

ABILITIES & HUMAN BEHAVIOUR EVALUATION PROCESS



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SUMMARY

The purpose is to provide a description and return on experience about the abilities and human behaviour evaluation processes set up and used for railway staff, holding positions with operational safety responsibility, and to explain how it has been transferred to Urban Guided Systems organisations – mainly Metro and Tram.

The people affected are railways vehicles drivers and traffic control operators in the French Railways (SNCF) and urban public transport companies in France and other countries operated by Keolis.

These operators must acquire appropriate skills and competences to ensure that they can deliver safe and reliable public transport.

The methods which we use were based on the observation of good practices in the field, on compliance with requirements from training, and on research works in evaluation of human resources. They allow us to identify the employment candidates who will be most effective in performing safety-critical work.

These techniques and know-how are concentrated on the capabilities and behaviour necessary to enable competence to be developed by training in the skills specifically required for the position.

The presentation of one of the tests will allow you understand our systems of evaluation and to identify some of the limitations of this method.

Transfers of these methods from railways to urban guided system will be developed through collaboration between SNCF and KEOLIS SA.

INTRODUCTION

In this presentation, we will share with you our experience of evaluation of candidates for position of vehicles drivers (including drivers of maintenance machines), and train traffic controllers. This activity is carried out by the internal consultants of the Recruitment Department of the SNCF.

Having described the fundamentals of our measurement system for railways, we will develop how these methods are also used for the selection of the staff working in the urban public transport sector: tram, streetcar and metro, within Keolis.

NOTATION

OCC: Operation Control Centre,
SNCF: French National Railway Company,

SNCF - FRENCH RAILWAYS COMPANY & KEOLIS WORLDWIDE ACTOR OF PUBLIC TRANSPORTS



SNCF in brief

SNCF is a world leader in transport and logistics, with a presence in 120 countries and a total workforce of 241,000 employees. 2010 revenues were €30.5 billion, 20% of which was generated outside France (including Keolis). SNCF is 100 per cent state-owned company. Its flagship brands include TGV as High Speed train, launched in 1981, Eurostar, Thalys, IDTGV, Voyages-SNCF.com, Geodis and Systra. In 2010, SNCF's long-distance and high-speed passenger rail division - SNCF Voyages - carried 132 million passengers. SNCF holds the world rail speed record at 574,8 kph, achieved on April 3rd 2007.

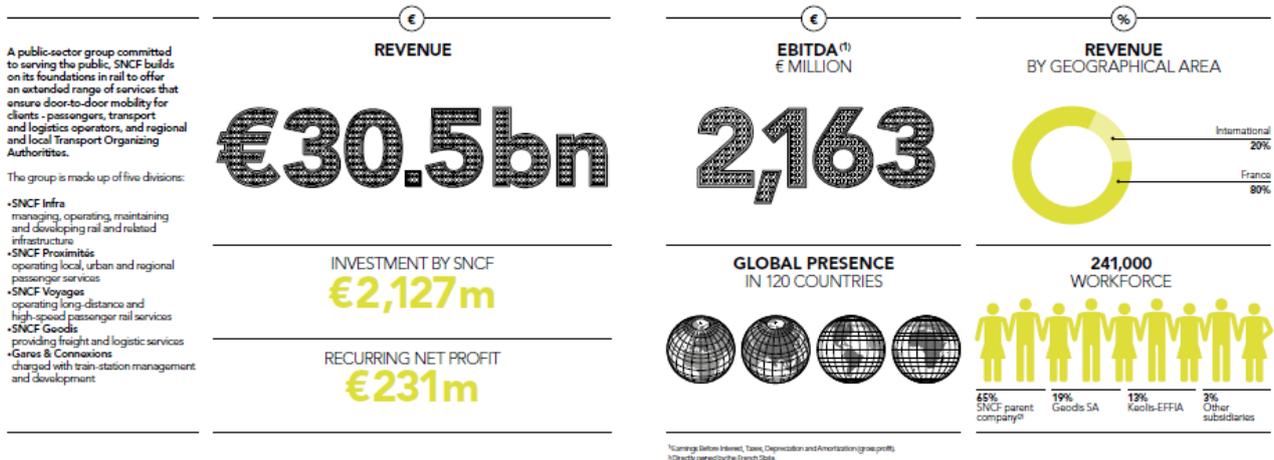


Figure 1: SNCF Group main figures



Keolis in brief

Keolis is a leading public transport operator in Europe and across the world. The group develops tailor-made mobility solutions to suit the needs of local authorities, in tune with the changing travel patterns of today's passengers.

