

Tactic #1: Perfect the Preliminary Study

**Providing Valid and Reliable
Key Performance Indicators
(KPIs)**

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Scope of Presentation

- ❑ TrainairPLUS Methodology – a systems approach
- ❑ Benefits of the Systems Approach
- ❑ Key Performance Indicators
- ❑ Challenges of utilizing a Systems Approach
- ❑ Expectations from a Successful Systems Approach

Preface

and orderly



NORMAL CHECKLIST

Phoenix Simulations Software
A319 / 320 / 321
AOM

PREFLIGHT	
Oxygen	TESTED, 100%
Instrument Xfer & Display Switches	NORMAL, AUTO
Window Heat	ON
Pressurization Mode Selector	AUTO
Flight Instruments	SET
Parking Brake	SET
Engine Start Levers	CUTOFF

BEFORE START	
Flight Deck Door	CLOSED & LOCKED
Fuel	KGS/LBS, PUMPS ON
Passenger Signs	ON
Windows	LOCKED
MCP	SET
Takeoff Speeds	SET
CDU Preflight	COMPLETED
Rudder & Aileron Trim	FREE & ZERO
Taxi & Takeoff Briefing	COMPLETED
Anti Collision Lights	ON

BEFORE TAXI	
Generators	ON
Probe Heat	ON
Anti-ice	AUTO
Isolation Valves	CONTINUOUS
Engine Start Switches	CHECKED
Recall	RTD
Autobrake	IDLE DETENT
Engine Start Levers	CHECKED
Flight Controls	CLEAR
Ground Equipment	

BEFORE TAKEOFF	
Flaps	GREEN LIGHT
Stabilizer Trim	UNITS

AFTER TAKEOFF	
Engine Bleeds	ON
Packs	AUTO
Landing Gear	UP & OFF
Flaps	UP, NO LIGHTS

Pressurization	Recall
Autobrake	Landing Data
Approach Brief	

Altimeters	
Engine Start Sv	
Speed Brake	
Landing Gear	
Flaps	

Fuel Pumps	
Probe Heat	
Hydraulic Pan	
Flaps	
Parking Brake	
Engine Start U	
Weather Rada	

SE	
IRS's	
Emergent Exit	
Window Heat	
Packs	

73	
T.O. Weight	
Landing Weig	
Taxi Weight	
Zero Fuel We	
Landing Gear	

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NORMAL CHECKLIST:

SAFETY CHECK

Landing Gear Lever _____
Engine Master Switches _____

START CHECKLIST

Logbook _____
Circuit Breakers _____
ADIRS (inertial navigation system) _____
Oxygen _____
Emergency Lights _____
Pressurization _____
Engine/Wing Anti-Ice _____
Air Conditioning _____
Electrical _____
Hydraulics _____
Fire Pushbuttons _____
Instruments Flags _____
Altimeters _____
ECAM (systems monitor) Doors, Status _____
Fuel Check _____
on Board _____
Anti-Skid/Nose Wheel Steering _____
Gear _____
Switching _____
Takeoff Warning _____
Engine Master Switches _____
MCDU _____

DREAMFLIGHT BOEING 737-400 CHECKLISTS	
Master Caution Recall	Check
Anti Skid Switch	Verify On
Autobrakes	As Required
Nav 1 and Nav 2 (when given first vectors)	Manual/Set
Course (when given first vectors)	Set
Decision Height (when given first vectors)	Set
INITIAL APPROACH (10,000')	
Landing and Runway Turn-off Lights	On
No Smoking Annunciator	Cycle
IAS/Mach Selector	210 KIAS
Flaps	1
IAS/Mach Selector	185 KIAS
Flaps	5
IAS/Mach Selector	Set Range 20
Flaps	
HSI	
INTERCEPT COURSE TO LOCALIZER	
IAS/Mach Selector	175 KIAS
Flaps	10
MCP	Calculate Vref
A/P	Vor/Loc
HSI	ILS
LOCALIZER CAPTURE (12NM out)	
AFAS	"Final Apr"
Heading Selector	Set
GLIDESLOPE ACTIVE	
A/P	App
A/P	Cmd B
GLIDESLOPE CAPTURE	
IAS/Mach Selector	155 KIAS
Flaps	15
Landing Gear	Down
Speed Brake Lever	Arm
IAS/Mach Selector	145 KIAS
Flaps	25
IAS/Mach Selector	Set Vref + 5
Flaps	30 (or 40)
LANDING DECISION	
At 100' above decision height, go heads-up	
Runway in sight, skip to LANDING.	
Runway not in sight, continue to GO AROUND.	
GO AROUND	
TOGA	Activate
Flaps	15
Gear	Up
Speed Brake Lever	Up
Hdg Sel (when given vector)	Set
Flaps	5 at 180 KIAS
Flaps	Up at 200 KIAS
LANDING	
Repeat INTERCEPT COURSE TO LOCALIZER and continue.	
Thrust Reversers (after A/T disconnect)	Engage

