



HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

Session4.5, Room Karam4 Project conduct, training and staff management



Moderator : Mr. ACHIBANE Lahcen ONCF, Morocco







Session4.5 Project conduct, training and staff management Speaker Lists;







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

Preparing railway staff for cultural changes linked to digital and technical innovations (MIND4CHANGE)



Virginie Papillut Manager, Human and Organizational Factors and Safety Culture – Safety division, UIC, France Session5-4.5 project conduct, training and staff management





=> As Human play a key role in this process of change, it is important that digital and technical innovations are accompanied with/by the necessary cultural change, to better prepare all staff, operators, managers, leaders, and decision-makers.

- Digital and technical innovations will be sooner or later in the railway landscape, including AI, ML, DL, etc.
- Railway compagnies will increasingly have to integrate digital technologies into their operations & safety management, and other activities.
- While becoming more fluid and more connected to the rest of the world, railway system is also becoming more vulnerable to its ecosystem & environment, more exposed to cyber-risks but also to fire, climate, and consequently economic and political risks

Safety Culture (model) is part of any Corporate Culture

In Railways, there should be a common basement regarding « railway cultural mindset »





Objective of the UIC study : enhance safety & performance by avoiding overall reluctance to changes with digital and technical innovations.

Resistance is based on the notion that, even though technical barriers have fallen, some features of technology are difficult for end-users to learn.

The other resistance is based on the "personality profile" of the end-user

- Anticipate and accelarate the shaping transformation of employees through rail automation and digitalization
- ✤ Reduce "organizational" resistance to digital changes
- Promoting / Sharing practical examples and best experiences







Focusing on employee engagement can create more efficient and productive workforce. Any initiatives of improvement which are taken by management can not be fruitful without willful involvement and engagement of employees

Managers will face more challenges because organizations will need more employees with increased technical and professional skills

- Strengthening the role of operational staff in knowledge, via the involvement of Managers' eye, is on how to keep employees engaged & committed in their job
- Certifying acquired knowledge and in particular technical knowledge: "establishing a certification system also enables the company's employees to adopt a culture of virtuous competition"
- Involving and engaging senior & second line managers in new methods of training

creative business opportunity lead big idea communication marketing positive leader success proactive optimistic life change your mindset inspire innovate strength strategy professional mind competition intelligent consult coaching goal decision challenge solution mentor attitude plan research benefit heart





These knowledge workers can not be managed with old styles of management. They will deeper expect operational autonomy, job satisfaction and status

- * such a major change requires management of employee motivation
- is recommended that a maturity assessment be carried out prior any deployment, to consider what incentive measures should be put in place and to anticipate employee resistance.
- Commonly encountered resistance is related to emotional and psychological needs on the one hand, and the workstation design on the other.
- * "Factors such as remuneration, promotion, recognition, and relationship with the hierarchical superior [...], affect personal and emotional needs, and therefore condition they support for any new initiative" (even some jobs will disappear)







Inspire motivation of Staff for cultural changes as follows

- Transport companies will not only need technological skills, but also soft skills, psychological skills, communication skills. Adaptability, curiosity, and social intelligence are important and welcome in the future if companies want their employees to have good working conditions.
- In times when technologies used in the transport sector are rapidly changing, it is important to consider that each person has different biological, physical, and psychological capacities to adapt to changing circumstances, and these changing circumstances are not only relevant to their actual job
- Resiliency to stress, skills for coping to change, need to be addressed not only in employee on-the-job training, but already start in school.
- N.B these soft skills should be developed earlier in stage, to allow people to have a higher level of adaptability.



PREPARING RAILWAY STAFF FOR CULTURAL CHANGES





Commitment

Start it from the top: Employee engagement requires leadership commitment

Autonomy

foster employee autonomy through a less hierarchical organization (organizational leverage) as persuasion, social intelligence, emotional responsiveness, and teaching others, may well be in higher demand (old workforce must keep relation with technology)

Social

 establishing new relationships based on trust, commitment and transparency (two-way communication) between employees, customers, and business partners: cocreation may be a new way of working which enables collectivity, gives workers the opportunity to express themselves, but must importantly, it is reflected in the results

Training

sive employees appropriate training: help employees to update by themselves their knowledge and skills through giving appropriate trainings, and establish learning as a lifelong passion to consistently acquire new skills over time

Feedback

Have strong feedback system: Build a distinctive corporate culture, companies should promote a strong work culture in which the goals and values of managers are aligned across all work sections.