Keolis operates public transport in 12 countries, including Australia, and particularly the Melbourne tram network: Yarra Tram in partnership with Downer EDi Rail (51% Keolis / 49% Downer in KDR).

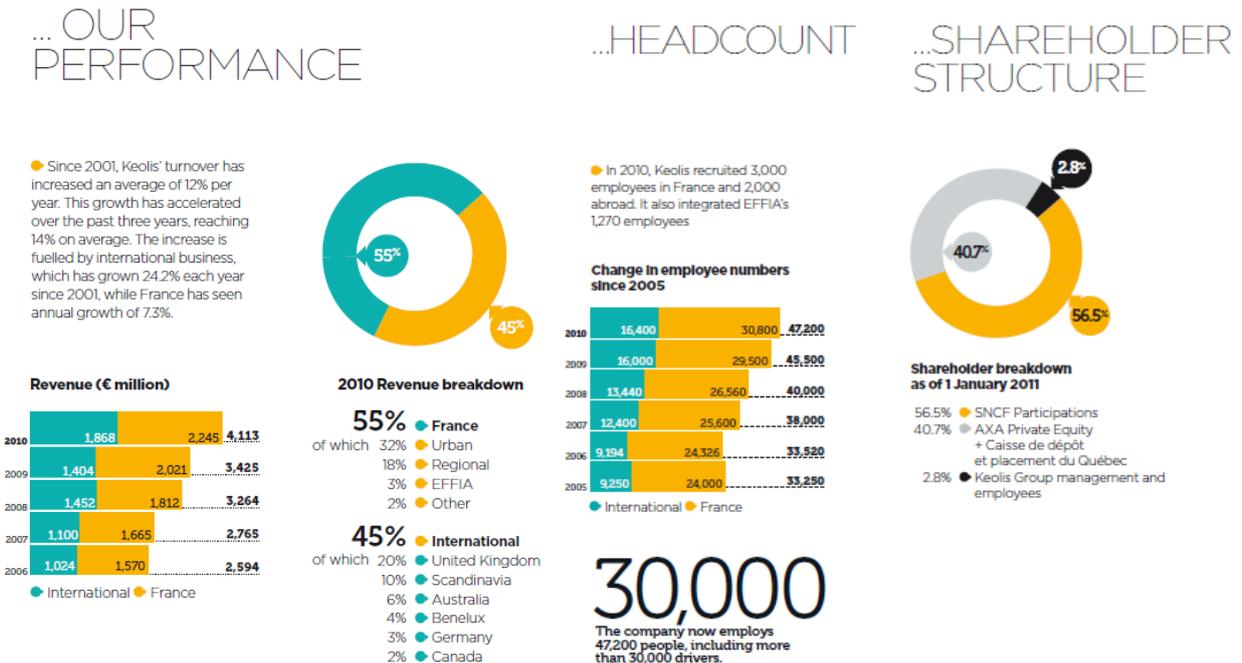


Figure 2: Keolis activities main figures

WHO IS CONCERNED BY ABILITIES & HUMAN BEHAVIOUR EVALUATION PROCESS?

Our evaluation activity concerns the train drivers traffic controllers and on-track machine drivers, (shunting machine, track inspection rail vehicle driver) and for the guided urban modes, tram and metro drivers as well as traffic control operators or line operation supervisor. It concerns also line & OCC operators for driver-less automatic metro.

