QUALITY MANAGEMENT SYSTEM OPERATION IN THE WOODWORKING INDUSTRY

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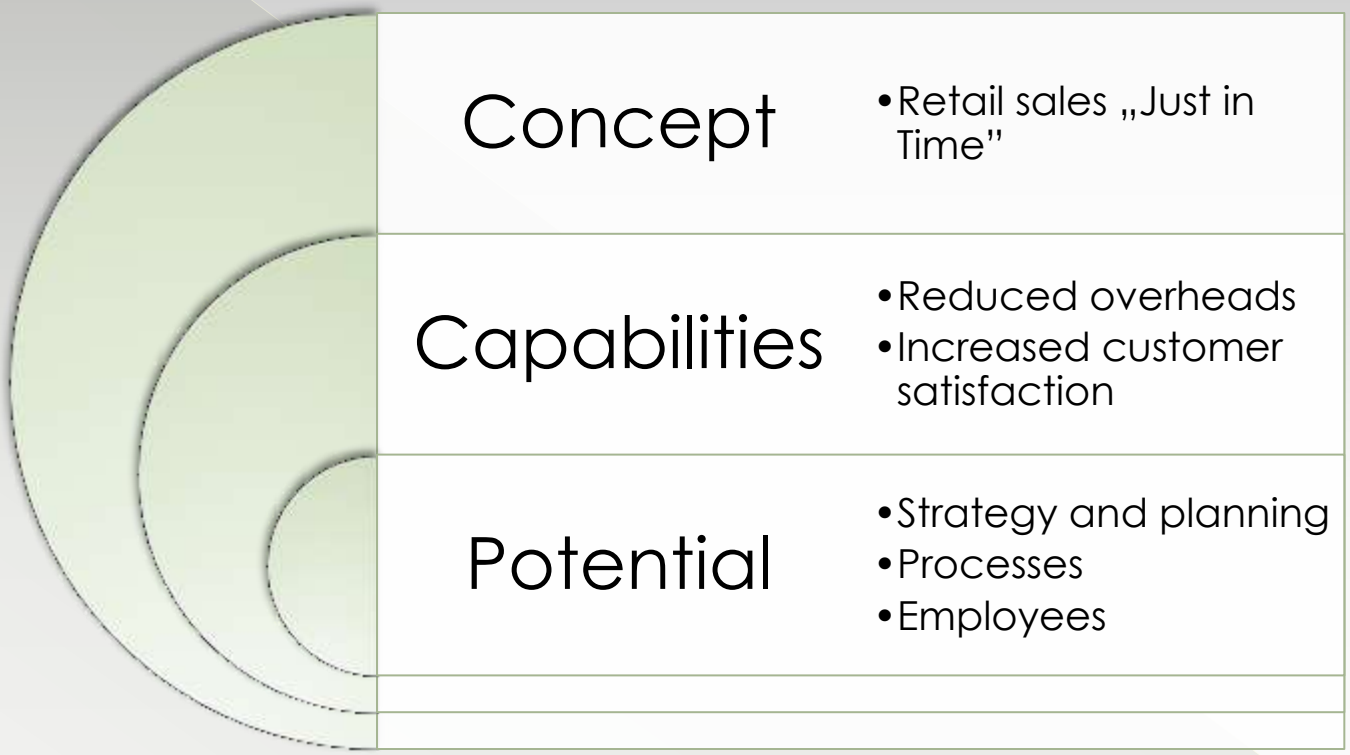
THE PATH FORWARD FOR WOOD PRODUCTS: A GLOBAL PERSPECTIVE

Introduction



RESEARCH OBJECT

- The research was carried out in the company of a group of small and medium-sized enterprises employing up to 250 employees.
- In the manufactured product range are furniture from 12 collections as well as independent types of products e.g.: chests of drawers, glass-case, benches, tables, bookcases, beds, chairs and others.
- The company has an internal quality assurance system in accordance with ISO 9001:2008

Analysis of the situation

Implementation of new products without proper marketing analysis, lack of sales simulation

Lack of support of simulation tools and support of optimization of orders

There is no concept of modularity and interchangeability of components between different series of furniture or various types of furniture.

Constructing new sets and types of furniture from the beginning without the use of standard elements base.

Mistake of concept involving the assumption that the greater assortment the higher sales. The analysis conducted for the year 2014 and 2015 showed that 25% of assortment realizes 72% of turnover.

Analysis of the situation

Currently, the database contains 1125 of indexes of offered assortment of solid wood and precious veneers.

The old organization of production

ENGINE

production of elements for warehouse

WAREHOUSE ELEMENTS

completing the customer

PAINTING AND ASSEMBLY

furniture production

Why change?