PREPARING RAILWAY STAFF FOR CULTURAL CHANGES





Outcomes





Learning Lab for cultural changes interactive and evolutive tool to identify barriers, issues and solutions December 2023

Guidelines - recommendations and best practices on how to engage staff at all levels of the organization December 2024



Cultural changes : final conference to disseminate and share December 2025



UIC RAIL HOF digital platform

will host and highlight best practices, solutions and recommendations.







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

THANK YOU



PREPARING RAILWAY STAFF FOR CULTURAL CHANGES





HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve

Ouiame, TAIMOURI Head of planning and Human Capital Development , ONCF, Morocco Session5-4.5 project conduct, training and staff management







1 The Need for High-Speed Rail Infrastructure

Annual Training Achievements

5

- 2 AL BORAQ : A Resounding Success
- 3 Investing in Employee Skills

- 6 Our ONCF Training Academy
- 7 Knowledge Management for Success

Annual Training Statistics

Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve





THE NEED FOR HIGH-SPEED

Rail Infrastructure



Boosts Competitiveness and Economic Growth

습 습 습 습 습 Improves Mobility and Quality of Life



Creates Jobs and New Economic Opportunities

En la

Promotes Sustainable Development and Environmental Protection



Reduces Travel and Logistics Costs

Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve



A RESOUNDING SUCCESS



10 M TRAVELERS

2h 10mn 5h 50mn

JOURNEY TIME



Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve



328 Km

CASABLANCA - TANGIER

Al Boraq is the first high-speed rail line in Africa, and it runs between Tangier and Casablanca, connecting the two major cities in Morocco.

Casablanca

RABAT-SALÉ-KÉNITRA

Kénitra

RABAT

ange

Ksar-el-Kebir

Meknès

Khémisset





120k

Tons

OF CO2 EMISSIONS A YEAR IS AVOIDED BY THE ONCF, WHICH EQUATES TO PLANTING 4 MILLION TREES.



Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve



Innovation through High-Speed Rail: Developing Employee Skills to Stay Ahead of the Curve







ANNUAL TRAINING ACHIEVEMENTS









11

Based on international best practices, the ISO 21001 system.

Excellence Center

Develop Research & Development in the rail industry in partnership with scientific institutions.

Expertise Center

Leveraging the experience of senior managers by creating a transport consultancy and engineering agency.

Training Center

Responding to the needs of the rail industry.





KNOWLEDGE MANAGEMENT FOR SUCCESS

According to the ISO 30401-2018 system.







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

THANK YOU







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

With confident steps into a successful project -PM@Siemens

Mohamed Bouhaja Business excellence manager, Siemens Mobility GmbH, Berlin, Germany Unrestricted | © Siemens Mobility GmbH 2022 |Turnkey| January 2023







Siemens is committed to mastering challenges in Project business - for more than 160 years



"I won't sell the future of my company for a quick profit"

Werner von Siemens to his brother Carl, Dec 29, 1884



European Telegraph Line from London to Calcutta (over 11,100 km) With a start of operation on time on Apr 12, 1870







Global megatrends will shape our lives in the coming decades...

and increase the need for sustainable mobility solutions including "High Speed Rail with the right speed for our planet"

Digitalization



By 2025, the digital universe will reach **175 zettabytes**

Demographic change



The earth's population will increase from 7.9 billion people today to **9.7 billion** by 2050

Climate change



By 2050, a global temperature increase of 1.5 - 2°C is expected

Urbanization



By 2025, **70%** of the world's population live in cities (2018: 55%)

Globalization



Due to increasing traffic, gas emissions will increase up to **60%** by 2050





PM@Siemens is our answer to the challenges in today's and future Project business

We have almost all our Siemens Mobility volume coming from project business.

It is vital for our success to ensure that the right:

- Approaches
- Processes
- Capabilities

are in place to address our challenges and opportunities in Project business.