All train drivers are considered together whether they drive trains for passengers or goods or infrastructure maintenance, and for any type of vehicle: shunting vehicles, on-track machines, commuter trains, freight trains, intercity trains and very high speed train circulating on national networks or, international European corridors. For urban public transport, we work with drivers of subway and streetcar.

As traffic controllers, we include all operational staff who can authorise movements of trains whether on site or in traffic control rooms.

All these employees are the essential players for safety.

They must be selected, trained, and guided to be qualified for their tasks, in order to guarantee the highest level of reliability of our traffic.

WHAT ARE THE MAIN GOALS FOR RAILWAYS & PUBLIC TRANSPORT COMPANIES?

To transport our customer safely, a main objective for railways and public transport companies is to reach and maintain the highest level of competence for all of their operators who have safety tasks and responsibilities. This high level of safety must be guaranteed throughout the operation including operations out of commercial service, on the way and on returning to the depot, or during shunting.

The SNCF has developed a set of methods of measures allowing a selection of the people predisposed to succeed in the functions of driving and traffic control. We want to share with you these methods that we apply to guarantee our level of safety. We provide you our results but also the questions which we handle currently.

WHAT ARE THE METHODS?

Methods in place

They are built through a long and an important experience: approximately 80 000 safety-critical workers within the SNCF in 2011. The application of the tests to urban guided modes (tram & metro) started 10 years ago. 400 candidates are evaluated for Keolis each year.

Briefly, the purpose is to build and update specific processes of evaluation of the capacities and the behaviour of these operators to give managers help in decision making for hiring, post-incident investigation, promotion or transfer.

The methods are built on observations in the working environment which allow us to identify the efficient railway professional behaviours in the fields of driving and traffic control using scientific knowledge in the field of evaluation.

Our efforts concern the efficient measure of minimum necessary prerequisites for building, by the means of the training, the main and mandatory professional skills to guarantee the level of reliability of our operators in their working position.

We have developed our own tests to have a measurement system best adapted to our businesses and to our environment. In addition to that the number of evaluations allows us to have a positive return on investment on the development expenses.

We will describe in this presentation the principles implemented in the processes of evaluation of the capacities and the behaviour of the operators of safety for driving and traffic control for guided transport modes.

The fundamentals of our system of evaluation

Not everyone has the attributes or behavioural resources to drive, control or regulate effectively a train, a metro, a streetcar or a tram.

Our objective is to identify candidates for recruitment who will be able and willing to absorb the necessary training.

Our measurement system targets the capacities and the individual resources of the applicants. We approach the intellectual elements of understanding, reasoning, and learning, the behaviour of organization, anticipation, multi-tasking and concentration, the modalities of reaction, the main dimensions of personality in connection with the working position (emotional stability, sense of responsibilities, the rigor.) and at the end, the degree of motivation for the professional and personal project.

The approach of tests allows us to place the performance of every candidate in regard to that required for working position. We calibrate the tests on the results of the candidates previously employed, and who have become effective operators in the domains of the driving and traffic control.

The tests are always followed by an interview which allows us to validate the hypothesis previously built thanks to the analysis of the tests results. This is crucial in the test process organisation.

We provide a report on every candidate to help the line manager and human resources recruitment manager. The acceptable candidates are presented to the decision-makers. The final decision-maker for the recruitment is always the line manager, who can follow the development of the new recruit.

The tests results, at the time of recruitment are not the only criteria for success. It's necessary to understand how the candidate can develop their performance.

We do not concentrate systematically on the "best" candidates in tests. We are looking for people capable of providing acceptable levels of speed, precision, organization, decision making and, prioritisation during training, but particularly in their day to day work. An error would be to consider "best" only in terms of quantified results.

After all, the potential must be sufficient but also not too much above our needs. We do not look for fighter pilots or space shuttle astronauts...

This evaluation is also used for operators during their career at decision point in professional life such as mobility, restructuring, conversion, retraining in case of difficulties identified by the line manager or change of direction requested by the employee. A particular focus is implemented for the population of ageing employees for whom we sometimes notice a diminution of the resources and abilities.

