

# COMPETENCY MAPPING A KEY FOR MASTERING A PROFESSION/ TECHNIQUE: A CASE STUDY

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## ABSTRACT

*Present article is a case study conducted at Bosch Ltd, Bangalore Branch to document the procedure adopted for the Competency Mapping. Researcher has spent a couple of days to understand the detailed procedure and strategies for the successful implementation of succession planning. Documentation process includes data from secondary sources as well as the interview conducted at different levels of stakeholders. Interviews were also undertaken for different levels of employees who are directly involved in the process. It has been observed that Competency Mapping at this company concentrates on developing the employee at all levels and facilitates positive growth in all aspects. The study identifies that employees are satisfied with the formal procedures and practices at Bosch Ltd. Competency Mapping is not limited to a single course of action and the employee development takes place continuously as a matter of policy at Bosch Ltd. Competency Mapping plays an important role in increasing the organization's capability to wisely make use of the available resources and thereby avoiding economic crisis.*

### **Keywords**

*Competency Mapping, Competency Management, Employee Development, Training, Career Development*

## INTRODUCTION

In 1960s and 70s, the focus/ target of the companies was on production. But now the focus is on people/ employee development. Competency Mapping is an important HR function and each company has its competitive advantage as people think differently and there is a differentiation in each company and therefore they look for best quality manpower. Competency is the possession of required skill, attitude, knowledge, qualification reflected in 'observable job behavior/ performance which can be evaluated. Competency mapping for each position/level states an individual's abilities (competencies) i.e. strengths and weaknesses to successfully complete a given role, task, job or an activity effectively and thereby directing the career development efforts.

The word 'Competency' is derived from the word 'Competere' meaning 'to be suitable'. The gap of an individual's job related skills and performance can be filled through effective training.

Competencies and competency models are position specific and applicable to all the employees in an organization. The mapping of employees to the job can be done by the employee himself or by his superiors. Competency can be classified as: Managerial/ soft competency relates to the ability to manage job and develop an interaction with other persons. For e.g. communication, change management, problem solving, leadership, etc. Functional/ Specific/ Technical/ hard competency relates to the functional capacity or technical aspect of work. For e.g. market research, financial analysis, electrical engineering. Generic Competencies are considered essential for all staff, regardless of their function or level. Specific Competencies are required to do particular job or task. Behavioral Competencies: Competencies considered essential for all. For e.g. Empathy, Negotiation skills, Effective listening, etc. Threshold or performances are the basic competencies that do not differentiate between high and low performers on the job. Performance competencies differentiate between high and low performers.

In Bosch Limited, one of the important human resource activities is the Competency Mapping. Efficient and effective corporate leaders are developed through competency mapping. It is a continuous and ongoing process in the company. Like any other progressive and professional company, Bosch Limited gives due emphasis on succession planning. The background of the company and the detailed process of succession planning are discussed in the following section.

## **BOSCH GROUP: THE BACKGROUND OF THE COMPANY**

Celebrating its 125<sup>th</sup> anniversary in 2011, the BOSCH Company initially was set up in Stuttgart in 1886 by Robert Bosch as “Workshop for precision Mechanics and Electrical Engineering”. Today Robert Bosch Group GmbH is widely known throughout the world with presence across six continents having more than 300 subsidiaries and regional companies in over 60 countries; its sale and service partners included, Bosch is represented in roughly 150 countries and is the leading global supplier of technology and services with a global group turnover of 45 billion Euros in the automotive technology, industrial technology, consumer goods and buildings technology in the fiscal 2008. Bosch operates in 260 manufacturing locations worldwide, of these 200 are located outside Germany in Europe, North and South America, Asia and Australia. . This worldwide development, manufacturing and sales network is the foundation for further growth. As on 2012, the company employs more than 3,06,000 associates worldwide.

**Operations at National Level:** Bosch Ltd. has its branches at Ahmedabad, Chandigarh, Chennai, Guhawati, Indore, Jaipur, Kochi, Kolkata, Uttar Pradesh, Mumbai, New Delhi, Patna, Ranchi, Secunderabad, Karnataka, Rajasthan, Bihar.