With **PM@Siemens**, we have a global program designed to deal with those challenges and opportunities.







PM@Siemens Process







Quality Gates are the basis for sound management decisions in project business

Readiness Check

- Sound assessment of current risks and issues
- Suggestions of suitable measures and alternatives



Measure Controlling

- Sustainable implementation
- Clear responsibilities





Our Project Categorization is the scale for processes and competency management

We differentiate 4 project categories, concerning volume and complexity

Project categorization

High Category A

Medium Category B

Low Category C

Small Projects Category S The process requirements are defined according to the project categorization

Process requirements

Mandatory requirements for Category A Projects

Mandatory requirements for Category B Projects

Mandatory requirements for Category C Projects

Mandatory requirements for Category S Projects Training and certification are aligned with respective project responsibility

Project manager placement

Project Director

Senior Project Manager

Project Manager

Qualified Project Manager Small Projects





Continuous improvement process in project business We continually improve our processes to meet our stakeholders' expectations



The 4 steps of the continuous improvement process:

- Analyze efficiency, flexibility and effectiveness
- Definition of necessary improvements
- Implementation of improvements in the organization
- Monitor progress of implementation

The sources are, e.g.:

- Lessons Learned in projects
- Project audits
- Key performance indicators (KPI)
- Operational reviews
- Assessments of maturity in project business





Competence management

All of the competences required are available in-house for guaranteed performance







Let's continue to collaborate to shape the future...

" Our goal is to create sustainable value for our customers with our products and solutions. Our project business is, and will remain, a central component in this effort... PM@Siemens has supported us in successfully implementing our projects for many years."







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

THANK YOU

Mohamed Bouhaja

Business excellence manager Siemens Mobility GmbH / Turnkey Solutions Nonnendammallee 101 13629 Berlin, Germany Mobile: +49 (1520) 6373952 E-mail: mohamed.bouhaja@siemens.com







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

HSR in Morocco: a successful model for skills transfer

Karim Eddine, CHENNOUF Chairman of the Management Board, IFF, Morocco Session5-4.5 - Project conduct – training and staff management







The 1st Moroccan High-speed line : Casablanca-Tangier



- 1. Which strategy?
- 2. Which means and methods?
- 3. Which results?





Challenge of transferring skills for the operation and maintenance of the HSR line

<u>ONCF strategic objective:</u> Successfully launch Al Boraq with 100% Moroccan skills and with an international quality standard



- How can the transfer of skills to the 600 ONCF employees be carried out efficiently and optimally?
- How to support the change among the rest of the ONCF workforce?
- How to perpetuate the acquired know-how and duplicate it for future projects?





ONCF has integrated the issue of skills transfer throughout the HSR Project









SKILLS PREPARATION STRATEGY: Creation of a three-level ONCF / SNCF partnership:

I. PMA & MEP

Project Management Assistance and Memorandum for Special Expertise PMA : transfer of know-how between business experts throughout the high-speed project management period

MEP : ad hoc studies to enrich the project, and to participate in the design of specific training

The drafting of reference systems: a key stage in the development of skills

170 reference materials have been developed for the domains:

- o Infrastructure maintenance;
- Traffic;
- Train driving;
- o Sales

These guidelines were used to draw up the specifications and training materials





II. Creation of SIANA the JV for high-speed rail maintenance

Objectives:

Achieve operational performance levels equivalent to those obtained on the RGV2N2 (Euroduplex) fleet maintained in France by SNCF

Optimization of maintenance costs

Transfer know-how to achieve autonomy in maintenance





Creation of IFF : Institut de Formation Ferroviaire Ш.



Jean-Pierre FARANDOU

CEO

50%









October 2007 Intergovernmental agreement for the creation of the Tangier-Casablanca high-speed line

Preliminary MOU for the Establishment of the IFF

Fatima LASIRI Finance, purchasing and legal department Director

Mohamed Rabie KHLIF

General Manager

50%

Mohammed SMOUNI Deputy General Director



Diego DIAZ President of SNCF International

SUPERVISORY COUNCIL





and Skills Department

Karim Eddine CHENNOUF Chairman of the Management board

Raphaël RABIER General Manager

MANAGEMENT BOARD

IFF is a limited company registered under the Moroccan law, with a Management Board and a Supervisory Council, held at parity by ONCF and SNCF

HSR in Morocco: a successful model for skills transfer





IFF Objective : To ensure training and sustainable skills transfer for 600 employees in charge of Al Boraq operation.

