



1st International Conference on Graduate Employability

**Lisbon 11-12 October, 2012
IST**

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An inspiring story...



Change of Gauge in Canada Central Railways

The Problem:

Canada Central Railways lines from Mattawa to Brockville with extensions to Ottawa and Perth were run on broad gauge.

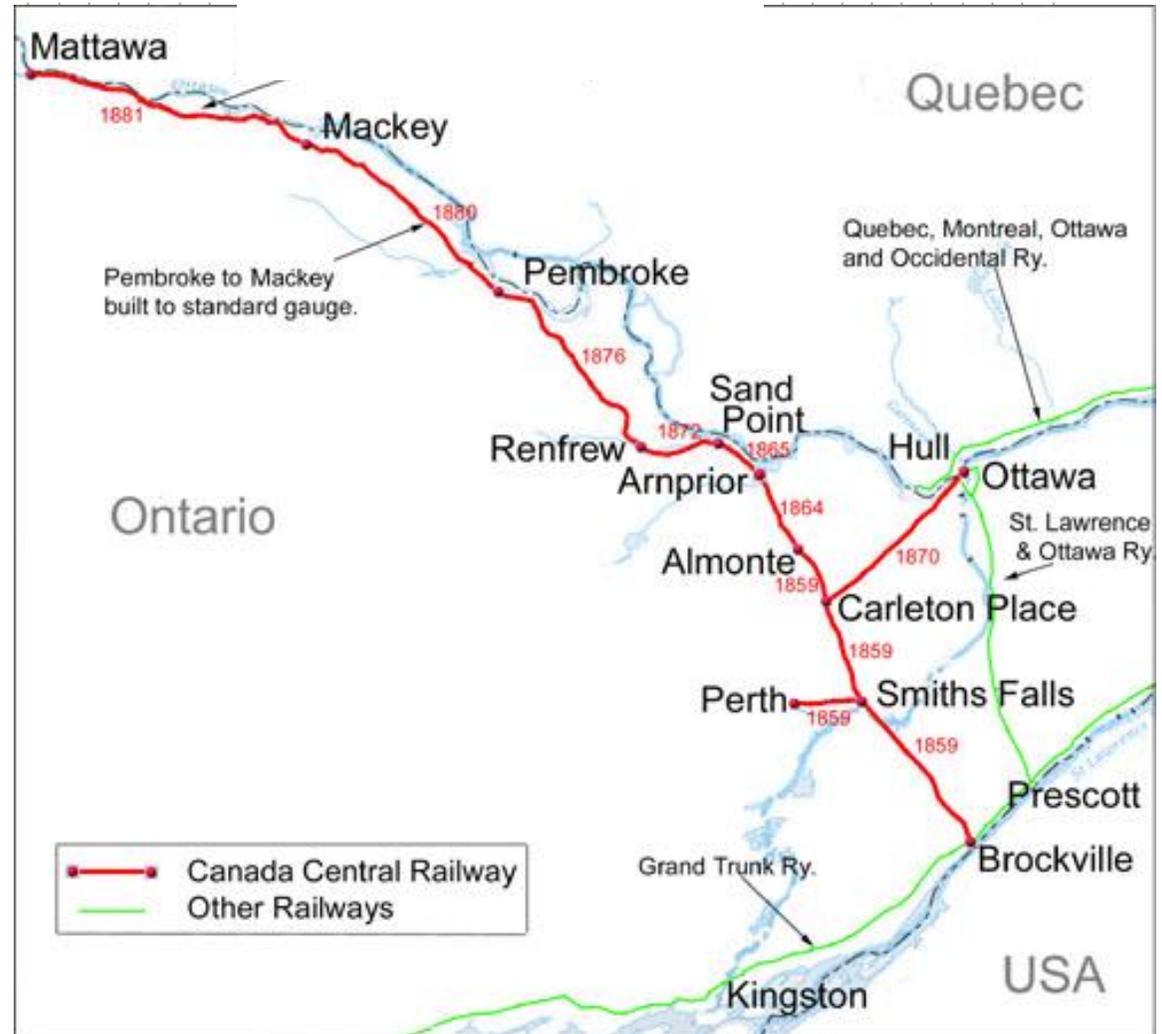
A change of gauge became necessary at Brockville because Grand Trunk Railway change to standard gauge in 1873;

The competitor St. Lawrence & Ottawa Railways already run standard gauge thus ensuring compatibility with the Grand Trunk Railway.

