



Business and People Competency Management

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Index

1. Introduction	3
1.1 <i>What is a competency?</i>	3
2. People Competence Management	4
2.1 <i>Why competence management?</i>	4
2.2 <i>Element of competence management</i>	5
2.2.1 Resource and capacity tracking and planning:	5
2.2.2 Interactive Career Development and Training:	6
2.2.3 Strategic Competence Development:	6
3. Business Process and People Competencies	7
3.1 <i>Mission:</i>	7
3.2 <i>Process:</i>	7
3.3 <i>Task:</i>	7
3.4 <i>Task to Competencies:</i>	7
3.5 <i>Competence Profiling:</i>	10
3.6 <i>Gap Analysis or Mapping the competence:</i>	11
Why map competence?	11
Problems with competence mapping	11
3.7 <i>Competency-based Behavioral Interviewing</i>	12
4. PCMM Model for Competence evaluation:	14
5. Case study of Competency-based management at Microsoft (Thomas H. Davenport, 1997) ...	16
5.1 <i>Introduction</i>	16
5.2 <i>Developing the Competency Structure</i>	17
5.3 <i>Defining Competencies for Particular Jobs</i>	18
5.4 <i>Rating Employees on Job Competencies</i>	18
5.5 <i>Building an Online Competency System</i>	19
5.6 <i>Implementing the Competency Model</i>	19
References:	21



1. Introduction

The buzzword of today's environment is *dynamics* or processes of change in firms and their management. Given the fact that environments are becoming increasingly dynamics, strategic planning based on static and rational view has long ceased to suffice. In order to create competitive advantage in a changing environment, firms are now focusing on building core competence and transferring them between various business units. Intangible resources continue to hold the potential to lead to such competitive advantages. Understanding how these resources need to be developed and how they should be managed becomes the imperative of every manager. Competences are generally regarded as unique resources which are knowledge based and can lead to direct competitive advantage. They are created by refining the knowledge, both explicit and tacit residing within the employees of the organization. Competences are only valuable if they can be used in market place and have to change with the dynamics of the market. Thus continuous evaluation of competencies and their relevance in today's market place and development of these competencies form the basis of strategic planning of the organization. In this paper we are trying to understand how to manage these competencies.

1.1 What is a competency?

The word competency is derived from Latin word "Competere" which means 'to be suitable'. The competency concept was originally developed in Psychology denoting individuals' ability to respond to demand placed on them by their environment. Ulrich defined competency as knowledge, skill or ability of employees relevant for organizational performance. Fletcher defines competency on the basis of 'what does organization need for future successes? According to him competencies are business led, measurable and fiat for purpose. His model includes skills, knowledge, behavior, task management environment and customers. Interestingly loosely opens competency as a function of Intelligence, education, experience, ethics and interest. His equation is:

$$\text{Competency} = \text{Intelligence} + \text{education} + \text{Experience} + \text{Ethics} + \text{Interest}$$

Academicians have a way of expressing their definitions in modals. A practicing HR professional can understand competency, as the minimum requirement an employee must comply with in order to deliver specific outcomes at a predefined standard. The competencies consist of four components called knowledge, skill attitude and capability.

When we talk of competency it is imperative to know the *levels* of competency such as:

1. **Practical competency:** An employee's demonstrated ability to perform a set of tasks.
2. **Foundational competence:** An employee's demonstrated understanding of what and why he/she is doing.
3. **Reflexive competence:** An employee's ability to integrate actions with the understanding of the action so that he/she learns from those actions and adapts to the changes as and when they are required.
4. **Applied competence:** An employee's demonstrated ability to perform a set of tasks with understanding and reflexivity.



Now we shall move to the subject at hand that is business and people competence management.

2. People Competence Management

Competence management is becoming increasingly important in today's dynamic context since it is becoming the only competitive advantage the organization actually has which cannot be duplicated easily by the competitor. Competence management will have various aspects under it like competence profiling and finding what the company is good at, competence building that is building new competence to match the market demands, recruitment based on competencies etc. in this section we will briefly discuss why competence management is important and what are the features of competence management.

2.1 Why competence management?

Some of the reasons why competence management is used are as follows:

- ❖ Effectively match individual competencies to position, project team, and job requirements
- ❖ Prioritize competencies by job, project, or position, and track individuals' abilities to fulfill requirements
- ❖ Integrate training and administration applications to focus training efforts
- ❖ Run gap and match analyses between individuals, jobs, teams, and positions
- ❖ Increase skill sets to meet your organization's scope and growth
- ❖ Increase their ability to attract, develop, retain and utilize co-workers
- ❖ Lengthen the time that staff stay with a company by allowing staff members to discover individual career paths within the company
- ❖ Increase capacity by achieving a more holistic view of the accumulated competence of the entire organization
- ❖ Achieve access to appropriate competence at the right time and place
- ❖ Establish an overview of the accumulated resources of the organization and the demand for those resources
- ❖ Find candidates with the right profile, from anywhere in the organization, to fill an unexpected vacancy
- ❖ Identify key positions for which you have no candidates
- ❖ Reconcile the aspirations of your key people with the opportunities available
- ❖ Check how closely your development activities are aligned with the needs of your business
- ❖ Ensure you are building the appropriate talent pool to support your future needs
- ❖ Make hiring #1 in terms of focus, priorities, and action
- ❖ Align corporate objectives and strategies to each person in the company
- ❖ Integrate your performance-management and review system directly with the hiring process

The above list is by no means exhaustive but it does lend itself to the immense importance of competence management. The aspects of competence building and its importance have not been touched here, but as Hamel and Prahalad said:

There are substantial rewards in getting to the future first. Getting to the future first may allow a company to establish a virtual monopoly in a particular category, to set standards, establish the rules by which other companies have to compete, to bulked an infrastructure that cannot be easily duplicated.