The slogan “Invented for Life” is a part of Bosch’s long tradition, communicating the Group’s core competencies and vision including the technological leadership, modernity,

dynamics, quality and customer orientation. In India, Bosch has set up its manufacturing sites and four development centers. Bosch group in India employs over 26,000 associates and is represented by six 6 group of companies in India. They are Bosch Limited, Bosch Chassis Systems India Limited, Bosch Rexroth India Limited, Robert Bosch Engineering and Business Solutions Limited, Bosch Automotive Electronics India Private Limited, Bosch Electrical Drives India Private Limited. Bosch Group invested more than Rs.2,600 crores in India during 2005-2010 to witness the growth while widening its market leadership which is a testimony to the high quality and technology of its products.. The company has exceptional R&D facilities, manufacturing capabilities with a strong customer base. One hundred and twenty five years later, capturing all the facets of the company in this way is a formidable challenge to its competitors. The company recorded a turnover of over Rs 8600 crores in 2013.

**Nature of the Business Carried:** BOSCH business areas include common rail injectors and components, diesel fuel injection equipment, industrial equipment, auto electrical, gear pumps for tractor applications, electric power tools, packaging machines, security technology products and car multimedia systems. Other Bosch group companies also provide solutions for business in three areas namely: Engineering services, IT services & Business services.

Bosch control units in car engines are all over the world from compacts to luxury sedans, roadsters to traditional saloons, gasoline or diesel. Bosch products and technologies win scores of awards and approbation every year for efficiency, eco friendliness, safety and innovation in categories as diverse as automotive, industrial and building technology.

Throughout its history, the company has been guided by the values and ethics of its founder, i.e. the principle of legality, which obliges each of them to observe compliance with the laws of the countries where they are doing the business.

## COMPETENCY MAPPING

Competency Mapping identifies key competencies for a job and thereby to an organization to integrate the same throughout the various processes and helps in hiring the right candidate, increasing their morale and retention. It helps the employees who possess the specific skills or rather the defined ability to appear valuable to a potential employer. Companies practicing competency mapping should make necessary arrangements and modifications to take the advantage of the skills and abilities of the workers noticed in their assessment. Core competency is the strategic strength of an organization and differentiates from its competitors in the marketplace. A competency model can be framed by the companies providing a road map in accomplishing the expected performance standards.

The process of competency mapping can be done as follows: 1. For competency mapping to be fruitful, the organization should be unambiguous about its short and long term business goals 2. The organization should gather information about various departments and its job positions/ roles. A job Analysis can be done to know the information about the required key behaviors and to develop a competency based job description - Subject matter experts can be interviewed or it can be collected from the incumbents doing respective jobs who complete a position information questionnaire (PIQ) 3. Once the needed attributes are known, mapping the competencies throughout the human resources processes i.e. mapping the capabilities of the employees to the standards linking to success criteria. 4. High and low performers are listed and the training and development needs can be known after mapping process to make them perform better.

## COMPETENCY MAPPING AT BOSCH INDIA LIMITED

Competence at Bosch is defined as “The ability of an individual to do a job effectively by producing the intended or expected result and efficiently by performing or functioning in the best possible manner with least waste of time and effort. Competence describes skills, abilities, knowledge, behavior and characteristics (attributes) as well as the willingness of a person or an organization to manage business or job requirements. Competencies become apparent in action.

Competence (Skill set) = Skill (Knowledge) \* Will (Attitude).

It is a combination of knowledge and attitude used to improve the performance.

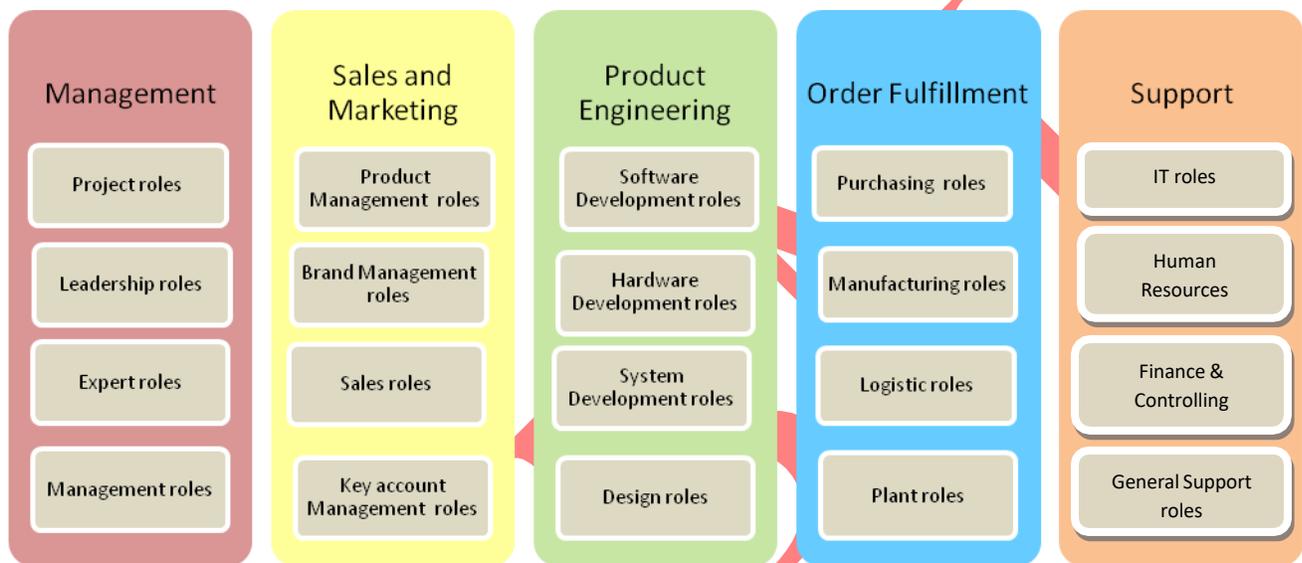
**Competence Management (CptM)** is a development process aligned with the strategic direction to achieve goals of the organization. It is the process of systematically identifying, steering and developing the competencies needed today and in future, in order to achieve business goals. In simple words, it is the functional skills required by people to do the job effectively. The Bosch competence Management concept differentiates between Organizational Competence is defined as those competences that an organization or organizational unit has to have to reach its strategic goals and Role related Competence describes all skills, abilities, knowledge, characteristics and behavior any individual who occupies a specific role has to cope with the requirements of that job field. The process aims to proactively address the business needs, communicate the criterion for competent employees, create linkage between the individual and organization needs and provide opportunities and encourages proactive development.

