

A. VUKOVIĆ, M. IKONIĆ, S. DOBOVIČEK

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## MODEL FOR LEADERSHIP COMPETENCE MANAGEMENT IN METALLURGICAL ENTERPRISE

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The purpose of presented research was to develop feasible model for leadership competence management in metallurgical companies. Results of the research are presented in the form of a structured procedure for leadership competence development and performance review. Analysis of entry requirements for employment in metallurgical companies synthesized presented set of leadership competences and matrix for calculation of leadership success was developed. With usage of these two tools it is possible to quantify the leadership performance which represents great advantage in leadership benchmarking process. During the research additional set of problems was defined. These problems were addressed heuristically in the framework of this research.

*Key words:* leadership, competence profile, performance review

**Model upravljanja kompetencijama vodstva u metalurškim tvrtkama.** Svrha predstavljenog istraživanja bila je razvoj ostvarivog modela upravljanja kompetencijama vodstva u metalurškim tvrtkama. Rezultati istraživanja predstavljeni su u obliku strukturirane procedure razvoja kompetencija vodstva i prosudbe izvršenja. Analiza ulaznih zahtjeva pri zapošljavanju u metalurškim kompanijama sintetizirala je predstavljeni set kompetencija vodstva te je razvijene matrica izračuna uspjeha vodstva. Korištenjem navedenih alata moguće je kvantificirati prosudbu izvršenja što predstavlja veliku prednost u procesu usporedbe vodstva s najboljima. Tijekom istraživanja definiran je dodatni set problema. Predloženo je heurističko rješenje tih problem u okviru ovog istraživanja.

*Ključne riječi:* vodstvo, profil kompetencija, prosudba izvršenja

### INTRODUCTION

Modern manufacturing concepts and paradigms form the basis for current and future manufacturing. The main focus is set on the processes and this have an effect on operative managers. They need to become leaders and require additional set of competences.

Leadership is the management task of maintaining and practicing a vision of the organization with respect to customer requirements [1]. A leader's effectiveness depends less on his/her position than on the respect and influence that he/she has developed within the organization. According to Mikac and Ikonić conclusion can be drawn that only managers with real authority can become leaders [2]. Management and leadership are different. Anyone with a vision who can lead others toward that vision can be a leader [3]. Effective leadership is an important trait of the manager. A good leader has his/her department acting as a team. A good leader cooperates well with other departments.

This article has two main objectives. The first objective is to review leadership competence profile in metallurgical enterprises, align them with modern manufac-

turing paradigms and create set of leadership traits that are necessary for leader to possess in order to achieve goals set by the same paradigms. The second objective is to present a model for reviewing leadership performance and by that achieving the adequate and successive evaluation, classification and qualification of every manager/leader according to the company's needs.

### LEADERSHIP COMPETENCE PROFILE

The leadership competence can be defined as an ability to carry out specific leadership tasks. Modern manufacturing concepts demand strong leadership [4] and they are trying to achieve it by expanding training for middle management to focus on leadership, employee training, skill enhancement, and successors planning [5].

Process of creating leadership competence profile in metallurgical enterprises presented in this article, starts with a review and cross reference of entry requirements for employment in industrial part of fortune 500 companies. Sample of 89 companies was used with more than 250 middle management jobs reviewed. Table 1 shows 11 preferred skills and personal qualities of middle management in reviewed companies. Technical competences are excluded because each company has its own

A. Vuković, M. Ikonić, S. Doboviček, Faculty of Engineering, University of Rijeka, Rijeka, Croatia

technical requirements. Table 1 also gives the significance of the competence in correlation to number of occurrences in entry requirements.

Results of review are cross referenced with the research presented in [6], where stated that management role of trade foreman in metallurgical enterprises must possess, among others, the following competences: Creativity, Cogency, Ability to make decisions in emergency, Leadership, Analytical ability, Knowledge of products, Managing human resources.

In accordance with analysis of presented review and cross-reference with relevant researches, Table 2 shows suggested leadership traits/competences aliened with modern manufacturing paradigms implemented in metallurgical enterprises. For example, lean experts are defined as agents of change streaming toward lean manufacturing and they need to possess an aptitude for learning, ability to lead, ability to mentor others, desire to continue to progress through the organization, ability to identify possible improvements and work as a facilitator for improvement teams.

Table 1 Preferred skills and personal qualities in industrial enterprises

	Competence	Significance				
		1	2	3	4	5
1	communication and presentation skills				✓	
2	team working					✓
3	business awareness	✓				
4	problem solving					✓
5	innovation					✓
6	leadership				✓	
7	initiative, drive and enthusiasm			✓		
8	ability to work effectively on your own or in a team			✓		
9	accountability		✓			
10	giving attention to detail		✓			
11	focusing on results	✓				

