price

Value is the extra benefit that is derived from the product or service above and beyond the price point.

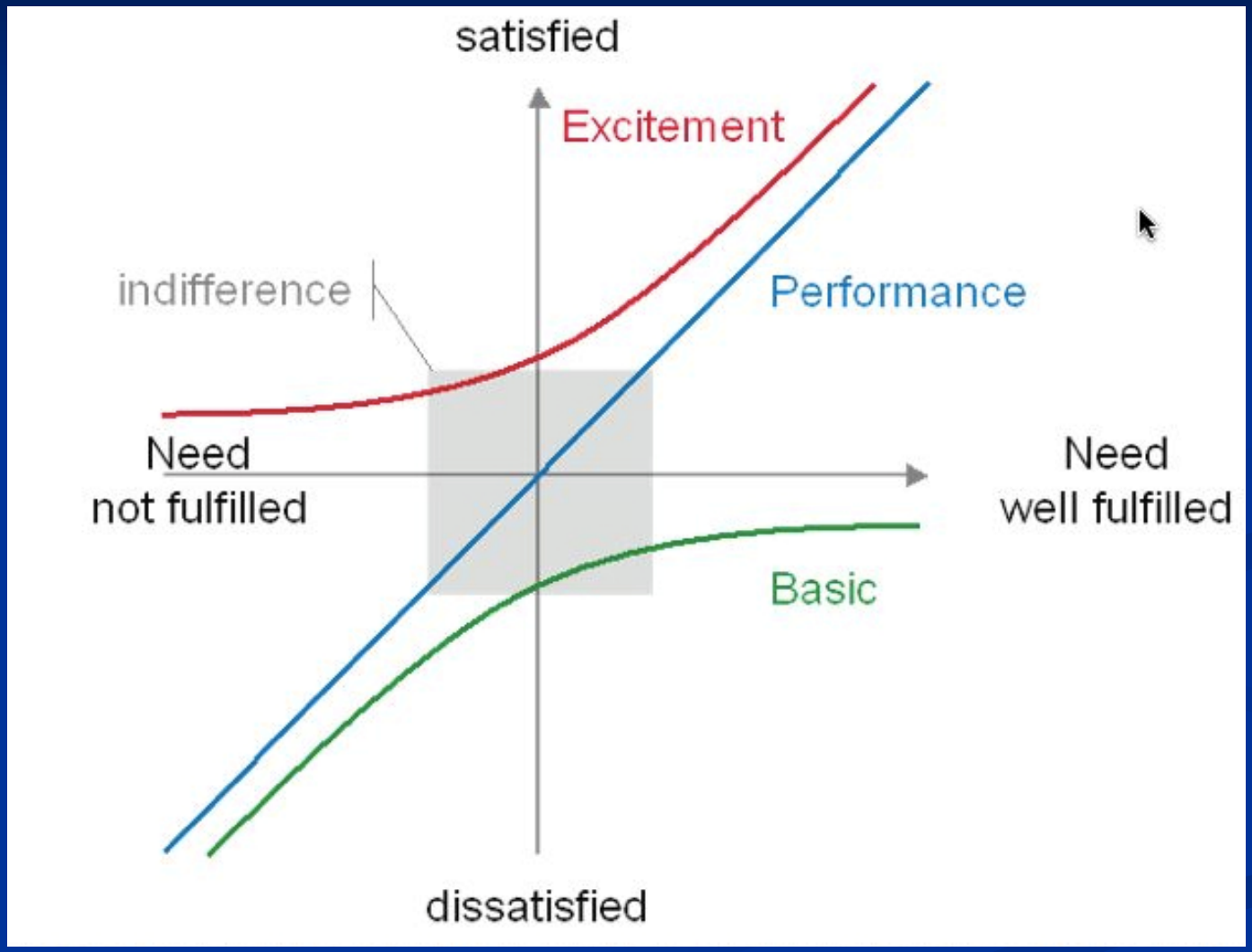
Reference: Angelo Lyall is a corporate coach and partner for Kaizen Solutions Inc. in Ontario, Canada

Kano Model of Customer Satisfaction

Dissatisfiers	Those needs that are EXPECTED in a product or service. These are generally not stated by customers but are assumed as given. If they are not present, the customer is dissatisfied.
Satisfiers	Needs that customers SAY THEY WANT. Fulfilling these needs creates satisfaction.
Exciters / Delighters	New or innovative features that customers do not expect. The presence of such unexpected features leads to high perceptions of quality.

