INTERNATIONAL COMPETENCE CENTRE RAIL GmbH

IRIS ACADEMY

the 'high' school for INTERNAL IRIS AUDITORS

Fast track to really understand the requirements of the IRIS Certification System Rev. 03

(ISO/TS 22163-norm, IRIS Certification Rules issued in May 2017 and *IRIS Addendum 2019 (01.07.2019)*

ENGLISH Version *(Rev.09E – March 2020)*

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Agenda

Explanation of color codes:

Red = *exercises*

Blue = **inside this training package are 22 mandatory processes (documented as flow charts), fulfilling all mandatory and optional requirements of TS 22163**

Green = **speeches about selected IRIS topics**

Day 1:

08:30 **Introduction**

Welcome, Introduction, training objectives, expectations,

Mini Interview, expectations, seminar rules,

the new IRIS objectives, specific features of the railway sector,

benefits and motivation to engage in IRIS

IRIS history and statistics,

10:00 **BREAK**

10:15 **IRIS Assessment Methodology**

Past situation vs. new concept

Knock-out items

Speech about Knock-out items

IRIS scoring methodology

Enabler Evaluation: IRIS Assessment Sheet

Speech about Enabler Evaluation: IRIS Assessment Sheet

Assessment Scheme – 5 maturity levels

Exercise 1: Assessment Scheme (15')

Scoring principles

Exercise 2: Calculations of enabler assessment (15')

Process Performance Evaluation (PPE)

Speech about Process Performance Evaluation

Turtle diagram

Application of Process Performance Evaluation

Process Evaluation Matrix

Evaluation of Customer Perception Performance

Speech about Customer Perception Performance

Stakeholder analysis and identification of critical Stakeholder

Application of Customer Perception

Exercise 3: Customer perception workshop (15')

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Quality Performance Levels

Thresholds for Quality Performance Levels

12:00 **LUNCH**

13:00 **Overview about the requirements for the rail industry**

IRIS elements integrated in ISO structure

TS 22163:2017 vs. ISO 9001:2015 radar chart

Overview about mandatory and optional requirements

IRIS required processes mapped in a "process landscape"

Overview mandatory and optional processes

Chapter 0: Introduction

Process approach

Definitions

The Customer- Supplier value chain

Process focus

Speech about IRIS Guideline 3:2013 MAINTENANCE

Hierarchical process structure

Process landscape (level 1+2)

Process representation

14:30 **BREAK**

14.45 Plan-Do-Check-Act cycle

PDCA board

Action plan

Plan for counter actions

Risk based thinking

Classification of external provided products and services

Classification of external provider

Classification of projects

16:00 **BREAK**

16:15 **Chapter 1-3: Scope, normative references, terms and definitions**

Terms and definitions

Major changes in terminology

Chapter 4-5: Context of the organization, leadership

Product safety policy

Exercise 4: Roles of process owner (15')

Chapter 6: Planning

Actions to address risks and opportunities

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Speech about IRIS Guideline 9:2019 RISK- AND OPPORTUNITY MANAGEMENT

Examples of preventive, mitigation, containment & corrective actions

Risk and opportunity management process

Planning of risk responses

Relations between risk management and QDC

Risk management at four fields

18:00 **wrap-up and finish of day 1**

<u>Day 2:</u>

08:30 wrap-up day 1 and outlook day 2

Chapter 6: Planning

Business risks

Contingency plan (Chapter 6.1.4)

Business planning

Strategic (annual) business planning cycle

Process Review (chapter 9.4)

Example of a process review template

Management Review (chapter 9.3)

Business Plan (chapter 6.4)

Innovation management (chapter 8.11)

Customer focus (chapter 5.1.2)

Customer satisfaction (chapter 9.1.2)

Customer satisfaction analysis - The Kano Model

Customer satisfaction analysis in a project

10:00 **BREAK**

10:15 **Chapter 7: Support**

Budget planning, approval & controlling process

Process for monitoring and measuring resources & critical tools

Process for competence management

Skill matrix

12:00 **Lunch**

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13:00 **Chapter 7: Support**

Internal and customer communication

Concept for internal communication

Process for control of documented information

Hierarchy of documented information

Record retention schedule

14:00 **BREAK**

14:15 **Chapter 8: Operation**

Process for planning of outsourcing of processes

Requirement management (chapter 8.2)

Speech about REQUIREMENT MANAGEMENT

Definition of requirements

Application of requirements management

Integration and operational maturity

Quality Engineering - process model

Comparability by a reference system

Verification and validation of requirements

Requirements traceability matrix

Process to manage requirements

15:30 **BREAK**

15:45 **Process for tender management**

Project risks: monetary analysis of risks

16:30 **5' BREAK**

Exercise 5: case study - Project FMEA (90')