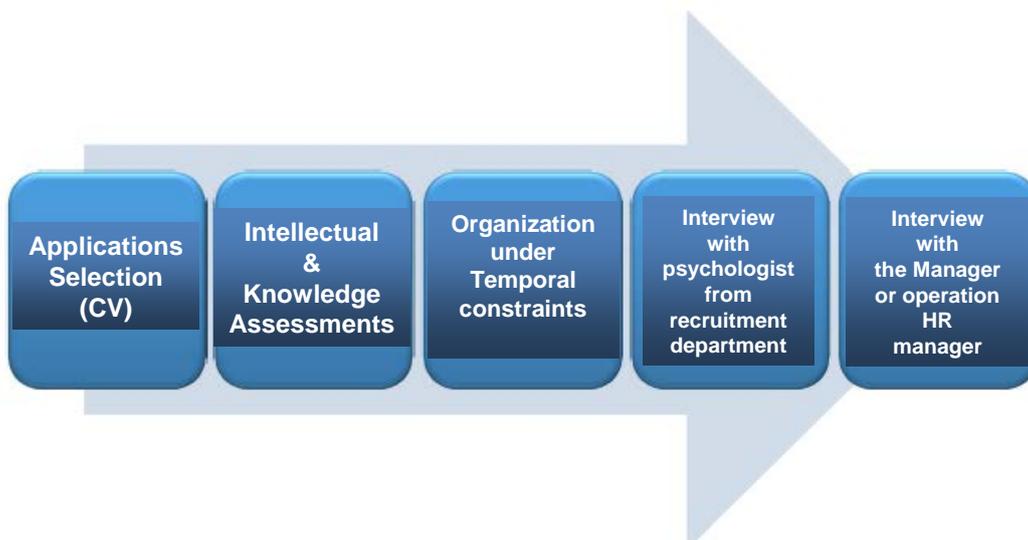


Figure 3: Recruitment & abilities & behaviour evaluation Process

Test & process of evaluation

The process of evaluation of a driver begins with the selection of its application on CV and application letter. The biographic elements and work experience including together nearest skills with the requirements of driver or traffic controller positions are valued. The level of education remains important but not crippling if the candidate has a significant working experience in an environment including procedures, operation environment working time, and safety activity.

Beyond the work on CV, a phone conversation allows us to validate certain points before planning any appointment. The second stage concerns the evaluation itself of the intellectual and behavioural resources.

Tests of intellectual capacities and reasoning allow us to identify the processing capacities of the information, the understanding and the integration of the working procedures. It identifies whether the candidate has the potential to make a successful training for train driving or traffic control positions.

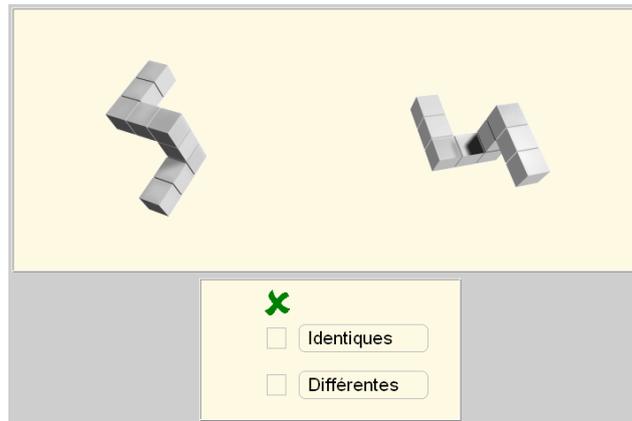


Figure 4: intellectual capacities evaluation

The behavioural tests give indications of capacities to react in complex situations including interruptions, multi-tasking prioritisation and compliance with rules. In this way, we understand the abilities of candidates to organize, to manage stress, to respond promptly, to analyse, to remember and to concentrate.



Figure 5: Sharing of attention test situation (left) & comprehensiveness of diagram/charts evaluation (right)



Figure 6: Movements coordination evaluation during presentation to managers

The tests are carried out under observation of the candidate. Their observed behaviour provides further information which can supply areas for investigation during the interview.