Developed by Noriaki Kano, a professor emeritus of the Tokyo University of Science.

KANO's Model for Customer Satisfaction



How can a business maximize its value offering?

Customer Value = Benefit – Price

Option A: Maximize benefit

or

Option B: Minimize price

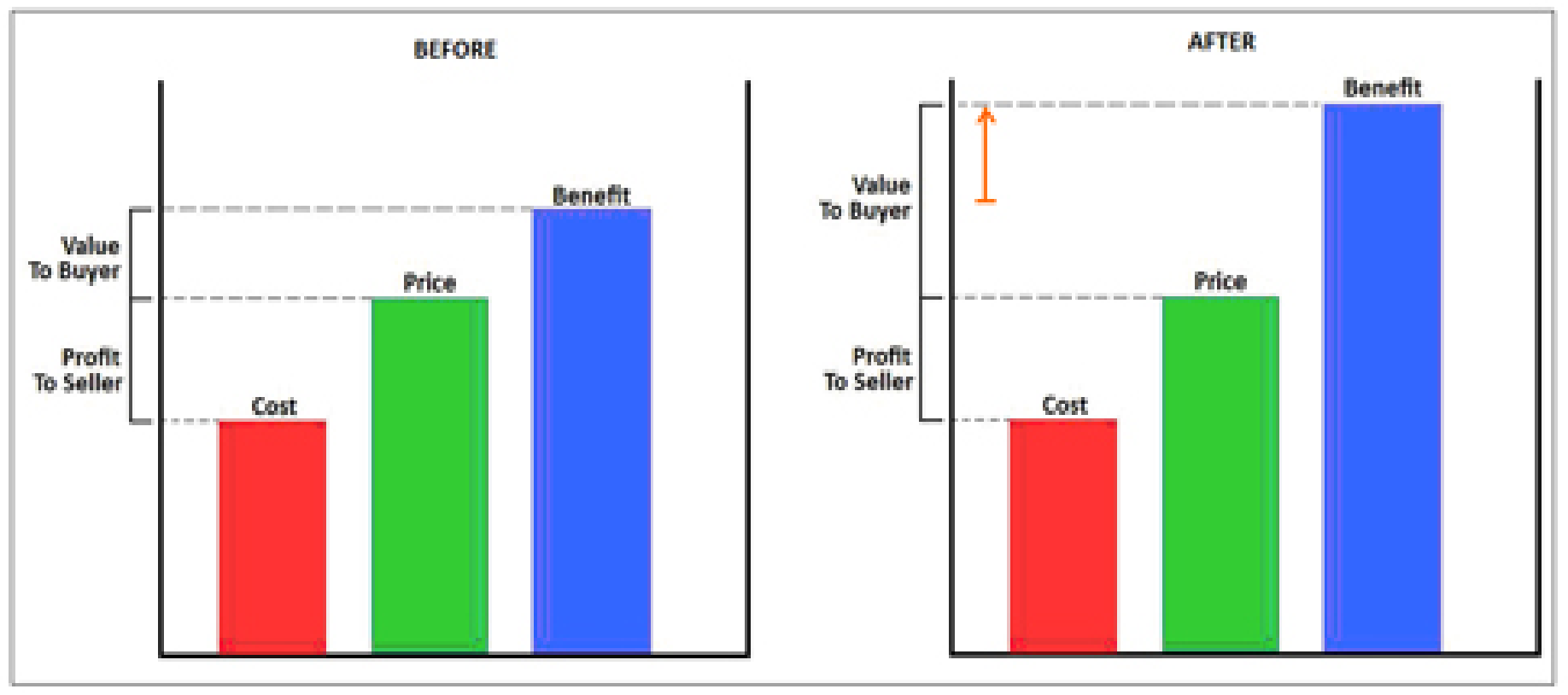
Option A: Maximize Benefit

1. Lead in marketing and product/service innovation,
2. Understand customer needs & problems,
3. Innovate to fulfill those needs, and
4. Offer solutions more effectively than competitors.