## MODEL OF ROLES

Role is a term that helps to describe similar job fields of associates in work processes. Roles have the following characteristics: A role remains stable, regardless of which associate occupies the role; Several associates can occupy the same role; One associate can occupy more than one role; Roles do not describe concrete and detailed tasks of any associates in the sense of a job

description and do not reflect organizational structures. The structure of the role model follows the five core processes. The roles will be elaborated in co-ordination with BxS and corporate functions and raised in the GB during the CptM process.

**Figure.01 An example of roles of employees under few departments at Bosch Ltd**



Competency mapping is an annual uniform process in all GB (worldwide) and corporate functions. Competence Mapping steps and focuses on five competencies per role per year. The assessments are made by the immediate manager and the assessment data is kept strictly confidential. It is the joint responsibility of the employee and the manager to complete the identified training/development measures; wherein the Human Resource Location and the Training and Development (T & D) team will co-ordinate and send invites and the procedure of Competency mapping at Bosch is as follows:

**Figure.02 showing Competency Management Process at Bosch Ltd**



In the preparation stage, the concerned manager and the department sit together to decide on the competence matrix. It starts with the defining of roles. For e.g. Roles in Manufacturing

department are Manufacturing head, Department head, Group leader for process planning, Process planner, Frontline Manager. All Frontline Managers should do the same work according to the job requirements. Next, the competencies are defined. For e.g. The Functional and Technical requirements are decided. If SAP is a competency; the expected level or score of competence is 3, but the employee's current level of competence is 2, he/ she needs to be developed in that area. The first stage focuses on deriving and agreeing on role-related target competencies. Here, the competence templates will be given to the Manager and he/ she will decide on the competencies for the basic requirement. Organizational target competency is derived through a workshop involving all range heads. FMDP mandatory training program covering all M & SS from Group 3 to 7 and e-learning to cover new/ lateral joiners are conducted. Concentration is on the assessment of current competencies in the second stage. The Manager starts mapping the individual's competence to the roles, i.e. the gap between the current and the expected level of competency is identified. When there is a gap, there is a need for development and the Competence development needs are identified, compared, planned, and communicated in the third stage. There is agreement on competence development measures and the fourth stage focuses on executing the competence development measures. Training/ Development program is given to the employee to develop him. Evaluation (Checking and Review) takes place on the Key Performance Indicators in the fifth stage after the training process to assess the individual and to know where he/ she stands and to measure the progress towards the agreed organizational goals.