Immersion training at SNCF

Immersion when facilities are not available:

Training of a group of 20 HSR maintenance technicians in France for 2 years

Training of test drivers: 4 managers and 6 drivers.

Immersion to witness operations in a real environment

immersion of Infra maintenance technicians of each specialty to discover and participate in maintenance operations

Immersion where the number of staff to be trained is small or where specific facilities are required:

Avoids costly investments for one-off use

Avoids developing a specific course (training engineering)

Immersion of the trainers selected to work at the IFF

Training by the designproducers

Training courses included in the contracts for studies, acquisition and or execution of works by the companies:

Track and catenaries : One week of training by COLAS in each speciality, as well as for mechanical signalling and switches

Electrical signalling and GSM-R: Training of field maintainers by ANSALDO

25 kV substations : On-site training by CEGELEC

Rolling stock: ALSTOM's support for the training of maintenance managers and technicians and for the training of train managers (doors, comfort anomalies, alarm management)

Training at IFF

Co-design of training modules by SNCF and ONCF:

Mobilisation of 20 training designers and experts (INFRA maintenance, equipment, driving, traffic and service in stations and on board)

IFF organised the training: resources, planning, practical work

Investments in IFF for the realization

Driving simulator (which allowed drivers to be trained even before the infrastructure was completed)

Practical rooms: track, rolling stock, telephony and IT

Mobilisation of an SNCF task force in

2018 : More than 40 trainers were involved (Infra maintenance, equipment, station and train services)







Review of HSR training at IFF (2017-2018)

7 0 4 1 1 587 Train driving Sales, passenger service

16 921 TRAINING DAYS CARRIED OUT







Train traffic



Rolling stock

HSR in Morocco: a successful model for skills transfer







Educational resources



40 Trainers Mobilised



Simulateur multifonctionnel

Composed of **6 cabins** recreating the conditions of train driving in AL BORAQ, it also has the exact model of the High Speed Line allowing training in very realistic conditions.Investment amount: 20,600 kDH





Sorties sur terrain

- Kenitra work base
- Signal boxes and remote control stations
- Train maintenance centre
- Rabat Agdal station worksite





1083

Trainees formed



Training modules

High Speed Meeting Morocco

253

Sessions

Key figures



Because the success of high-speed rail in Morocco is the concern of all railway workers, IFF, in collaboration with the HSR department, organized **25 high-speed rail meetings for 1,500 railway workers** from different professions.

These meetings, each spread over half a day, aimed to share the latest information on the HS project in Morocco, its impact on the ONCF company and the country, but also to exchange views on the various developments in the railway professions.





Results of the first year of operation on track



96 % Regularity rate

92 % Customer satisfaction rate

6 800 trains ran on the LGV

2,5 million passengers transported

A good perception of the quality of training at IFF(2022)

MONCF UIC

Instant evaluation



HSR in Morocco: a successful model for skills transfer







Customers in Europe and Africa trust IFF France Luxembourg CFL cargo SNCF MASTERIS Espagne CHEMINS DE FER DE LA CORSE CAMINI DI FERRU DI A CORSICA Maroc A network of international partners ONCE STANA SCIF * Suprations UíC [] RAILWAY SIGWA RAIL PHILIPPINE RAILWAYS INSTITUTE Sénégal Cameroun Serer CAMRAIL GRANDE CÔTE Côte d'Ivoire SiTARAIL Gabon ETRAG COMILOG

THANK YOU





معهدالــتكــويــن السكـكــى INSTITUT DE FORMATION FERROVIAIRE

www.iff-ma.com



HSR in Morocco: a successful model for skills transfer





HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

Training of traffic controllers on the highspeed line

Abderrahmane AMAZAL

Chef de département Systèmes d'Exploitation, ONCF, MAROC Session5-4.5 project conduct, training and staff management