Option A: Maximize Benefit

- Additional benefits usually require additional costs.
- Additional costs can be offset through higher pricing, if the seller truly offers additional benefit to the customer.
- But, if improvement is not valued by customers, it is not a true benefit, and provides no advantage.
- A benefit arises when the offer is perceived as being better than other competitive offers.

Option A: Maximize Benefit



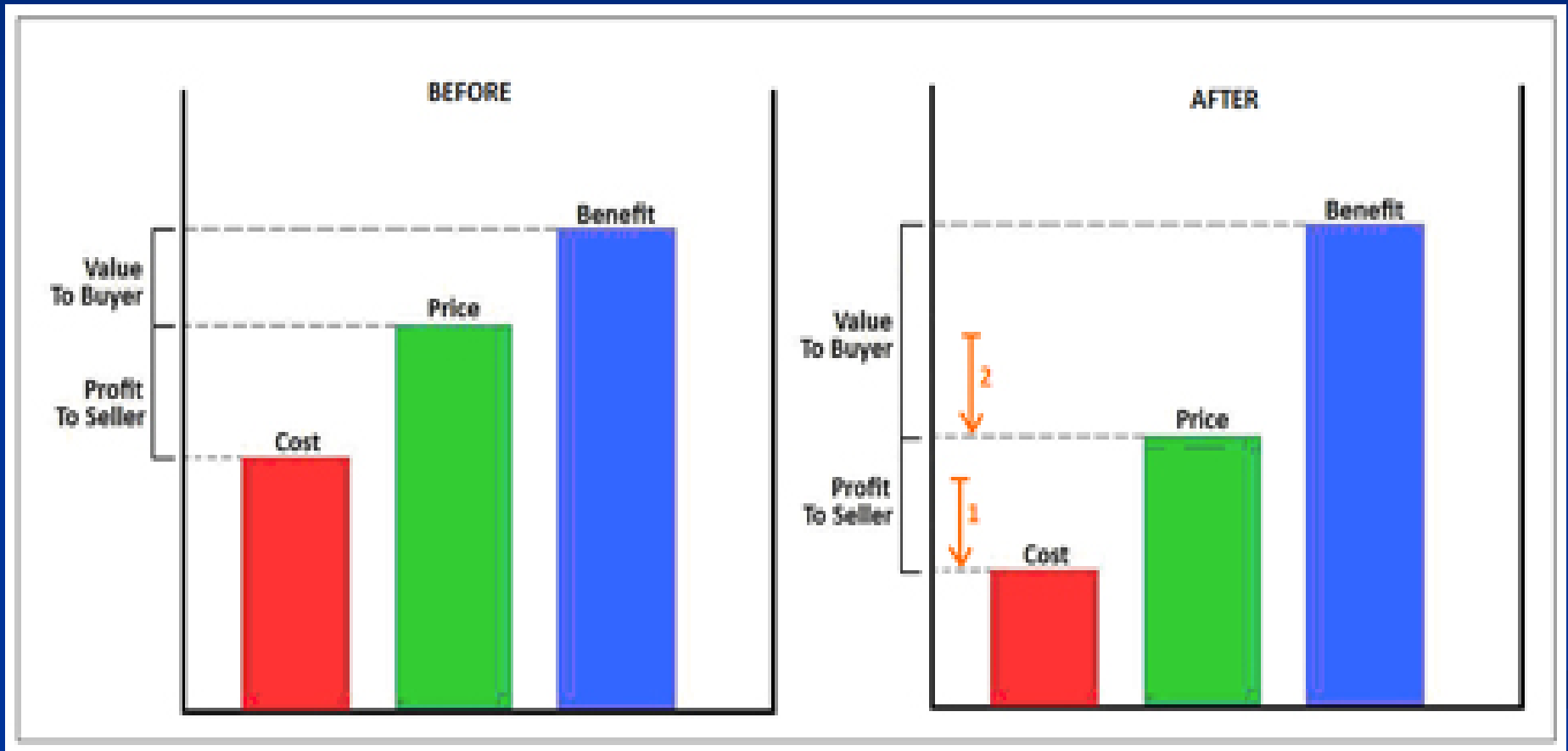
Option B: Minimize Price

1. Focus on initiatives that reduce your cost structure,
2. Then a lower price can be offered to the customer.

Take note of the obvious:

Offering lower prices without first reducing cost structure is not a sustainable advantage. It leads to profit margins which may not be recoverable.