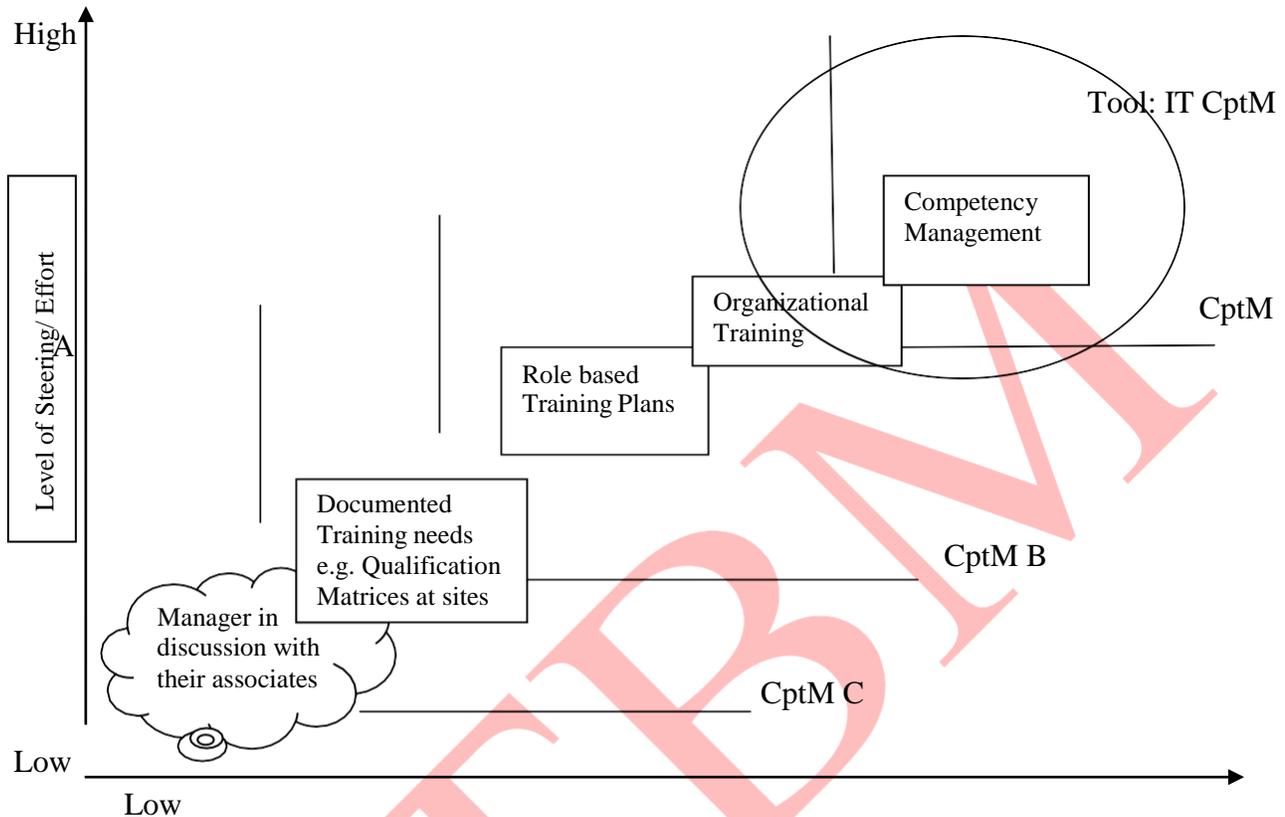
In Bosch Limited, the competency management process works as follows:

CptM Preparation → Current competencies → Development measure identification → Gap workshops → Top five function-wise and plant wide → Consolidation of development measures and Individual Development Plans (IDPs) → Integration to PRED and developmental measures start. At the first stage, competency management preparation takes place along with review roles and competence directory. In this review mechanism, the manager does the assessment of the employee. If the Manager is new to the department, to understand the competency level of the employees and to remove biasness, a gap workshop is conducted, wherein the new manager meets the HR Partner who is responsible for driving the competence process along with Range heads.

**INSTRUMENTS: MANAGEMENT OF DEVELOPMENT (MOD)****Table.01 indicating Standards depending on target groups**

<b>Target groups</b>	<b>Instruments/ Processes</b>	<b>Typical Competence fields</b>	<b>Typical Time Horizon</b>
Associates/ Roles in strategically significant units	1. Competence Management A (Vertical approach, Cascaded derived from GB-strategy)	→ Mostly very GB - specific professional competencies in engineering & partly in production (Core capabilities)	→ Future → Usual Horizon (3-8 years)
Associates/ Roles with specific competence requirements	2. Competence Management B (Vertical & horizontal approach)	→ Professional competencies (Basic capabilities, competence standards) → Meta – professional competences	→ Today & future → Usually Business Plan Horizon (1-3 years)
All Associates	3. Competence Management C	→ Basic capabilities (Skills)	→ Today (< 1 year)