We also use personality questionnaires which help us, in interview, to approach the main dimensions of the individual.

The objectives of the tests are to evaluate the capacities and the behavioural choices of each candidate, to compare them with those who are by experience successful factors in the training then in the working position.

We also use calibrations by level of education or working experience which allow us to compare the performance of each candidate with the average achieved by all the applicants from similar backgrounds.

The tests built by the SNCF meet the scientific criteria of validity, sensitivity, standardization and fairness appropriate for the serious tools of the profession of assessor. These methods allow us to establish credible hypotheses which will then be validated or not in interview.

The objectives of the structured interview which is going to follow the phase of tests are to confirm the initial hypotheses to select the candidates or the employees to succeed in the working positions.

The interview also provides information to the candidate about the position or about the Company, mainly on the working position organisation.

A formal report combining the observations, the results, subjective assessments, main biographic elements, elements of motivation, probability of professional development is then produced. It guarantees the traceability of the assessment of each candidate. (Refer to appendix at the end of the document)

WHAT ARE THE RESULTS?

For 2010, in external recruitment approximately 270,000 candidates applied to join the railway company and at the end 3350 were recruited. It is approximately 15 000 persons who were evaluated.

For 2010 in internal evaluation, approximately 2000 person from operation staffs benefited from an evaluation of potential to help to build a new professional project or to validate they could get a new position.

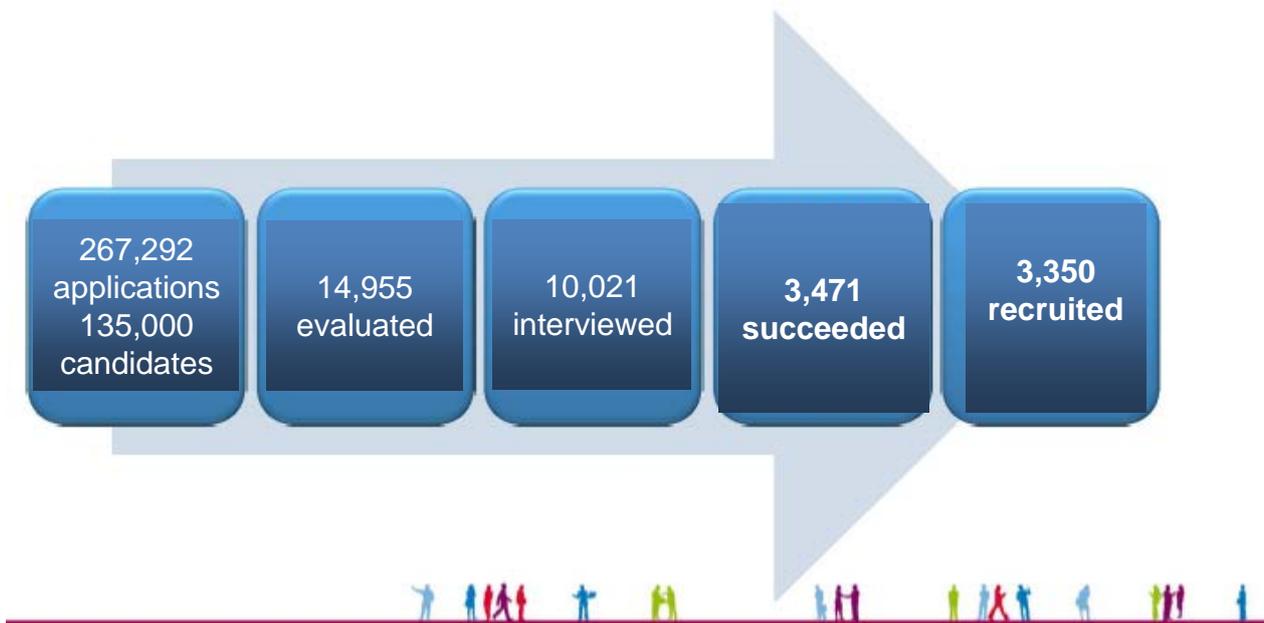


Figure 7: Selection process main figures

Concerning KEOLIS, more than 850 candidates and employees were evaluated by these processes in 2010 for driving position and for traffic control for streetcar, tram or LRT and the metro.