<u> PLAN :</u>

- * THE TRAFFIC CONTROLLER MISSIONS AND INTERFACES
- ✤ DESIGN OF THE TRAFFIC CONTROLLER TRAINING COURSE
- TRAINING COURSE FOR TRAFFIC CONTROLLER ON A CONVENTIONAL LINE
- TRAFFIC CONTROLLER TRAINING COURSE ON HIGH-SPEED LINES
- ✤ FOCUS ON THE TRAINING SIMULATOR
- ✤ KNOWLEDGE MAINTAINING
- ✤ TRAFFIC CONTROLLER/PROCEDURE WATCH PLAN
- ✤ FOCUS ON THE WATCH PLAN COMPUTER TOOL





THE TRAFFIC CONTROLLER MISSIONS AND INTERFACES

Ensure the switching of traffic, the protection of obstacles and works, the application of safety procedures related to the movement of trains.







DESIGN OF THE TRAFFIC CONTROLLER TRAINING COURSE

- Determine the selection criteria for the participant population (physical and psychological abilities, academic level, cognitive abilities, experience in computer switch stations)
- Set the pedagogical objectives
- Elaborate the specifications
- Develop the pedagogical process based on the specifications
- Develop the pedagogical notes
- * Set the evaluation indicators to measure the training action
- Design the training materials: presentations, trainee deliverables
- Designing training exercises, evaluation exercises and their answer keys
- Planning time, resources and logistics





TRAINING COURSE FOR TRAFFIC CONTROLLER ON A CONVENTIONAL LINE



Special watch during one year: control every two weeks minimum.

Training of traffic controllers on the high-speed line





TRAINING COURSE FOR TRAFFIC CONTROLLER ON A CONVENTIONAL LINE

Prerequisite: having worked in a PAI station for at least one year



Special watch for one year: check at least every fortnight.

Training of traffic controllers on the high-speed line





FOCUS ON THE TRAINING SIMULATOR

D

Dual role :

training tool and evaluation



ADVANTAGES

- Train traffic controllers on procedures in normal/degraded situations
- Observe an employee's ability to manage priorities
- Observe the employee's behaviour in degraded situations (ease of use of safety documentation, overload, ability to manage stress, self-control, etc.)
- Assessing the quality of communications and the use of safety documents

FEATURES

- Editing scenarios
- Timestamp the commands that will be launched during the scenario
- Simulate train traffic on the HSL (length, speed, ETCS level, direction, operating mode)
- Act on the state of the signalling installations (put a zone or a point in trouble...)
- Simulate the operations that field agents carry out from a field station (authorisation received, AuATR, etc.)
- Simulate the state of absence of catenary power
- Simulate detector alarms (DCV, DVL, DSI)

Training of traffic controllers on the high-speed line





KNOWLEDGE MAINTAINING

Consistency	Periodicity
Maintenance of knowledge written exam	Annual
Oral interview to assess knowledge	Annual
Ongoing training at central level on technical procedures and soft skills	Annual (4,5 days)
Continuing education at local level	At least 4 meetings per year
Traffic controller/procedure watch plan	According to planning
Controls and inspections	New employee: at least every 15 days for at least one year At least once a month, after







TRAFFIC CONTROLLER/PROCEDURE WATCH PLAN

<u>Purpose</u>: systematic monitoring of traffic controllers on the application of procedures according to a systemic approach.

<u>Role</u>: to develop the behaviour and skills of employees individually and collectively.

The supervisor monitors all traffic controllers and all procedures implemented so that all staff must be observed at least once a year on all procedures. The planning takes into account :

- Results of the first enabling examination
- Rarity of the targeted procedure
- Complexity or criticality of the procedure concerned
- Events or incidents



FOCUS ON THE WATCH PLAN COMPUTER TOOL

HIGHSPEED

- Plan physical, psychological and professional aptitude tests
- Plan the training topics per traffic controller
- Plan the checks
- Enter findings, deviations, deviation adjustment dates, closure dates
- Visualise via dashboards: the most recurrent errors, progress in rectifying errors, progress in carrying out checks, progress in carrying out training topics, vulnerable employees, employees who have not been observed in procedures, etc.