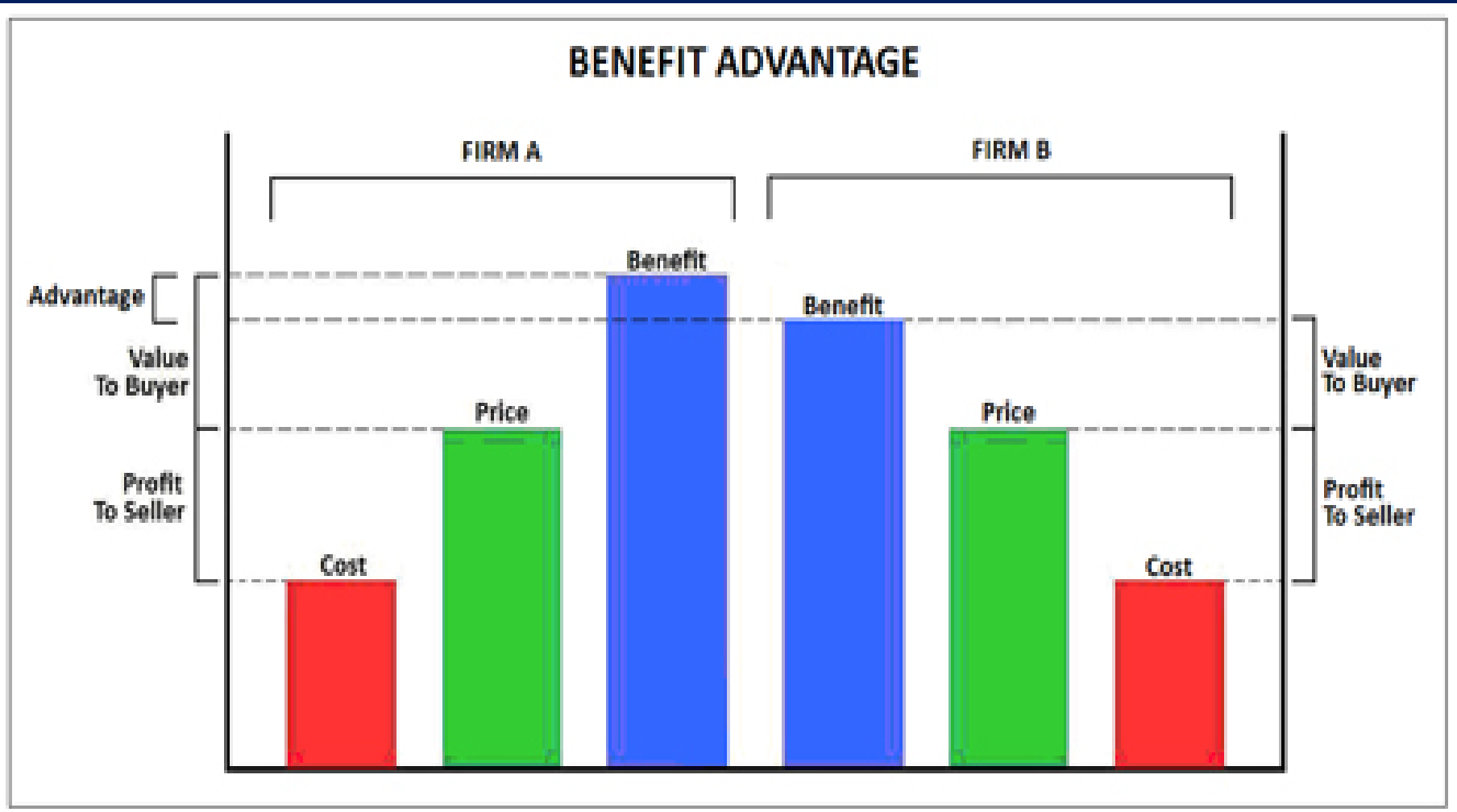
Option B: Minimize Price



When is an advantage achieved?

- Advantage is only achieved when the company's offerings *leads its industry* in terms of benefit or price (which is warranted by having the lowest cost structure in the industry).

Showing a Competitive Value Advantage



So, how can you add value to your customer?