Table 2 Leadership traits/competences

Leadership trait	Expectations (Change)
Competitive, profit driven	Aggressively pursue organizational success identifies and implements significant cost saving and revenue opportunities, anticipates the actions of key competitors in the industry and takes actions to address their potential threat to the business and knows market trends and cycles.
Challenges status quo	Actively promotes new ways of looking at problems, generates solutions and highly innovative ideas that challenge status-quo-thinking and assumptions, thinks "outside of the box".
Re-invents competitive advantage	Generates innovative, breakthrough ideas and fresh perspectives that challenge status quo thinking and assumptions, create significant value in the marketplace, and keep the organization well ahead of its competitors.
Energy	Set high standards for own performance and maintain a consistent, high level of productivity.
Delivery - a way of life	Drives the achievement of meaningful results in meetings, focuses on results and outcomes without over-emphasizing process, fosters a strong sense of urgency in others to meet and exceed goals, readily intervenes to remove direct and indirect obstacles to move work forward and/or get efforts back on track.
Keeps things simple	Focus on important information and recognize key interrelationships and patterns, break down problems into manageable components.
Quick, decisive	Make timely decisions on problems / issues requiring immediate attention when necessary, take principled personal and organizational risks to do what is right and achieve organization success.
Acts with integrity	Show consistency between words / actions and follow through on commitments in line with rules and policies.
Leadership trait	Expectations (People)
Coaching & freedom to act	Apply coaching (formally and informally), empowers others, ensure and / or contribute to the availability and development of the talent needed.
Freedom of information	Encourage the open exchange of information and viewpoints.
Holds himself and others accountable	Delegate significant responsibility and authority and foster a sense of energy, ownership and personal commitment towards the job.
Demands, shares, recognizes success	Create an environment in which performance excellence is encouraged and rewarded.
Optimism via customer-focused vision	Identify and anticipate customer requirements, expectations and needs.
Makes tough calls	Raise difficult issues to ensure that they are addressed and lead himself and others to follow through on difficulties.
Builds best teams	Chooses fitting team members, facilitates the effective interaction and contribution of team members and external partners, establishes and reinforces shared values and norms.
Treats others with dignity / fairness	Treat others fairly and consistently. Be honest and truthful on dealing with others.

Table 3 Target factor with according metrics, features and training possibilities

Target Factor	Leadership trait	Metrics	Features	Training
Drive	1. Competitive, profit driven 4. Energy 12. Demands, shares, recognizes success 13. Optimism via customer-focused vision	360 degrees assessment	Self motivation and team motivation	Motivation and Leadership Training
Develop	9. Coaching & freedom to act 10. Freedom of information 15. Builds best teams 16. Treats others with dignity / fairness	360 degrees assessment, output metrics - team members	Tasks and interpersonal relations orientation	Team Leadership Training
Decide	2. Challenges status quo 6. Keeps things simple 7. Quick, decisive 14. Makes tough calls	Percentage of goals attained	Strategic thinking and thinking in parameters	Decision Making Training
Deliver	3. Re-invents competitive advantage 5. Delivery - a way of life 8. Acts with integrity 11. Holds himself and others accountable	Percentage of goals attained	Change, passion and practice	Leadership for Change Training

	LEADERSHIP COMPETENCE PROFILE																Sum
	Change								People								
TF	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Drive	✓			✓								✓	✓				
Develop									✓	✓					✓	✓	
Decide		✓				✓	✓							✓			
Deliver			✓		✓			✓			✓						

Criteria (in the signed fields enter grades following the criteria):  
 Grade 2 - meets expectations  
 Grade 1 - needs development  
 Grade 0 - hardly meets expectations, leadership development chances have to be examined and justified

Figure 1 Target factor – competence profile correlation matrix

Leadership traits are designed in two groups according to expectations from the leader performance. First group of competences focuses on leading change (strategy and vision understanding) and the second group focuses on leading people.

**LEADERSHIP PERFORMANCE REVIEW AND FEEDBACK MODEL**

Performance review and feedback model presented in this article uses three phase procedure to build competence profile of every leader in the company according to the company’s needs. Performance review is the first phase and has two tangible objectives:

1. Setting clear understanding of the leadership tasks and responsibilities - Target Drafting. For target drafting, a system of four factors is developed. Each factor encompasses four of leadership traits which represent expectations from the leadership behaviour. By combining traits leadership performance is more easily quantified. Factors are structured in such a way that each of them can

be improved in training and development. Each of the four target factors includes leadership traits with similar features, metrics and training possibilities, Table 3.

2. Structured review of objectives fulfillment using Target Factor – Competence Profile Correlation Matrix. Target factor – competence profile correlation matrix, Figure 1, connects target factors with leadership traits, giving possibility to enter values for each one and generating results. Depending on the result, performance in each area of competence (target factor) is evaluated. Real value as a result of calculation must be aligned with leadership development strategy of a given company.

Relatively rough criteria with three grades 0, 1 and 2 is suggested because it eases the performance grading per competence, and combining these grades for each target factor, a output value gives more precise grade scale.