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

THANK YOU







HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

11THWORLD CONGRESS OF HIGH-SPEED RAIL

Marrakech, 7-10 MARCH 2023

Shaping a vision and a culture around a Company project : ITKANE 4.0, an Industrial Excellence Program

Abdelhalim NACIRI Projects and Performance Director, SIANA, MOROCCO <u>Abdelhalim.naciri@smmrgv.ma</u> Session5-4.5 project conduct, training and staff management







SIANA'S MISSIONS



JOINT VENTURE Between ONCF and SNCF created in 2016





Company specialized in the maintenance of Moroccan High Speed Trains

The Goal :

- To succeed Operation of the 1st Moroccan HSL
- To control the Maintenance activities of HS Trains
- To make it a driving force for the rest of ONCF Maintenance Activities





ITKANE 4.0 : ORIGIN, DEFINITION AND IMPLEMENTATION

From the start of AlBoraq trains Operations in November 2018, SIANA started an ambitious program to bring the company to a maturity and excellence level allowing it to be an essential leader in maintenance and railway innovation in Morocco and Africa





ITKANE4.0 is the name of our industrial excellence program which aims : operational excellence, continuous improvement, quality control, safety management, improvement of occupational health and Environment by stimulating Innovation and Digital Transformation

The term "industry 4.0", which first appeared in 2011 at the World Industry Forum in Hanover, corresponds to a new way of organizing the production by including new technologies like (Big Data, IA, IoT, etc.).



ITKANE 4.0 : OBJECTIVES AND ROADMAP



The **ITKANE 4.0 program** contribute to the development of the company's structure, and to create a new working environment with good human relations. All worker's ideas are welcome and their creativity are stimulated.

ITKANE 4.0, based on simplicity, innovation and the creation of added value, rely on the management of 6 fundamental pillars which consist of themes and Items with 4 levels of maturity.









THE 6 PILLARS AND THEIR OBJECTIVES



Promote the ITKANE 4.0 project

Be the facilitator and a support to the pillar manager to solve risks and crucial problems if necessary

Supervise the pillar manager and Check the results obtained according to the project schedule

Pillar Project Manager

Be the organizer, coordinator and animator of the pillar Be the director and/or responsible of action's plan

Present deliverables and all results to the Sponsor

Solve the risks and problems

Theme Project Manager

Be the facilitator of the Items Be the director and/or responsible for item action's plan Present deliverables and all results to the Pillar Manager

Be an ambassador for the Theme Manager Provide support during the implementation of actions



intér

exigences





QUALITY MANAGEMENT

The ITKANE program is part of the M1 and M3 process of the Integrated Management System

Each pillar has its indicators to measure performance

schedule

PRODUCTION DE MAINTENANCE		Indicateurs de Performance 202		
		Objectif 2022	Résultat À T3 2022	Commentaires
	% de mise en place du 5S par chantier	85%	72%	Poursuite de la mise en place de
	% de digitalisation du partage des indicateurs de production	85%	70%	Projet KPIXO Management Visuel
	% réalisation charge N2/N3	95%	96% 🥴	Polyvalence N3 ciblée en cours
Production	% Robustesse de la réalisation de la charge hebdomadaire	90%	84%	 Efficacité de la cellule dépannage + Polyvalence + Astreinte
ntenance	Taux de disponibilité des installations	90%	86% 😃	 Industrialisation du plan de maintenance des installations
	Délai de traitement moyen des DI patrimoine	48h	61 h 🤐	 Mise en place du Contrat de maintenance patrimoine avec un
	% d'industrialisation des chantiers PRM	70%	67%	nouveau mode de gestion du volet patrimoine





MANAGEMENT & ANIMATION



MANAGEMENT

Weekly follow-up point Monthly monitoring of indicators Quarterly Steering Committee Thematic Working Group



ANIMATION

Business challenges

Creativity workshop

Work group

Team meetings



EVALUATION

Semester evaluation of the maturity level according to a performance evaluation grid