Figure.03 representing Competency Management Types



High

Competence Management at Bosch is divided into three steps A, B and C. The focus of CptM-A type concentrates on professional competencies (technical and business) that lasts from 3-8 years and are derived from the strategic competences, individual approach, and measures having a direct influence on attaining the technical excellence. The competence development measures are consciously not limited to training measures, but also cover organizational development measures, coaching, recruiting, etc. Initiatives are taken in conducting the FMDP (Future Managers Development Program) and the time scale to complete the same is 4 to 6 years which is mandatory for all M & SS who are below SL1 (Salary Level) i.e. group 3 to 7 employees. CptM-B type is for 1-3 years which focuses on developing role-based and operator training program and competence standards like SteP-Up, SCA, etc. in all locations. Bosch limited is Asia Pacific Centre for SteP-Up. CptM-C type needs Basic competencies like Basic HR Qualification, BSS-K (Bosch System Specialist) basic training for DS (Diesel System) sales, Technical Induction Program, Basic SAP and quality program, EDE (ETAS Data Engine) program for R & D, etc.

### COMPETENCY MAPPING MODEL

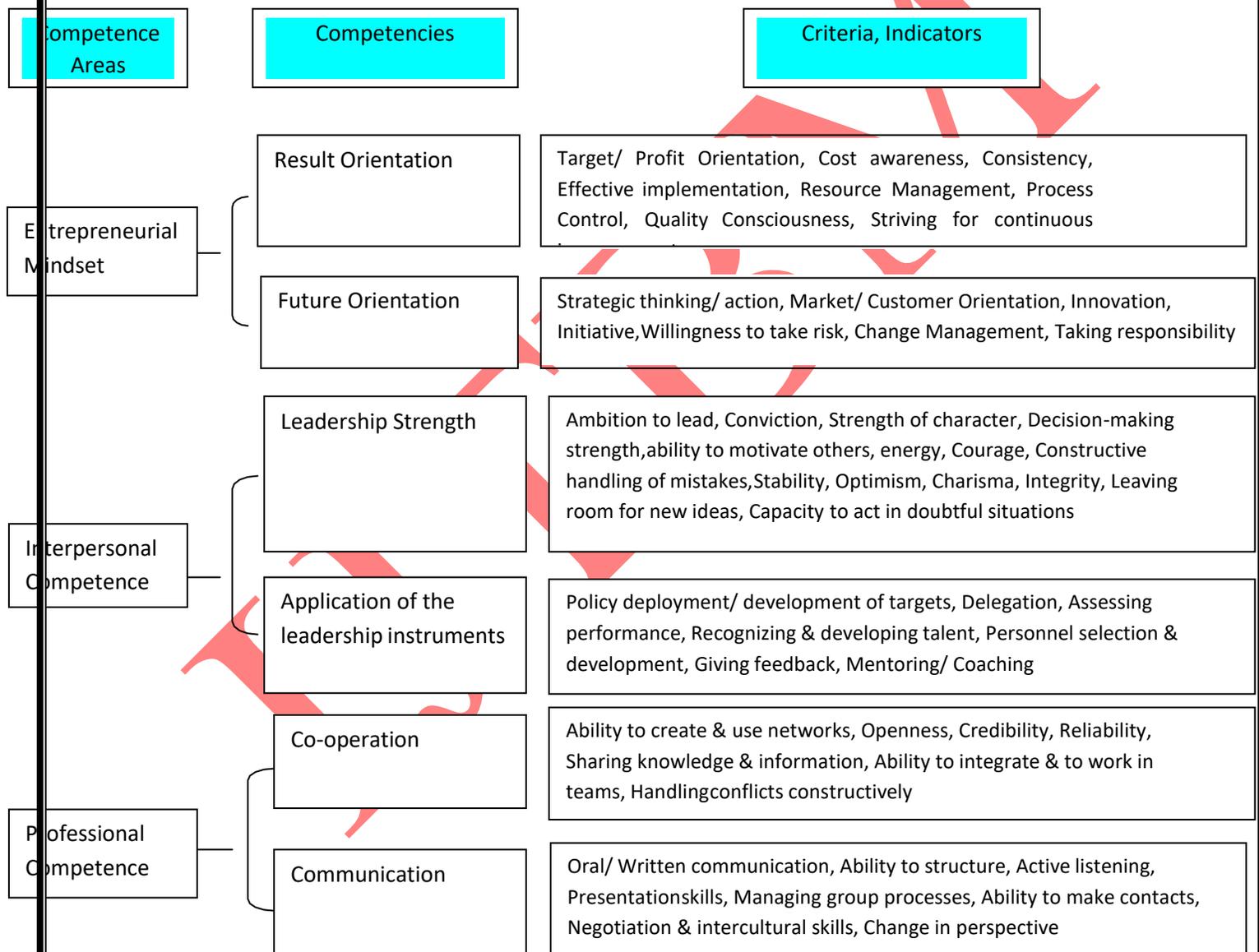
CptM Model is used to record and classify the competencies that are uniform for the entire company. Strategic Competence Management focuses on competencies, which will be required in the future. It looks at strategic relevant, important competencies and roles, which will be necessary to reach business goals.

