Introduction to the
IAQG SCMH
“Supply Chain Management Handbook”

IAQG General Assembly
Orlando, USA
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Christian Buck
Safran
Susan Armtrong
UTC

Larry Weng
Boeing
Bernard Lauras
Airbus
Content

- General presentation of “Supply Chain Management Handbook” objectives and concept
- Presentation of SCMH projects
- SCMH deployment
IAQG Objectives have recently evolved

- Up to now, IAQG produced standards describing requirements
- We need now to help suppliers to develop:
  - By helping them understanding our requirements
  - By providing guidance and best practices on how to fulfil requirements and achieve objectives and expectations

Up to Now: Focusing on the WHAT

And Now: Focusing on the HOW

Focus on the How through the “SCMH” Supply Chain Management Handbook
Focus on “How” through SCMH

Inputs for future revision of 9100

New or revised IAQG published documents (Standards, guideline)

9100 Requirements

Supply Chain Mgmnt Handbook

Links to

Preference is to develop guidance material

SCMH Guidance material, tools, trainings

Inputs for future revision of 9100

Preference is to develop guidance material

New or revised IAQG published documents (Standards, guideline)

Supply Chain Mgmnt Handbook

Links to

Preference is to develop guidance material

SCMH Guidance material, tools, trainings
The Supply Chain Management Handbook further explains the requirements in 9100:

- Example
  - 9100 states "The organization shall select suppliers which meet organization requirements", but does not say how to assure or demonstrate that they meet these requirements"

“Supplier Selection and Capability Assessment” is a guideline on how to assess supplier capability and select them
Supply Chain Management Handbook

1. Sales, Master Scheduling & Sequencing
2. Contract Requirements and Flow Down
3. Design and development
4. Suppliers sourcing selection & approval
5. Plant, material, skills, capacity planning & scheduling
6. Order Management and logistic (Internal & external)
7. Manufacturing and inspection (Production and service provision)
8. Supplier operational management and product validation
9. Control of non conformities, corrective and preventive actions
10. Customer Support (Control of service operations)

- Requires and flow down templates
- New Product Introduction
- Supplier Selection and Capability Assessment model
- 9103 education package (Key characteristics)
- Performance Metrics
- Supply Chain Assessment
- Root Cause Analysis and Problem Solving
- Control of non conformities
- Work transfer

Structure of the SCMH:
11 Business Processes, several projects
“Supply Chain Management Handbook”

Supplier Selection and Capability Assessment Model

IAQG Leader: Christian Buck – Safran
Objective

- To build a common model to assess the Maturity of a Supply Chain to achieve sustainable On Time & On Quality delivery objectives
Supplier Maturity Assessment
For each Supply Chain Business Process

Four domains assessed:
- Processes
- People & Organisation
- Tools & Data
- Performances Metrics

Four levels of maturity
2. Defined and applied
3. Applied and improving
4. Optimising: Implemented and optimised, continuous improvement

<table>
<thead>
<tr>
<th>Concept</th>
<th>Supplier Maturity Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four domains assessed:</td>
<td>For each Supply Chain Business Process</td>
</tr>
<tr>
<td>Four levels of maturity</td>
<td>Supplier Maturity Assessment</td>
</tr>
<tr>
<td>2. Defined and applied</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non Conformity Management</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Reactive needs Customer Stimulus</td>
<td>Firefighting actions</td>
<td>Root cause process in place</td>
<td>Mature process for root cause &amp; preventive actions</td>
</tr>
<tr>
<td>People &amp; Organization</td>
<td>No clear Accountability No Problem solving skills</td>
<td>Expert firefighters</td>
<td>Multifunctional team Highly Skilled</td>
<td>Multifunctional team Highly Skilled</td>
</tr>
<tr>
<td>Tools &amp; Data</td>
<td>Manual : Fax e-mail Spreadsheet</td>
<td>Multiple Data base integrated workflows</td>
<td>Integrated database clear workflows</td>
<td>Integrated database clear workflows</td>
</tr>
<tr>
<td>Performance Metrics</td>
<td>No measurement of Performance</td>
<td>Measuring performance</td>
<td>Performance drives action plans</td>
<td>3+ regular review of metrics effectiveness</td>
</tr>
</tbody>
</table>