COMMUNICATION

Newspaper ItkaNews

Scorecards

WebSite

Annual Event,

Communication Booth





RESULTS OBTAINED AT THE END OF PHASE 3

Ĉ

Relation Clients et Performance Economique

- High Speed Train Reliability ~7 inc/Mkm (better than the Benchmark)
- Punctuality and Regularity at 98%
- Maintenance Cost Controlled (beyond Targets)



Human Ressources

- Creation of our internal **SIANA ACADEMY training center** and training courses for Engineers and technicians.
- Implementation of the Company Project
- Standardization of knowledge transfer tools through SIANA KNOWLEDGE
 MANAGEMENT project

Maintenance Production

- Repair Workshop for some spare parts like air conditioning or Battery
- Dynamic visual production management project
- Technical engineering teams for Maintenance and Projects



Supply Chain and Purchasing

- Railway ecosystem support
- Stock consistency rate at 92%
- Management of **7103 references** stock in 2022
- Partnerships with local industrials



Integrated Risk Management

- ISO 90001 Certification
- ISO 45001 Certification
- O Operation Safety Event
- Establishment of an environmental culture



Digitalisation & Innovation

- 60% of our activity Digitizated
- More than 80 innovative ideas (10 transformed into projects)
- Participation in CES LAS VEGAS with "SAFAE Project"

Shaping a vision and a culture around a Company project : ITKANE 4.0, an Industrial Excellence Program





Examples of innovative projects



Digitalization and Innovation

Digital archiving

reports Interfacing with

the CMMS





Generalization of the ITKANE program to all Maintenance workshops of ONCF

- * The Maintenance's ONCF RST Division (Pôle Matériel) is implementing ITKANE 4.0 as the basis for its strategy
- Capitalizes on the feedback from SIANA Experience Program
- Directors and Managers benefit from a unified Program : same language; structured around 6 pillars ; therefore allows

us to compare and benchmark between our different departments

Chapter	Rolling Stock Direction Level	Maintenance Workshop level	
Steps	ITKANE 4.0 standard	Transformation of maintenance workshops driven by a version of ITKANE 4.0 specific to each Establishment and its specificities	
Steering	- 1 pilot for a program - 1 pilot by pilier	 Head of workshop piloting the program Local pilots designated by pillar The local HSE manager animates the deployment 	
Sponsorship	pilots Rolling Stock Direction shared with their SIANA correspondents	 Maintenance Worskop Chief is the program sponsor Central pilots sponsor local pilots 	
Goals and Actions	Objectif by pillar	Objectives declined by Maintenance WorkShop \rightarrow Own actions	
Quick wins	Quick wins Quick wins achieved on each pillar to facilitate the adhesion of Establishments		

l mplementation Roadmap





SIANA and ONCF RST Division's challenges in 2023 : ITKANE 4.0 Industrial Excellence Program, a tool for implementing the vision and establishing a culture of Excellence





Succeed in phase 4 'Excellence' of the Program

Spread of the RST Division's Vision through **ITKANE 4.0**

Prepare the future cycle of 2024-2025-2026 A new cycle of improvement in 3 phases development / maturity / excellence

Supporting new operating challenges Development / deployment of new services / deployment of new technologies / industrial localization ...

For 2023-2025 RST division challenge is to adapt a successful model (SIANA)

Mono serie I High Speed Passengers I 2 workshops I 150 people

to a large scale Maintenance organization

multi series I mixed Passengers & Freight I 14 sites / 1300 people / future Locomotives JV



Relation Clients et Performance Economique



Capital Humain

OSSE



Production, Ingénierie & REX

Digital & Innovation

Shaping a vision and a culture around a Company project : ITKANE 4.0, an Industrial Excellence Program

Page 10





HIGH-SPEED RAIL : THE RIGHT SPEED FOR OUR PLANET Under the High Patronage of his Majesty King Mohammed VI

THANK YOU FOR YOUR ATTENTION

Abdelhalim NACIRI Projects and Performance Director, ITKANE 4.0 Sponsor SIANA, MOROCCO

Omar DEMMOUN

Head of the Transformation and workshop Department, ITKANE 4.0 Pilot ONCF, MOROCCO

Luciano FERNANDES BORGES

Chief Executive Officer, SIANA, Executive Rail Director Rolling Stock, ONCF, MOROCCO