Change of Gauge in CCR from 5 feet, 6 inches (broad gauge) to 4 feet, 8,5 inches (standard gauge) became necessary.

Aprox. 500Kms of tracks

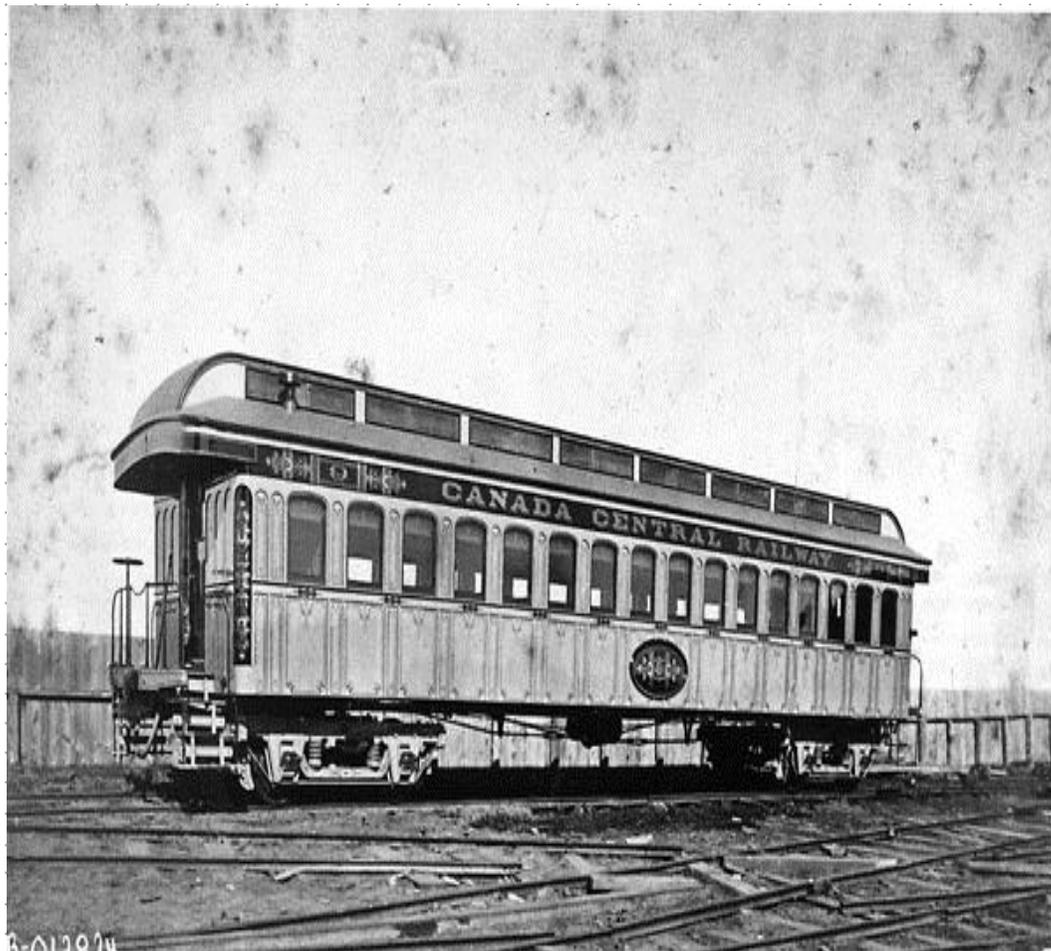
Around 1880



An inspiring story...



Change of Gauge in Canada Central Railways



Change executed overnight;

24 to 25th April, 1880

Preparation work started 1878 namely construction of new locomotives, construction of some line extensions acquisition of additional cars, turntables, etc.

One accident in Dec, 5th, 1879 delayed the preparation process

Source : www.railways.incanada.net

An inspiring story...



What can we learn from this story?

Attitude makes the difference!

Change to european gauge has been discussed in both Portugal and Spain for several decades already. Both countries run on the so called Iberian gauge (1668 mm) not compatible with the european one (1435mm);

Iberian Gauge was standardized in 1955 between Portugal and Spain; Since then the connection to the european rail network and the need to cope with the european gauge has been discussed...and discussed...