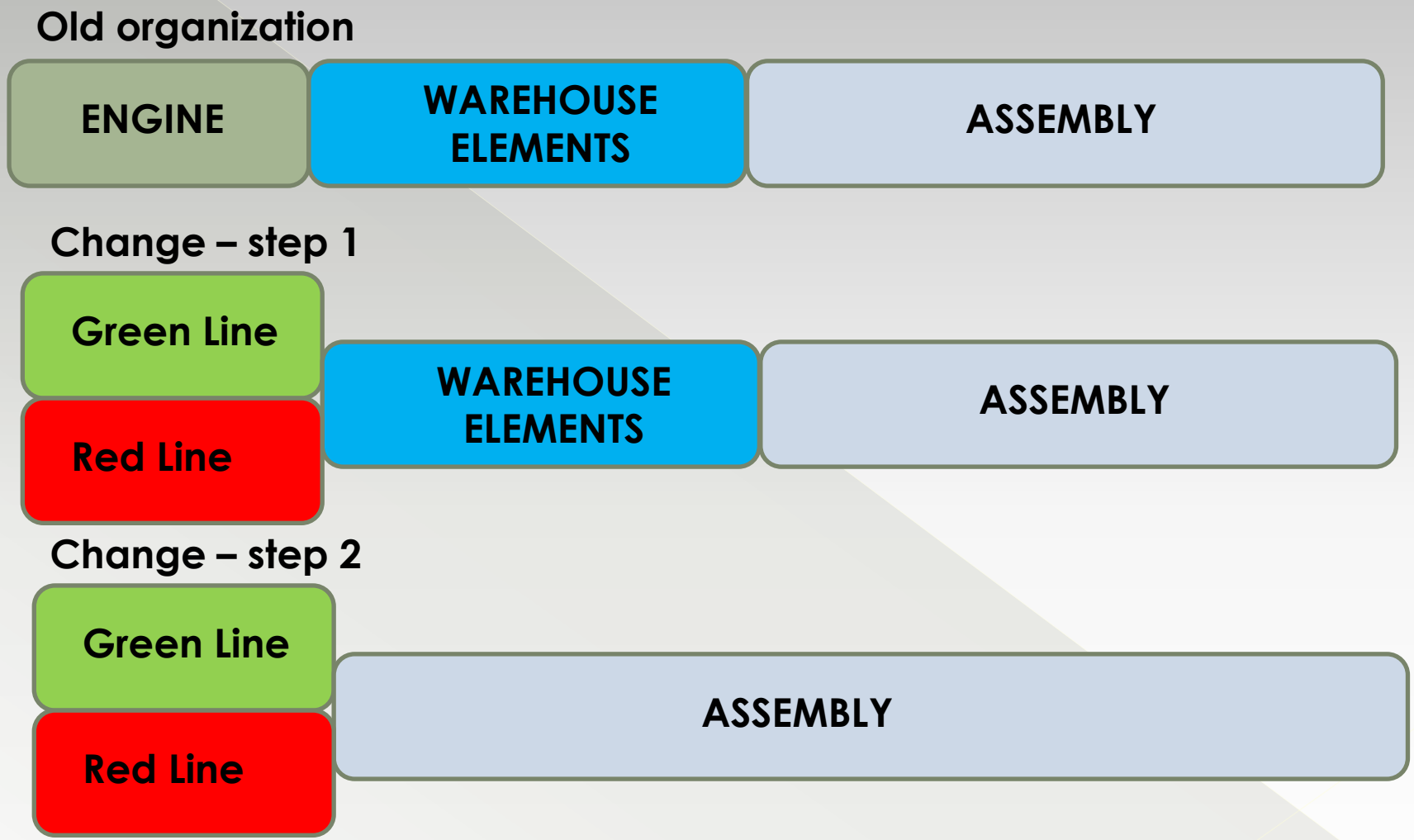
- Short product life
- Changing the size of demand
- Variability - more choices for the customer
- Increase supply of materials and components
- No-moving components

The Glenday Sieve

- Collecting reliable data - the volume of sales
- Changing the size of demand
- Sorting data

Cumulative Sale [%]	Number of products	Codes of groups
50 %	68	Green
95 %	563	Yellow
99%	787	Blue
1% remaining	338	Red