- Via Product Quality
- Via Customer Satisfaction Initiatives

Product Quality

- Product Attributes (workmanship, preservation, airworthiness status, etc.)
- Inventory availability - service levels, support, & responsiveness
- Competitive pricing & effective cost controls
- PO/contract compliance
- Delivery

Customer Satisfaction Initiatives

- Implement an effective QMS
- Respond quickly & thoroughly
- Accommodate changes to requirements
- Provide management expertise
- Provide technical support
- Demonstrate effective planning & scheduling
- Embrace continuous process improvement using management tools

BLOCK #7

The Next Steps to be Taken

Your next steps…

1) Determine which of the Standards are you eligible for: ISO 9001, AS 9100, AS 9110, or AS 9120.
2) Determine the cost factors associated with:
   - Registration
   - Preparation
   - Use of consultants
   - Training
   - Conducting a Pre-Assessment Audit
3) Identify needed resources:
   - People
   - Finances
   - Facilities

Your next steps…

3) Conduct management & employee awareness training
   - Do you need an outside training provider?

   NOTE: Train all personnel, but the training depth can vary
4) Generate your QMS documentation
5) Roll-out your new/updated QMS processes
6) Conduct your 100% internal audit
7) Select a Registrar
   - This may be a long term relationship and you have leverage to ask questions.
   - Is the registrar appropriate for your company.

Your next steps…

8) Quote/Application process

- Company information
  - Processes, Special Processes and Technical Areas
  - Outsourced work and use of consultants
  - Specific Aerospace Questions
  - Scope of certification
  - Shifts, Language, Number of Employees

Your next steps…

9) Certification schedule
   - Consider a Pre-Assessment Audit
   - New certifications require a Stage 1 and Stage 2 audit. The audits can not be conducted back to back. Typically 3-6 weeks between the two audits.
   - Common to have NCRs
   - Typically surveillance audits are yearly but can also be set at 6 month intervals.

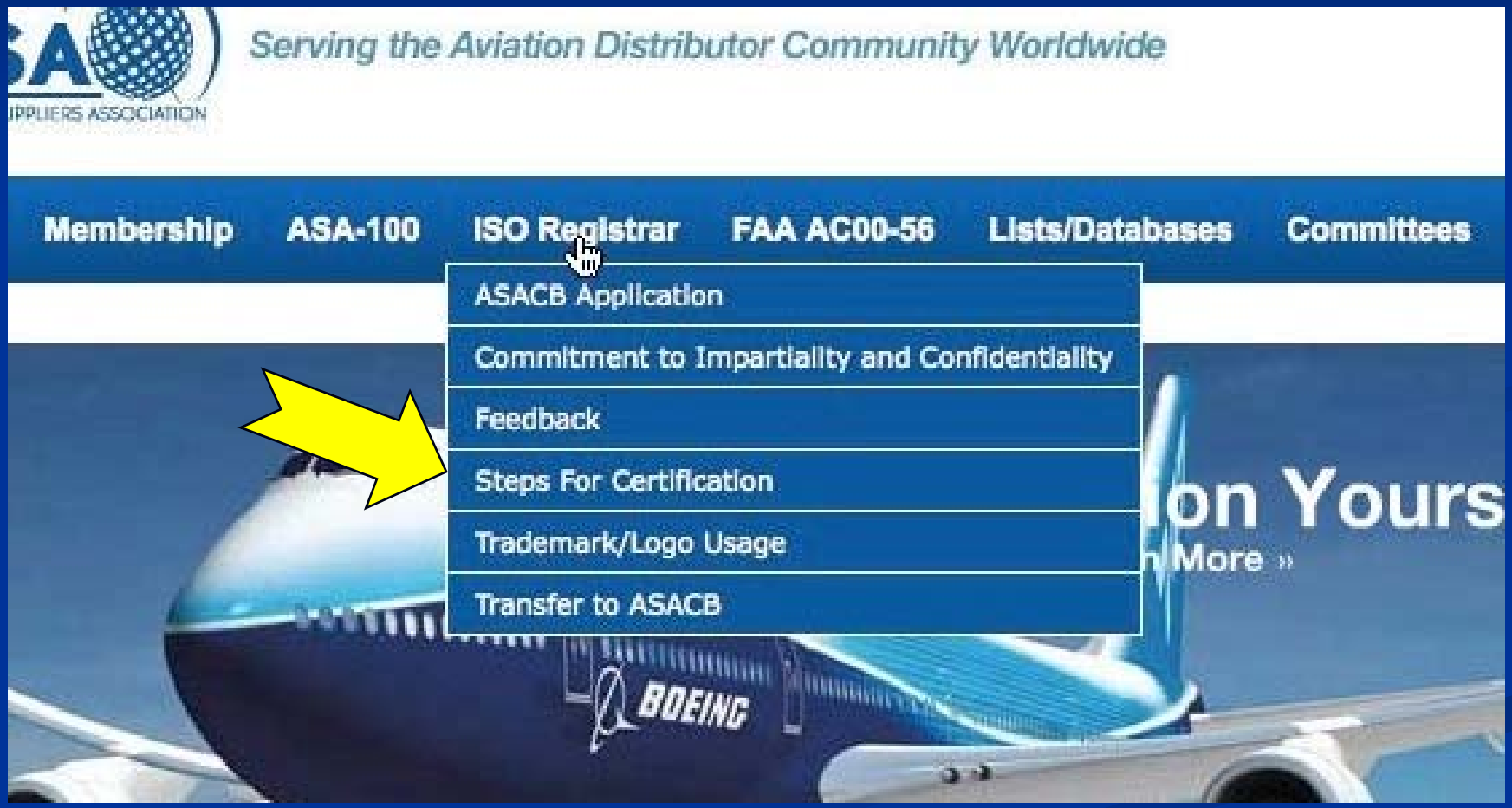
10) Pass your certification audit
   - Maintain your QMS