Employing Engineering Graduates



What has changed over the last 10 years?

Changes in the ecosystem:

Low Visibility;

Market Instability;

Cost is always an important factor;

Significant increase in the offer of engineering graduates;

Innovation is an important driver for change;

Requirements for getting a new job:

A Strong set of Technical Skills is a minimum requirement, not a differentiator;

The Attitude is a differentiator;

The cost of opportunity of hiring the wrong persons is very high;

(You cannot easily change personal values and characteristics);

Employing Engineering Graduates



What has changed in the past 10 years?

What has changed?	Before	Now
Mobility	You would stay in your home town. Stability was a value.	Need for frequent travel abroad and even relocation on a permanent basis.
Change	Your career could be developed in the same technical area; Focus on specialization.	Your career will encompass several technological areas and businesses. Need for the capacity to adapt and learn fast.
Skills	Technical skills were the best “presentation card” for every engineering graduate;	Attitude, initiative, communication skills, problem solving capabilities and orientation towards objectives are valued at (at least) the same level as technical skills.
Creativity	Consolidated knowhow in a given subject was primarily valued;	Consolidated knowhow is only a basis for solving new problems in new contexts;

Employing Engineering Graduates



Personal characteristics that matter:

Interpersonal skills;

dealing with people, not only with technology;

the capacity to work in a team;

negotiation;

communication and language skills;

Problem solving capabilities;

critical thought;

capacity for empathizing with someone's problems;

information retrieval and classification;

application of knowledge to solve practical problems;

capacity to innovate;

flexibility;

Ethics and professional conscience;

basics on company structure, values and behavior;

professional ethics and organization behavior;

Differentiating evidences in your CV



Employing Engineering Graduates



Novabase experience:

- What we evaluate:

Psychometric Tests oriented towards evaluation of personality;

Psychometric Tests oriented towards evaluation of learning skills;

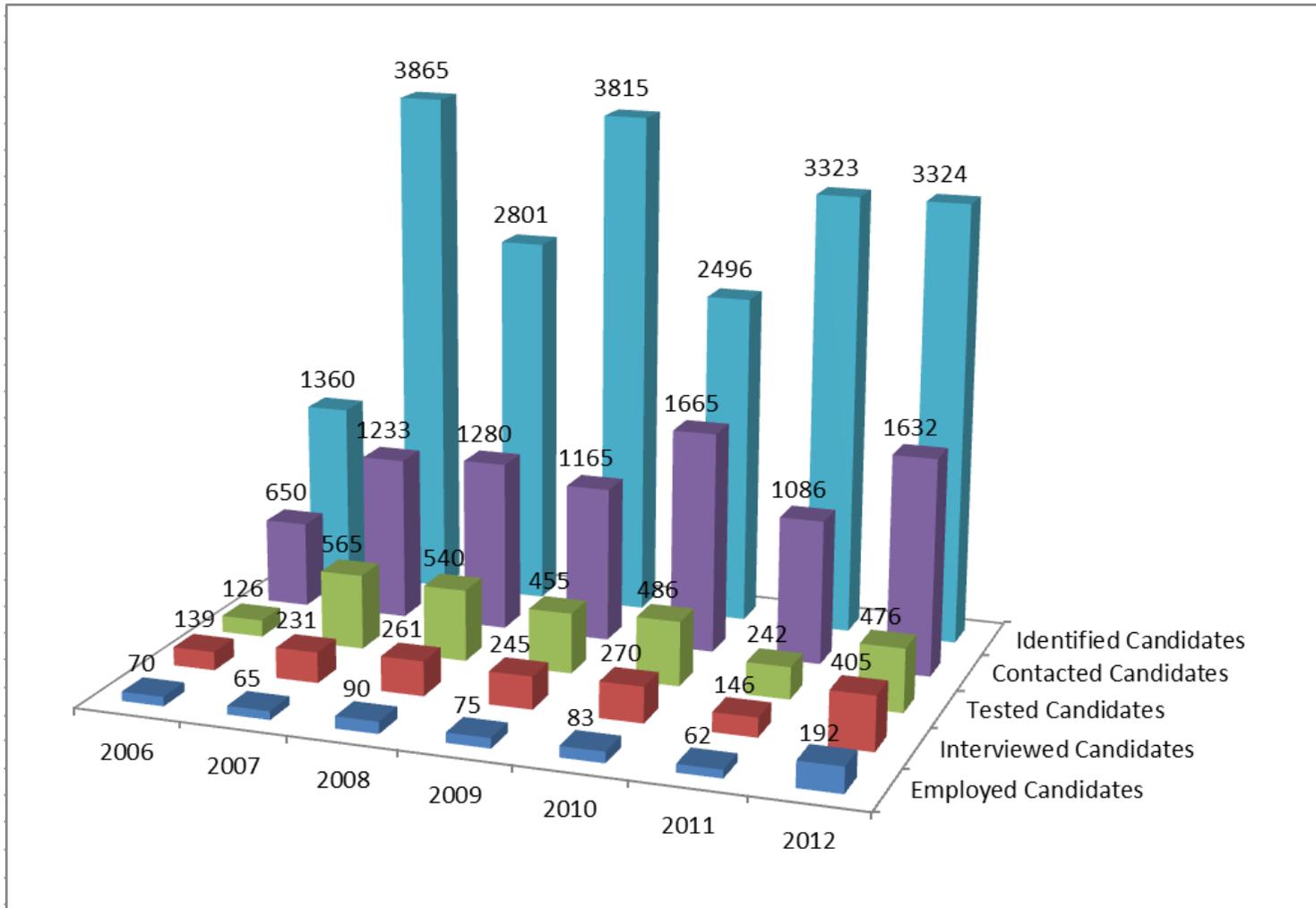
Biographical and Motivational interviews that evaluate:

- ... evidence of past behaviors that can predict future ones**
- ... posture and communication skills**
- ... willingness to accept international projects**
- ... problem solving and logical reasoning skills**
- ... ability to improvise**
- ... stress resistance**
- ... capacity to innovate**
- ... technical knowledge**

Employing Engineering Graduates



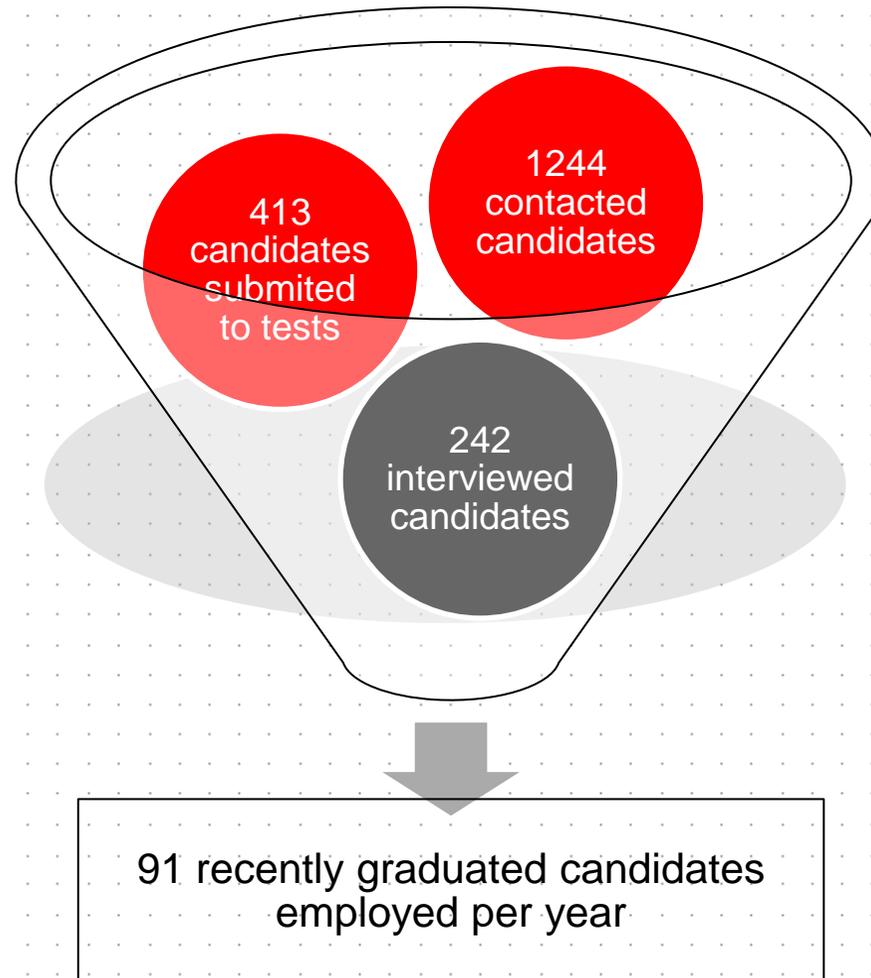
Novabase recruiting stats:



Employing Engineering Graduates



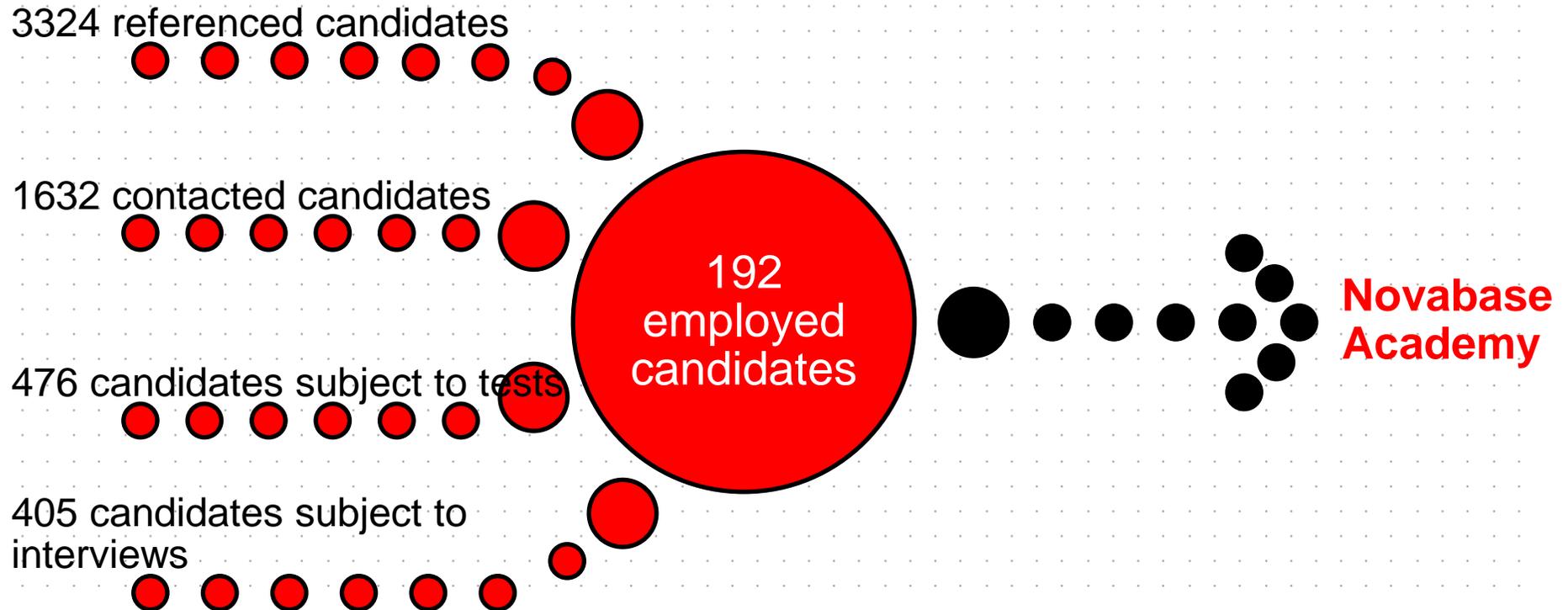
Average numbers (last 7 years)



Employing Engineering Graduates



Novabase 2012 stats:



Epilogue



What can we learn from our experience?

This reasoning and the statistics of major portuguese employer (Novabase) show that relational, communication and motivational skills and abilities are of paramount importance in the hiring process of engineering graduates.

Technical skills are no longer enough and are widely available. It is the attitude and the relational skills that make the difference.

Universities have a clear role in the motivation and the active training of students in such skills not only through the offering of specific courses but mainly thought the values they inspire and through the example passed on to the students by their teachers.



**Believe in yourself!
Have faith in your abilities!
Without a humble but reasonable
confidence in your own powers
you cannot be successful or
happy.**

Norman Vincent Peale