The Glenday Sieve



The Glenday Sieve

green team

Change – step 2

Green Line

Red Line

ASSEMBLY

blue team

Change

red tools

green tools

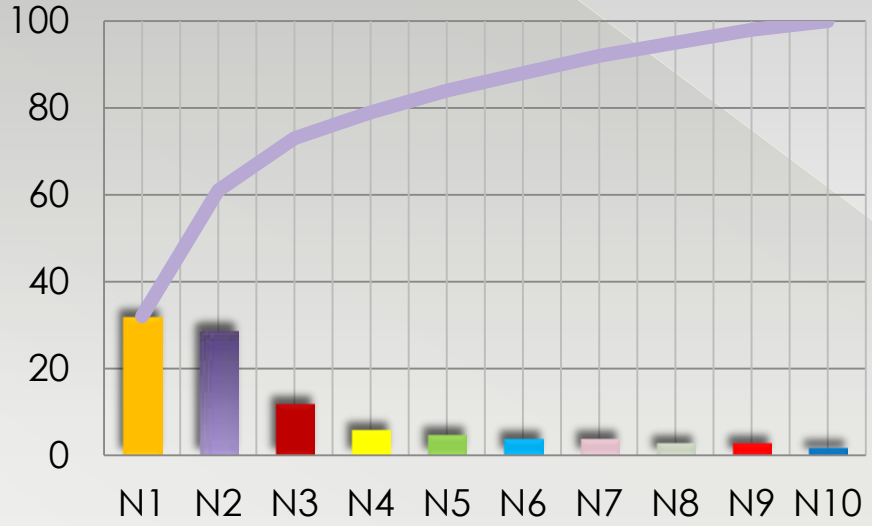
Incompabilities in production before change

No	Incompatibilities	Share [%]	Accumulated share [%]
N1	Disadvantages of mechanical processing	32	32
N2	Mechanical defects	29	61
N3	Wild scratches	12	73
N4	Misplaced circulation holes	6	79
N5	Defects of veneer	5	84
N6	Hyperpigmentation	4	88
N7	Inequalities on the varnish	4	92
N8	Inadequate dying of wood	3	95
N9	Bad juxtaposition of the drawing	3	98
N10	Defects of masking connections	2	100

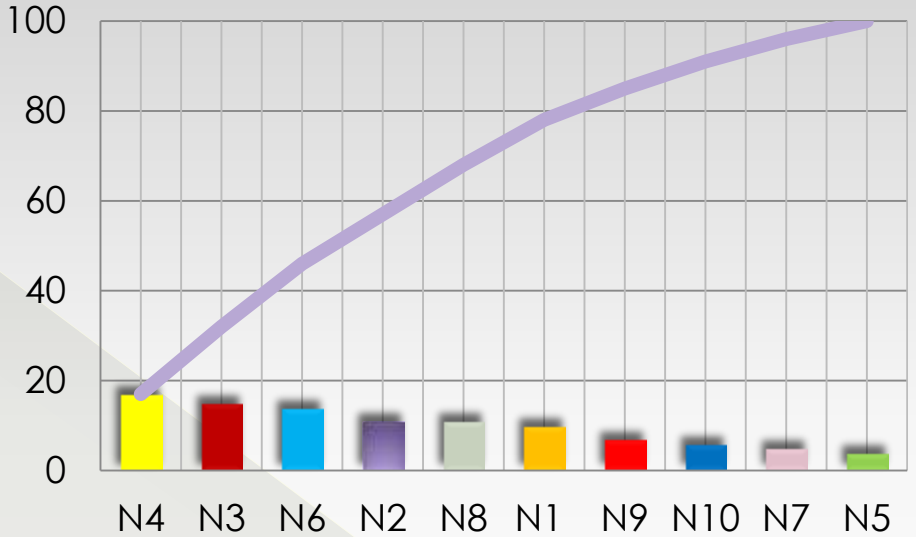
Incompabilities in production after change

No	Incompatibilities	Share [%]	Accumulated share [%]
N4	Misplaced circulation holes	17	17
N3	Wild scratches	15	32
N6	Hyperpigmentation	14	46
N2	Mechanical defects	11	57
N8	Inadequate dyeing of wood	11	68
N1	Disadvantages of mechanical processing	10	78
N9	Bad juxtaposition of the drawing	7	85
N10	Defects of masking connections	6	91
N7	Inequalities on the varnish	5	96
N5	Defects of veneer	4	100

A comparison of the percentage share of incompatibilities



before the adaptations



after isolation of green line

N1

N4

CONCLUSIONS

- The results of research of quality level indicate the positive effect of the application of Glenday sieve.
- In the period of three months after the separation of the green line and the assignment of group of employees for working specifically on this line (green group) and a group of employees (blue group) to non-standard work there was achieved reduction in detected incompatibilities by 40%, significantly changed also the structure of incompatibilities.