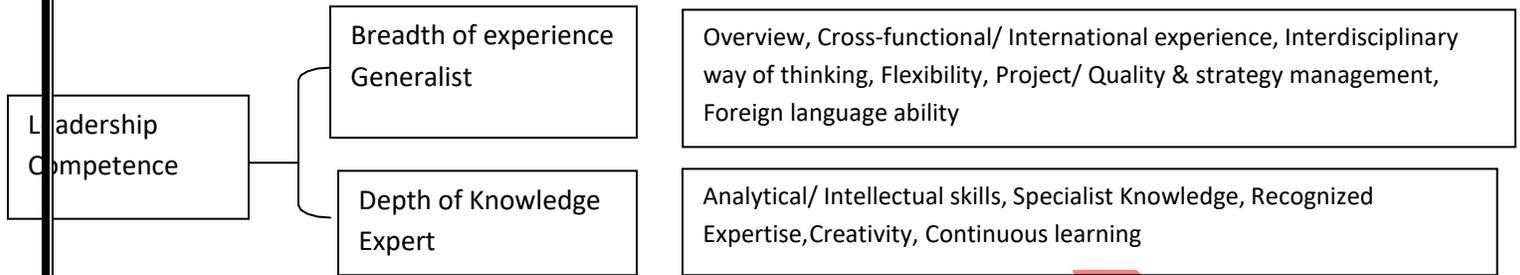
**Table.02 showing the clusters and fields of competence and its levels**

7.01	Level 01: Competence clusters	Level 02: Competence fields	Level 03
Professional Competencies	Technology	Products and Systems Technologies Production (Engineering) (Product) Engineering Product Knowledge Quality & Reliability Safety & environment	. The GB or seating owner defines the competencies for level 03 and below
	Business Administration	Finance and Controlling Strategic Management Logistics/ Supply chain Management Purchasing Sales and Marketing Human Resources Legal Corporate Communications & Public relations	. Which competence fields already have cross-divisional competence standards applying to them can be seen in the attachments
Meta-professional Competencies	Methodological Competencies	Project Management Process Management Working Techniques Presentation & Moderation	. If additional competence standards are added these will be communicated via the respective topic community GB/ HRD
	Social Competencies	Communication Co-operation	
	Leadership	Application of Leadership instruments Leadership Strength	

Entrepreneurial Mindset	Future Orientation Results Orientation
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Chart.01 representing the Competence Templates

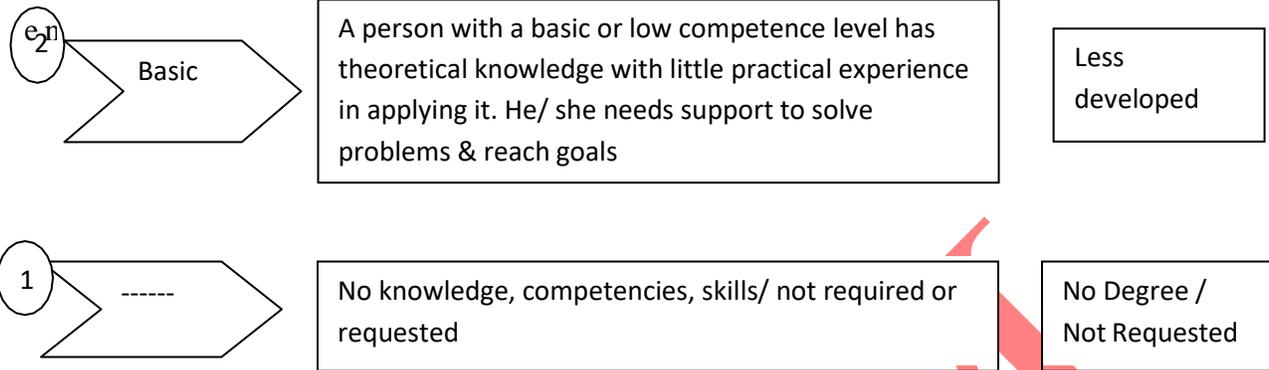




**Chart.02 indicating the Rating Levels of Competence Management**

This is the scale of Competence Management wherein the competences will be measured with the following five degrees