WHAT ARE THE CURRENT TRANSFER FROM RAILWAYS TO URBAN GUIDED TRANSPORTS

All public transport companies need to ensure the safety of their passengers. . To achieve this, they must master the technology of driving and traffic control for guided systems. Whatever the technology, the human factor remains an essential key factor for the success of the service. Our contribution to the selection of the operational staff and the maintenance of their competence seems to us an essential link in the chain of safety responsibility, allowing the management of the risks of degradation, incidents, or even accidents.

For the urban environment, we have re-used for some years, some of the tools for measurement of the fundamental aptitudes (concentration, multi-tasking, prioritisation), but with some adaptation of the criteria. These tools have been used in the processes of selection of drivers, traffic controllers and on-line supervisors.

We have also developed new observations and good practice studies specifically for these positions in the urban transport environment, and finalized a process of measure and decision-making support for drivers of metro, tram and for all the dispatchers or traffic control operators.

The first results led to a significant increase in the level of success in training. We were also able to alter the training process specific to in house bus drivers who must move towards in driving position of streetcar, tram or subway (All modes of urban transport in a French city are under a single organisation. When a tram or metro line opens, bus drivers normally have the opportunity to re-train for the new mode and often drive more than one mode).

This transfer from heavy rail to the urban sector has been in place for more than 10 years. Now systematically, all recruitments of drivers or traffic controllers for tram and metro follow that process. Since 2009, to prepare the opening of Bergen (2nd city in Norway) tram operation, all managers, drivers and traffic controllers' candidates have been assessed by SNCF teams on site.

A feasibility study to transfer the abilities and behaviour evaluation process is starting for Yarra Trams in Melbourne.



Figure 8: Training of Norwegian Managers to tram operation on a French network

QUESTIONS AND CONCLUSIONS

To conclude, investment in a successful measurement system, can allow a transport company to target the individual attributes necessary for the development of the professional skills of driving and traffic control positions.

This process both reduces failures during training and also contributes to assuring the level of competence is appropriate to the expected requirement for the position.

It also allows the company to reduce the issue of boredom which is sometimes found in people who have exceptional capacity and ability, but for whom a driving position or a traffic control position is not stimulating enough to maintain motivation.

This evaluation process must be presented beforehand to the candidates, the employees, the managers, and when necessary to Union representatives, to ensure their participation in, and support for, the objective measurement of attributes. This preliminary stage of information allows us to clarify the objectives but also to communicate the limitations of these systems with transparency.



Figure 9: Presentation of the evaluation process to Operation Managers

The compulsory safety commitment of all operators of transport can be only built through improved and reliable methods both in the technical domain and in the management of the human factor.

Our experience, follow-up of the evaluated candidates, discussions with line managers, and observations on other networks, constitute continuous improvement loops to strengthen our risk management activities.

This improves the safety of railway transport activities (freight and passengers) and urban guided public transport systems.

For any question or comment please contact:

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APPENDIX: Example of report delivered to operation managers

DIRECTION DES RESSOURCES HUMAINES

DIRECTION Les Services RH

DEPARTEMENT RECRUTEMENT
Recruitment department



TRAM OPERATION COMPANY
To the attention of Mr. SMITH
Human resources Director
1, Collins Street
Melbourne VIC 3205
AUSTRALIA

CONFIDENTIAL

Paris, le 06/09/2011

EVALUATION REPORT

Candidate: **M. / Ms.**
Working position: Tram Driver
Final advice: **POSITIVE**

ASSESSOR: **Thomas WEEXSTEEN**
SNCF
Recruitment Department - PARIS
☎ :+33 (0) 153 415 417

Biographical elements

Motivations / Comprehensiveness of the working position

Relations with others

Intellectual resources

Behavioural resources

Personality elements

Professional Project