Speed Brake Lever	Up at 80 KIAS
Brakes	As Needed
Thrust Reversers	Off at 60 KIAS
Taxi off the runway	25 KIAS Max
Parking Brake	Set
AFTER LANDING	
Flaps	Up
Auto Brake	Extinguish
Taxi Lights	On
Landing and Runway Turn-off Lights	Verify Off
Position Lights	Off
Engine Start Switches	Steady
Pressurization Mode Selector	Off
Wing Anti-Ice Switch	Grd
Eng Anti-Ice Switch	Verify Off
Flight Director Switch	Verify Off
Transponder	Standby
TAXI	
COM 1	Request Clearance
Parking Brake	Release
Taxi to the gate	25 KIAS Max
Parking Brake	Set
SHUTDOWN	
Taxi Lights	Off
Ground Power	On
Engine Start Levers	Cutoff
Fasten Seat Belts Annunciator	Off
Cab Door	Open
Air Conditioning Pack Switches	Off
Isolation Valve	Close
Recir Fan	All Off
Fuel Pump Switches	Off
Galley Power	Off
Window Heat	Off
Pitot Heat	Off
Anti Ice	Off
Hydraulic Pumps	Verify Off
APU Bleed Switch	Off
Eng 1 & 2 Bleed Switches	Off
Yaw Damper	Verify Off
Auto Brake	Verify Up
Speed Brake Lever	Verify Up
Flaps	Off
Exterior Lights	Off
No Smoking Annunciator	Off

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TrainairPLUS Methodology

- ❑ TrainairPLUS Methodology – essentially a three stage, 7 step process...an enhancement of the standard Instructional System Design Model (ISD).

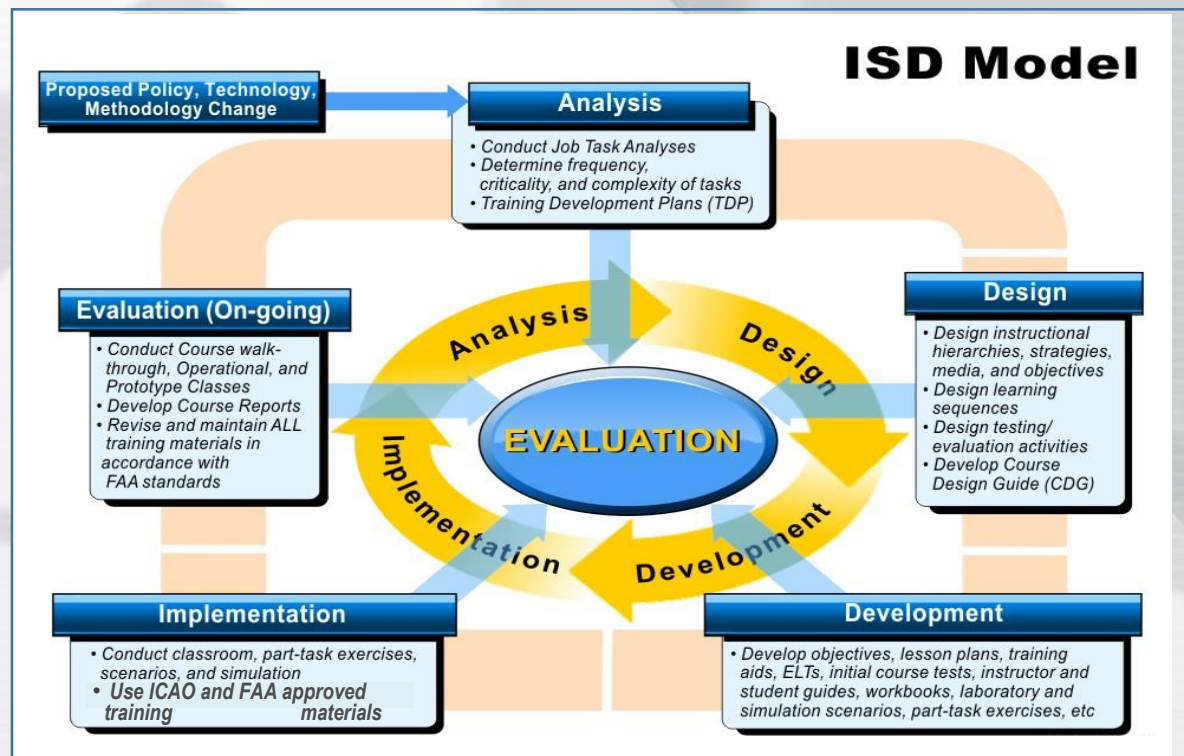


Figure 2.1 Instructional Systems Design Model

TrainairPLUS Methodology - continued

□ TrainairPLUS Methodology:

- Stage 1 – Step 1 ***Preliminary Study***
- Stage 1 – Step 2 ***Job Analysis***
- Stage 1 – Step 3 ***Population Analysis***
- Stage 2 – Step 4 ***Design of Curriculum***
- Stage 2 – Step 5 ***Design of Modules***
- Stage 2 – Step 6 ***Production & Developmental Testing***
- Stage 3 – Step 7 ***Evaluation***

TrainairPLUS Methodology - continued

- Stage 1, Step 1 – **Preliminary Study**
 - Problem Identification
 - Problem Analysis
 - Determine most Effective Solution
 - Plan for Course Development
 - Develop Evaluation Plan
 - Conduct Quality Assurance activity for Preliminary Study
 - Develop Key Performance Indicators (KPI)

TrainairPLUS Methodology - continued

□ Key Performance Indicator

- Effective course design absolutely depends upon a comprehensive understanding of the **Key** development processes, **Performance** objectives and expected outcomes of the course...hence KPIs.
- What is a KPI? – A set of quantifiable metrics used by an organization to gauge the performance of an activity, department,or course...

TrainairPLUS Methodology - continued

- KPI metrics can be developed for two (2) major categories:
 - High Level (HL) KPI – focus on over performance of organization/activity
 - Low Level (LL) KPI – focus on supporting departments/activities.

NOTE: Course Designs are based upon the results of the ***Stage 1/Step 1 Preliminary Study*** which identify these KPIs.

TrainairPLUS Methodology - continued

□ Examples of KPIs:

■ High Level KPI:

- ✓ Enhanced operational skill levels
- ✓ Improved Organization Performance vs Cost
- ✓ Improved Post-Course Supervisory Surveys

■ Low Level KPI:

- ✓ On-time Delivery of Course(s)
- ✓ Improved Post-Course Student Surveys
- ✓ End-of-Course Exam Scores

Importance of the Systems Approach

- ❑ Provides a structured configuration within which responsibilities are better defined
- ❑ Supports effective configuration management
- ❑ Allows for consistent application of course architecture
- ❑ Allows for standardization of curriculum and course structure, delivery and integration
- ❑ Supports program sustainability
- ❑ Minimizes or eliminates Bias in the development process
- ❑ Targets improved performance outcomes (KPIs) for individuals, groups (teams) and organizations

Importance of the Systems Approach

- ❑ Analysis using the Systems approach enables CDs to undertake
 - Organizational performance diagnosis: ie
 - ✓ What are the desired performances?
 - ✓ What are the actual performances?
 - ✓ What improvements need to be made?
 - ✓ Link the training solution to the operational system

Importance of the Systems Approach

□ Document Work Expertise

- Gather information on existing expertise in the organization, teams, and individuals
- Record expertise requirements needed to meet the KPIs and perform on the job.

Challenges of Using the Systems Approach

- ❑ Proactive management support
- ❑ Course development costs can be inadequate
- ❑ Identifying accurate KPIs due to:
 - Poorly written job descriptions
 - Overlapping job tasks
 - Inaccurate organizational data
 - Inaccessible data

Expectations from a Successful Systems Approach

- Coherent, well-designed course material and course inventory
- More efficient course maintenance
- Training program planning more efficient
- Better use of Instructor/Course Developer resources
- Improved training outcomes
- Improved performance
- Sustainable Training Program

Workgroup Assignment

- ❑ Consider the development of a a ***Preliminary Study*** that will yield KPIs that can be used in post-training evaluation.
 - Discuss the challenges and the tactics for identifying KPIs (High level and Low level)
 - Decide on solutions and/or best practices
 - Select a group spokesperson and present if called upon

WCG BEST PRACTICE

- ❑ Subject Matter Expert (SME) Identification
 - Requirements:
 - ✓ Must be knowledgeable with both operational and training background
 - ✓ Highly recommended by management and supervision
 - ✓ Available throughout course development
 - Advantages:
 - ✓ Assures course content reliability
 - ✓ Assures integrity of development process
 - ✓ Enhances training credibility within operational environment