Level / Degree	Competence cluster/fields – Technology, Business Administration, Methodological Competencies, Meta-disciplinary	Entrepreneurial Mindset, Leadership, Social Competence
5 Champion	The breadth & depth of his/ her competencies are usually unique & outstanding. He/ she has a command of the technical & methodological issues & sets technical / methodological standards for the organization or the industry	Excellent developed
4 Specialist	A person with a high level of competence & can work independently, solve problems intuitively & find new solutions. He/ she can coach & instruct others to come to a specific solution. The depth of his/ her knowledge allows him/ her to solve complex & new tasks	Very well developed
3 Advanced	A person with an advanced level of a competence possesses a lot of experience in applying his/ her knowledge. He/ she is able to apply their abilities in new & changing contexts.	Well developed



No employee is as good as champion. An advanced person can work without others help. The person with basic competence needs guidance. After training, the employee moves from level 1 to 2 and so on to become a champion as shown in the above figure.

**Table.03 showing the DS/ HRM Build up Competency**

		Module	Aim	Departments Covered	Roles Covered	
CptM	⇒	Engineering Qualification & Q – mandatory	To meet the requirements of DS CptM  Standardization of DS basic knowledge through a common qualification program	<ul style="list-style-type: none"> <li>● MFx</li> <li>● CLP</li> <li>● TEF</li> <li>● BPS</li> <li>● QMM</li> </ul>	Process Engineers, Process Planners, CLP & LOG Planners, Industrial Engineers, etc.	Result  Individual Development Plan Sheets (IDP) for each M & SS (Below SL1)
	⇒	STeP-up	Development of BPS & leadership competence at shop floor	<ul style="list-style-type: none"> <li>● MFx</li> <li>● BPS</li> <li>● QMM</li> <li>● TEF</li> </ul>	All associates with direct work at shop floor (FMLs – TL & Supervisor)	
		Role based CptM	To develop the right competence	<ul style="list-style-type: none"> <li>● HRL</li> <li>● BVC</li> </ul>	HRL associates (Resourcing,	
	⇒	INTERNATIONAL JOURNAL OF TRANSFORMATIONS IN BUSINESS MANAGEMEN				

		at Indirect/ Non-technical areas	<ul style="list-style-type: none"> <li>● DBE</li> <li>● CFA</li> </ul>	T&D, etc.) CFA associates (Accounting, Controlling functions, etc.)
→	PRED	Need based programs for taking care of specific development measures	All departments	All M & SS

For below SL1 employees, Engineering Qualification & Q – mandatory is to develop basic knowledge with a qualification program; STeP-up to increase the leadership competence of shop floor workforce; Role based CptM for developing the competence of individuals at Indirect/ Non-technical areas; PRED is undertaken for specific development measures.

Figure.04 showing the Sample of Individual Development Plan sheet 2013

Source column shows the origin of the training programs like PRED, CptM, STeP-up, Lead, etc

manager

CptM Individual Development Sheet

Year 2013

Employee name: XXXXX

Role: Front Line

E No.: YYYYYY

Department: ZZZZZ

Sl No.	Source	Competencies	Expected level	Current level	Gap	Training	Others	Coach/ Mentor	Closing Date
1	STeP-up	Role as a leader	3	2	-1	STeP – up - Role as a leader	Name of the identified Coach/ Mentor		
2		Communication Skills	3	2	-1	STeP – up - Communication Skills			
3		Problem - solving	3	2	-1	STeP – up - Problem - solving			
4		Working according to standards	3	2	-1	STeP – up - Working according to standards			
		Shop floor Management cycle	3	2	-1	STeP – up - Shop floor Management cycle			
		Presentation Skills	3	2	-1	STeP – up - Presentation Skills			
		Legal & Corporate	3	2	-1	STeP – up - Legal & Corporate			
		TPM	3	2	-1	FMDP – TPM			
						KAIZEN & WASTE REDUCTION			

5	
6	
7	
8	CptM & PRED
9	
10	
11	
12	

Signature of the  
Manager &  
employee to ensure  
ownership of  
training program

Created by: BanP/ HRL – T & D team    Version: 2    Date:    Modified on:  
This data is to be treated as strictly confidential & is applicable for year 2013 & 2014

Manager Sign.

Employee Sign.

On the job training, Mentoring, Coaching, etc. will be evaluated during the month of September-October. Employee is responsible to identify his/ her own Coach/ Mentor for the same. Competencies are derived from specific job demands within the organization as mentioned above - Leadership, Emotional intelligence, Communication, Problem-solving, Innovation, Presentation skills, Teamwork, Decision-making, Meeting critical standards etc. After the training, the noticed improvements can be Employees planning in advance for the training, Managers can know in advance about the training programs and Duplication of invites due to this knowledge reduces.