18:00 **wrap-up and finish of day 2**

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Day 3:

08:30 wrap-up day 2 and outlook day 3

Cont' Exercise 5: presentation of results (30')

Chapter 8: Operation (cont')

Project management

Project management phase model

Matrix –Organization

Process for project initiation & planning

Functional planning

WBS & work-packages

Scheduling

Project Cost

10:00 **5' BREAK**

Process for project execution & closure

Project phases, applicable processes & and gates

Gate criteria

Exercise 6: Workshop - Gate checklist (15')

11:00 **BREAK**

11:15 **Chapter 8: Operation (cont')**

Speech about GUIDELINE 8:2016
CONFIGURATION AND CHANGE MANAGEMENT

Configuration management

Product breakdown structure

Configuration control

Configuration management process

Exercise 7: Workshop - configuration management (20')

Change management process

Traceability

12:30 **Lunch**

13:30 **Chapter 8: Operation (cont')**

Design and development process

Design Reviews

Selection criteria for Design Reviews

14:30 **BREAK**

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14:45 **Purchasing**

Purchasing Process Landscape

Speech about UNIFE commitment for the supply chain 2013

Strategy for targeted external provider (UNIFE 12/03/2013)

Process for externally provided processes, products and services

16:15 **BREAK**

16:30 **Production and service provision**

Controlled conditions in production and service provision

Production scheduling

Deferred work

Process for production and service provision

Maintenance of Infrastructure (Chapter 7.1.3)

18:00 **wrap-up and finish of day 3**

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Day 4:

08:30 wrap-up day 3 and outlook day 4

08:45 **Chapter 8: Operation (cont')**

Speech about Guideline 6: 2014 SPECIAL PROCESSES

Management of special processes

Process Risk

Process FMEA: foundry process of track pads for excavators

Process FMEA template & inputs

Manufacturing process flow chart

SIPOC

Cause / effect diagram (Fishbone / Ishikawa)

Risk evaluation scheme

Process-FMEA- file

09:45 **BREAK**

10:00 **Chapter 8: Operation (cont')**

Post-delivery activities

Process for post-delivery activities

Control of nonconforming outputs

In-process control

5' BREAK

11:00 **Chapter 8: Operation (cont')**

Reliability, Availability, Maintainability, Safety & Life Cycle Cost

Speech about Guideline 4: 2016 RAMS / LCC

RAMS / LCC – activities

RAM Life Cycle

Bathtub curve

Availability

FRACAS

FRACAS – Lessons Learned

Maintenance Measures

Maintenance Types

Conditioned Based Maintenance

Maintainability

Product safety – the V-model (EN 50126)

General safety rules to be considered by Engineers

Life Cycle Cost Definition

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LCC cost elements

Life cycle costing

Process to manage RAMS / LCC - activities

Speech about Guideline 2: 2012 FIRST ARTICLE INSPECTION

Process for first article inspection (FAI)

Speech about Guideline 5: 2012 OBSOLESCENCE MANAGEMENT

Process for obsolescence management

12:30 **Lunch**

13:30 **Chapter 9: Performance evaluation**

Speech about Guideline 1: 2011 KPIs

Exercise 8: workshop - classification of KPIs (15')

How to define the right KPIs?

KPI – Definition

Mandatory and optional KPIs

SMART KPIs – Criteria

Principles of KPI measurement

KPI profiles

15:00 **5' BREAK**

Quality deficiency cost (QDC)

QDC representation

QDC analysis

Exercise 9: QDC case study! (45' + 15')

16:45 **BREAK**

17:00 **Chapter 9: Performance evaluation (cont')**

Process for internal audits

Evaluation scheme for internal auditor's performance

Chapter 10: Improvement

Speech about Guideline 7: 2014 PROBLEM SOLVING

Process for managing nonconformities and corrective actions

The Five (5) Why's – The Jefferson Memorial

18:00 **wrap-up and finish of day 4**

Individual preparation for examination

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Day 5:

08:00 wrap-up day 4 and outlook day 5

08:15 **Auditor behavior**

Definitions

The Audit Zoo

Communication skills

Fundamental communication rules

The Sender – Receiver Model

The four sides of communication by Friedemann Schulz von Thun

Active listening

Approaches to speaking

Questioning techniques

Phases of an audit

Good auditing behavior

Bad auditing behavior

my 10 golden rules

Bonus: 13 behavioral rules for auditees

09:45 **BREAK**

10:00 *Exercise 10: Audit situation! (150')*
OR
questions and answers and seminar wrap up

12:30 **LUNCH**

13:30 **written examination** (1:15')

14:45 **BREAK**

15:00 Seminar closure

Expectations met?

Course evaluation

Coaching & mentoring

IRIS Learning

Handout of Certificates

Conclusions

16:00 **Farewell**

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