What is a Reasonable Timeline?

- 6-9 months from initiation to the registrar audit is quite common
- Allow an additional 1-2 months to address any additional concerns or NCRs

See the sample timeline in your handouts…

www.aviationsuppliers.org
Click on “ISO Registrar”



ASACB Steps to Certification…

Return to ISO Registrar

Steps For Certification

Interested in becoming certified to ISO 9001:2008?

You are in the right place. ASACB is an accredited certification body.

Below is a description of the ASACB's Certification Process.

1. ASACB values its relationship with our Clients and strives for a long-term relationship. Therefore it is our goal that our Clients have all their questions and issues answered. Each Client will be assigned a contact person for all stages of the certification process. If you have any questions regarding the process email ASACB.
2. ASACB has an online application that needs to be completed. The application provides ASACB with the information needed to determine if ASACB is competent to conduct the audit; the parameters of the audit; and the pricing associated with the audit. There may need to be some communication between ASACB and the Client in order to assess the Client's needs.
3. ASACB will send via email a contract to the Client which includes legal terms and pricing. If ASACB is unable to support the proposed audit, ASACB shall notify the company and explain why we will cannot provide the certification audit.
4. Client shall review the contract and, if needed, ask questions. Once the Client determines to use ASACB as its registrar, Client needs to return an executed contract.
5. Client will be introduced to their team at ASACB which includes an administrative contact, Accreditation Manager, Application Reviewer, Certification Decision and the Auditor(s).
6. ASACB will begin to work on preparing for the audit. All new registrations shall have a two-part audit, referred to as Stage 1 and Stage 2. If the contract is for a Transfer of Certification then the audit steps will change. Recertification Audits typically do not need a Stage 1 audit. Please contact ASACB for details about the transfer and recertification process.
7. Client will be required to work with ASACB to gather all the information needed for the audit including manuals, process cross reference matrix, review of auditor qualifications, approval of audit schedule, etc.
8. The audit process typically includes corrective action. Details for responding to findings shall be discussed with Client during the audit.
9. Once all the findings have been completed, the ASACB Auditor shall forward to ASACB the audit package. ASACB Auditor does not make the certification decision. ASACB shall review the audit package and determine approval status.
10. Client will be notified of approval and provided with a certificate, a letter of passage and the license agreement to use the ASACB Mark. ASACB shall also communicate with Client a tentative date for their surveillance audit.
11. Client will be asked to complete a Client Survey so as to provide critical feedback to ASACB for improvement.
12. While we hope that this does not happen, it is necessary to discuss what happens if ASACB determines to not certify the Client. Client has the right to appeal that decision. ASACB has a robust appeals process and Clients will be provided with information about the appeals process.
13. ASACB can also audit to FAA AC 00-56 and ASA-100. If you want those audits conducted, let us know!

Thanks for attending!

and remember…

"To stop learning…. is to stop living."

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