**CONCLUSION**

In this globalised economy, organizations have realized the importance of competency mapping to develop highly competent workforce to achieve progress and are striving to create a competitive edge over the other companies by planning in advance and thereby avoiding undesirable results as employees are more important than any other resources. Every job requires

some set of attributes (Skills, Behavior and knowledge) to successfully perform a job known as competencies. Competency mapping succours individuals and teams in aligning towards the vision of the company i.e. the individuals meeting the expectations of the company as they get professionally developed, Increased morale, job satisfaction and retention of the employees advancing them in further decision-making for the progressing of the organization.

Competency mapping at Bosch Ltd receives support from the top management that understands the increasing need of training and evaluating the level of competencies of their workforce. The company has a significant investment and commitment to employee development and as competency mapping paves the way for internal mobility of employees which in turn elaborates the flexibility of the organization. Business owners at Bosch Ltd. take utmost care in grooming the promising individuals to get the desired result of properly implemented/ exercised competency mapping procedures. The Human Resources Department in the company says defined procedures minimizes stress and anxiety in the minds of responsible managers as well as particular departments as this organization-wide standards for all career levels enables the employees to move across worldwide and yields higher organizational productivity. The company has a policy of creating multifarious talent pool within the department; retention of its most valued employees; time and cost saving by reducing the external personnel searches and increasing the morale of its employees and reduced effects of restructuring through its Competency mapping.

Bosch strives for goal-orientation and achieving profitability in all aspects by providing proper directions and bestowing due recognition to its employees' abilities in executing the job effectively and it becomes a win-win situation to the individuals in acquiring new skills and the organization moving towards achieving its vision. Competencies integrate all considerable HR functions like Recruitment, training and development, performance management, compensation and reward management, Succession planning, etc. Bosch employees are satisfied with the overall competency mapping process, as its gives utmost importance to its existing employees to identify the critical competencies that are essential for them to excel in the organization and provides training and development programs in grooming them, showing a positive sign towards the advancement of the company.

## REFERENCES

- [1] Adrian Furnham, A Question of Competency, Personnel Management (1990), Vol.22, No.6, p.37.
- [2] Alessandro Margherita and Giustina Secundo, Competency management in support of organizational change, International Journal of Manpower (2009), Vol.28, No.3/4, pp.260-275.

- [3] Aswathappa, Organisational Behaviour, Seventh Edition, Himalaya Publishing House(2007), pp.249-250.
- [4] Bergenhenegouwen G.J., Ten Horn H.F.K. and Mooijman E.A.M., Competence development – a challenge for HRM professionals: core competences of organizations as guidelines for the development of employees, Journal of European Industrial Training (1996), Vol.20/9, pp.29-35.
- [5] Gary Desslar Human Resource Management, 7th Edition. 1997 Prentice Hall, New Jersey Page-353-365 ISBN-81-203-1230-5
- [6] Gilbert, T.F. (1978). Human Competence. Engineering Worthy Performance. New York: McGraw-Hill.
- [7] Katz, Daniel (1994), “Study of Competency Mapping”, Harvard Business Review.
- [8] Kodwani, Amitabh Deo (2009) “Competency Mapping”. Paradigm (Institute of Management Technology) Vol. 13 Issue 2, p117-118, 2p.
- [9] Lucia, A. D., & Lepsinger, R. (1999). The art and science of competency models: Pinpointing critical success factors in organizations New York: Pfeiffer.
- [10] Lyle M.Spencer, Jr.and, Ph&Signe M Spencer(1993) Competency at work-models for superior performance.
- [11] Prahalad, C.K. and Hamel, G. (1990). The Core Competence of the Corporation. Harvard Business Review, May-June, pp. 79-91.
- [12] R. Sankheti “Competency mapping”: Business line, Business daily from THE HINDU group of publications, December 15, 2008
- [13] Sanhgvi. S (2007) The Handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations, 2 edition New Delhi, Sage Publications Pvt. Ltd.
- [14] Subba Rao Personnel and Human Resource Management Page-1-11 ISBN-81-7493-7773
- [15] White, R. W. (1959). Motivation reconsidered: The concept of competence. Psychological Review, 66, 5, p. 297-333.
- [16] Wiley. Dubois, D. D. (1993). Competency-based performance improvement: A strategy for organizational change Amherst, MA: HRD Press, Inc.
- [17] Yuvaraj, R. (2011). “Competency Mapping- A drive for Indian Industries”, International Journal of Scientific and Engineering Research, Vol. 2, Issue 8.