Objective setting is the second phase of the proposed procedure. Employees in metallurgical enterprises show the lowest understanding of corporate objectives among

OBJECTIVE SETTING			Self assessment	Manager assessment
Objectives	Deadline (deadline, milestone)	Success criteria (how will performance be judged)		
Leader successfully finished introduction to corporate vision and strategic objectives for his team.	May, 31 <sup>st</sup> Year	Team members know corporate vision and strategic objectives. (Questionnaire)		
Leader successfully finished connecting people, their position in the organization and corporate strategy.	Sept., 30 <sup>th</sup> Year	Team members know their position in the organization and part they play in corporate strategy. (Questionnaire)		
Leader optimized the process X.	Dec., 31 <sup>st</sup> Year	Processing time dropped by x % and the error ratio was decreased by y %.		

Figure 2 Objective setting form with repetitive corporate objective

surveyed employees in various industries [8]. Only 60 % of all employees know strategic plans of the enterprise. This reflects on motivation of the employees thus on the company performance. Model presented in this article addresses this issue by introducing corporate objectives into leadership objective setting form, Figure 2 as a repetitive goal for leaders. Leaders need to connect employees with the corporate strategy and objectives and by doing that achieving other goals set by them self.

Leaders need to generate three additional operational objectives for the period that follows. It's particularly important to define the criteria

for success in this point, so it becomes identifiable if the objective was achieved. According to [9] 63 % of Best-in-Class surveyed companies use percentage of objectives attained as a metrics for performance measurement, but other metrics are proposed beside this.

Objectives must be simply worded (specific, brief, clear), related to tasks and development steps, quantitative, qualitative, encouraging, attractive, demanding, challenging, and thus motivating, realizable and time-phased, thus S.M.A.R.T.

In objective form, Figure 2, examples of three well structured goals are presented. Two of the goals are corporate and need to be every year repetitively achieved and one goal is operational.

Third phase of the procedure proposes two way feedbacks. One is from leader to his manager and vice versa and other one is from the leader to his team and vice versa. Results of the research presented in Š10Ć confirmed that the performance will increase more in a leaders who receive reflection instructions combined with feedback from his manager than it will in leaders who receive feedback without reflection instruction, receive reflection instructions without feedback, and receive neither reflection instructions nor feedback. Internal communication is positively related to motivation, competence/performance appraisal is positively related to employee abilities and the interaction between em-

ployee ability and employee motivation is positively related to firm performance [11].

Formal tool for this phase of the procedure is yet to be presented, but a standard feedback form is to be used for now.

## CONCLUSION AND FURTHER RESEARCH

Specific nature of leadership tasks and responsibilities emphasise the need of structured tool for leadership competence management. Specifically tailored leaders will represent advantage for organizations. Model for leadership competence management in metallurgical enterprise presented in this article gives organizations possibilities to do just that.

Three sets of problems were addressed. Leadership competences definition – target factor – leadership performance review problem was resolved by introducing standard competences that leader need to poses and target factor - competence profile correlation matrix which connects leader competences with a target factor. Giving grades to each factor performance of the leader is numerically represented, giving the organization possibility to use benchmarking to evaluate leaders. Second problem is strategy deployment problem. Proposed solution is to set repetitive goals for leaders. These goals need to be reset every time that new occurrence in the organization happens. Leaders need to interpret specific occurrence in operational level context. Third problem set includes communication – motivation – performance chain. Improving internal communication motivation on all levels of organization is improved. Motivation is directly connected with performance. Proposed solution is two way feedbacks. Additional research need to be conducted in this area to produce feasible tool for internal communication and two way feedbacks.

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## REFERENCES

- [1] Sadikoglu, E., Zehir, C.: *Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms*, International Journal of Production Economics, ARTICLE IN PRESS, 2010
- [2] Mikac, T., Ikonić, M.: *Organizacija poslovnih sustava*, Graphis, Zagreb, 2008
- [3] Goetsch, D.L., Davis, S.B.: *Quality Management: Introduction to Total Quality Management for Production, Processing, and Services, fifth ed.*, Prentice-Hall, New Jersey, 2006
- [4] George, M.L.: *Lean Six Sigma*, McGraw-Hill, New York, 2002
- [5] Wincel, J.P.: *Lean Supply Chain Management: A Handbook for Strategic Procurement*, Productivity Press, New York, 2004
- [6] Prusak, R., Waszkielewicz, W., Kulawik, A.: *Modification and improvement of human resource management system in metallurgical enterprise*, Metalurgija, 46(2007)2, 129-133
- [7] <http://www.qualitydigest.com>, accessed on April 26<sup>th</sup> 2010
- [8] Expert Training Systems plc: *An analysis of the ETS Employee Survey*, Performance Management Review, 2009
- [9] Analyst Insight: *Best-in-Class Use of Metrics in Talent Management*, Aberdeen Group, 2008
- [10] Anseel, F., Lievens, F., Schollaert, E.: *Reflection as a strategy to enhance task performance after feedback*, Organizational Behaviour and Human Decision Processes, 110(2009), 23-35, 2009
- [11] Fey, C.F., Morgolis-Jakushev, S., Park, H.J., Björkman, I.: *Opening the Black Box of the Relationship Between HRM and Firm Performance*, Stockholm School of Economics in Russia, Working Paper #07-101, 2007

**Note:** The responsible for English language is Ksenija Mance, Rijeka, Croatia.