Areas of potential Supplier Development if deemed necessary
### Supplier Assessment for 11 Business Processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Tools &amp; Data</th>
<th>Performance Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier Selection</td>
<td>Manual: FAX, Email</td>
<td>No Measurement of Performance</td>
</tr>
<tr>
<td>Design and Development</td>
<td>Multiple Database</td>
<td>Measuring Performance</td>
</tr>
<tr>
<td></td>
<td>Spreadsheet</td>
<td>Performance Drives Action Plans</td>
</tr>
<tr>
<td>Sales, Master Scheduling and Sequencing</td>
<td>Internal &amp; External Collaboration</td>
<td></td>
</tr>
</tbody>
</table>

**Guidelines contained in Supply Chain Management Handbook may be used to support improvement plans**

**Action plan as required**

**Apply weighting to each process as appropriate to Product, Customer, Risks, etc…**
All assessment matrices completed and grouped in one Excel document

Title and Definition of the Business Domain

Content for each level (from 1 to 4) and each parameter (Process, People and Organisation, etc...)

11 sheets, one per business domain
“Supply Chain Management Handbook”

Requirements and Flowdown

IAQG Leader Larry Weng - Boeing
Objective

To publish best practices and guidelines on how to ensure requirements are well identified, flowed down to suppliers and agreed upon between customer and suppliers.
### Requirements and Flowdown Content Structure

#### 2.2 Requirements for Approval

<table>
<thead>
<tr>
<th>Section</th>
<th>9100 Clause</th>
<th>Generic Expectation</th>
<th>Specific Expectation</th>
<th>Organization</th>
<th>Supplier (Seller)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>9100</td>
<td>Best Practices</td>
<td>How to demonstrate compliance</td>
<td>Buyer</td>
<td>Seller</td>
</tr>
</tbody>
</table>

#### 9100 Requirement

- **Generic Expectation**
- **Specific Expectations**
- **Best Practices**
### 2.2 Requirements for Approval

<table>
<thead>
<tr>
<th>9100 Clause</th>
<th>Section Title: Requirements for Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4.2 Purchasing Information: Purchasing information shall describe the product, requirements for approval of product, procedures, processes and equipment.</td>
<td></td>
</tr>
</tbody>
</table>

We expect purchasing organizations to flow down any applicable customer requirements for approval of product, procedures, processes and equipment and the method to obtain the approvals using purchasing processes which take into consideration all the item listed below which are applicable to product being purchased.

<table>
<thead>
<tr>
<th>Product Type</th>
<th>COTS/Standards</th>
<th>Raw Material</th>
<th>Build-to-Print</th>
<th>Supplier Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific to the product type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Specific to the Buyer and Seller**

- Not applicable. See 7.2.2

29 Templates have been populated
“Supply Chain Management Handbook”

Education Package about 9103 (Variation Management of Key Characteristics)

IAQG Leader: Bernard Lauras - Airbus
Do you know what Key Characteristics are?

Which ones were missed?
**Objective**

- Promote benefits of IAQG Standard 9103 (Variation Management of Key Characteristics) and gain broader acceptance
- Increase skills for all people involved in 9103 deployment

**Reason**

- The application of 9103 will help resolve the main contributors to quality non-conformance in aerospace, but is not sufficiently and adequately deployed (lack of buy in, lack of skills)
9103 Education package status

- 9103 education package technical content has been completed with contribution of Engineering people
- Existing PowerPoint document is being transformed into a e-learning tool
- Final version should be available around year 07 end
“Supply Chain Management Handbook”

Root Cause Analysis and Problem Solving

IAQG Leader: Bernard Lauras - Airbus
Propose methodology to improve the way escapes and problems are managed (including communication between all actors - engineering, MRB, supplier, customer, etc...) to reduce their impacts, contain them as far upstream as possible and prevent recurrence.
“9 Steps” harmonised Process

Communication is a key aspect

Start Immediate containment actions

Build the team

Define problem

Complete and optimise containment actions

Identify Root Cause(s)

Define and select root cause corrective actions

Implement root cause corrective actions and check effectiveness

Standardise and transfer the knowledge across business

Recognise and close the team

Optimised IAQG process was defined based on comparison between those used by main IAQG members

Is the root cause corrective action effective?

yes

no
Root Cause Analysis and Problem Solving

Content of the guideline defined for each step:

- What is the **Objective** of the step
- **What** is the content of the step
- **Why** this step is necessary
- **Who** are the actors
- **When** does it take place
- **How** to manage this step so that it is effective, including some **tools** to be used
- **Main Communication** aspects to take into consideration
- Some **Specificities to be considered**
“Supply Chain Management Handbook”

Work Transfer Management (AAQG)

IAQG Leader Susan Armstrong - UTC
Unsuccessful work transfer is a major problem for the industry
Objective

To provide guidelines for the exercising of effective risk and management control when changing the source of supply of a component, a component package or an assembly across a company or its external supply chain.
### Work Transfer Management
**Phases & Gates:**

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
<th>Phase 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal &amp; Feasibility</td>
<td>Develop Business Case</td>
<td>Detail Planning</td>
<td>Execution of Plan</td>
<td>Project Closure</td>
</tr>
</tbody>
</table>

- **Gate 1**
  - Proposal & Feasibility
  - Gate Review
  - Team Launch and develop charter
  - Source Selection
  - Risk Assessment
  - Business Case
  - Gate Review

- **Gate 2**
  - Detail Planning
  - Knowledge Transfer pre-move
  - Gate Review

- **Gate 3**
  - Project Management
  - Technical Review Requirements
  - Production Readiness Review

- **Gate 4**
  - FAI / LAI
  - Knowledge transfer
  - Gate Review
  - Identify Continuous Improvement opportunity
  - Capture Lessons Learned
  - Recognize team performance
  - Post implementation review

- **Gate 5**
  - Project Closure
  - Identify Continuous Improvement opportunity
  - Capture Lessons Learned
  - Recognize team performance
  - Post implementation review

### Templates

- **WT Project Proposal Form**
- **Gate Check List**
- **Project Charter**
- **Risk Assessment Business Case**
- **Gate Check List**
- **Project Plan**
- **Transfer checklist**
- **Gate Check List**
- **Production Readiness Review Check List**
- **AS9102 FAI/LAI**
- **Gate Check List**
- **Closure Form**
“Supply Chain Management Handbook”

New Project just started

Control of Non Conforming Material
• Draft Problem statement
  • Control of nonconforming material in supply chain is viewed as a major potential source of risk
  • Management is critical in regard to controlling non-conforming material and the communication of escape data.
• Proposed solution
  • A chapter within the SCM/H that clarifies the Supply Chain requirements for non-conforming materials as depicted in 9100
“Supply Chain Management Handbook”

Deployment
Today’s SCMH status

- All SCMH produced material is available to IAQG Members through IAQG website

- For other Non IAQG members suppliers
  - Current access through your IAQG member companies
  - Future access through IAQG website currently being worked
For any question or comments, contact one of the “Product and Supply Chain Improvement” stream leaders depending on your sector:

- **AAQG:**
  - Susan Armstrong - UTC
  - Larry Weng - Boeing

- **APAQG:**
  - Shuji Komori - FHI

- **EAQG:**
  - Bernard Lauras - Airbus
  - Christian Buck - Safran
Discussion topics:

• What subjects/issues should be addressed next?
• How can we assist you in using the material to provide feedback?
• ...?