And one of the factors that help you to get to the future first is its success in building core competencies central to the provision of customer value in the new opportunity arena

2.2 Element of competence management

Broadly the area of business and people competence management can be divided into three main subdivisions:

2.2.1 Resource and capacity tracking and planning:

This is more on the operational front. Various projects require different skill sets depending on the criticality of the project, the client importance and so on. Thus competence management has to consider the project modalities and accordingly allocate the resource so that the overall optimization of the people competencies can take place. The various elements that competence management has to look into these aspects are:

1. Defining the competencies required for particular jobs:

Until now, the HR department used to define only the skills required for a particular job. But as we now know, what we actually require goes beyond the just technical or soft skills requirements. We need a combination of **Intelligence, education, Experience, Ethics, Interest**. Hence a re-look is required at the existing job profiles to take into consideration the other parameters like interest and ethics which were so far ignored.

2. Rating the performance of individual employees skills:

Also as discussed earlier every employee will not be at the same level of skills. A person might be comfortable with say Java language but may not be excellent at it. So the level of skill competence needs to be measured and recorded. Prepare a Skills Profile containing the core skills for their job and add appropriate historical and specialty skills. This is followed by a self-assessment against a skills glossaries describing skills on a scale from 1 (training or light experience) to 5 (industry expert; strategic skill leadership). Ability for the assigned manager, supervisor or coach to assess the person's skills separately also needs to be done.

3. Manage skills inventories as well as management and technical competencies:

Once the above steps are complete the system should have some way of maintaining the database of this information. This will help in the having the required information at the fingertips of the HR department.

4. Candidate Searches to find the right people for the right assignment:

A competence management system needs to be able to map the right people to the right job. For this the above steps prove very useful. We need to know what the job entails and what the capabilities of the people working for us are. The database enables us to match the profiles perfectly.

5. Organizational and Unit Skills Gap Analysis to determine recruitment needs:

The organization may be working on a project for which it does not have the requisite skills within the company, so they may have to hire from outside or maybe even recruit. A competence management system should be able to understand this need and also help plan how the interview should be carried out and what competencies in a desired candidate should be evaluated and how.



2.2.2 Interactive Career Development and Training:

This is looking at the future, but at the individual level. Competence management also has to look into the aspirations of each individual and assess him/her to find out what competencies will be required to advance to the next set of hierarchies, what additional training would be required, is he fit for promotion etc. The elements of this division are:

1. Compare skills to other job titles to see what a person has to improve:

The database of job profiles will help the individual to assess where he needs to improve; what competencies are required for the next level. This will also motivate him to learn newer skills by himself and nominate himself for additional training needs. The competence management system needs to be open enough to be able to allow the employees to understand what is expected of them for being promoted.

2. Development Plan Summaries showing all of the skills people need to work on:

This provides a measurable rationale for training budgets and a means to identify people to attend course openings. Here we need to also provide individuals with the ability to view and enroll in training and development courses as well as books, developmental activities, etc. This will help individuals to be able to plan their work accordingly. The schedules of training dates and prerequisites need to be displayed so as to allow the individual to take cognizance of the same.

3. Predict Training Demand:

The above step will help the HR department to calculate the training staff required based on the summation of individual plans which have come in.

4. Identify individuals who are eligible to be considered for promotion:

A good competence management system has to be able to determine which competencies need to be promoted and who has them so that the overall competence level of the organization can grow. Also on the other hand, we also need to know who potential replacements for an unexpected vacancy are so that planning can be done accordingly.

5. Succession planning:

The competencies required for the top management should be completed in the job profiling, but further who should be groomed; what competencies will be needed and how to develop the same would require a good system.

2.2.3 Strategic Competence Development:

This area too is looking at the future, but at a more macro level. Competence management also has to look beyond today and at the changing face of tomorrow market and identify the skills required for tomorrow. It has a more strategic outlook and is looking at the strategic position of the organization in the future. The elements of this division are:

1. Providing an overview of the total competence in the organization.
2. Integrating competence development with business strategies.
3. Identifying shortfalls and surpluses in competence in addition to revealing unexploited resources
4. Assess trends and developments in competency levels over time
5. Giving support to strategic business and personnel planning
6. Unleashing the company's intellectual capital
7. Helping the company to attract, develop and retain co-workers



3. Business Process and People Competencies

It is not enough to just look at the people competencies by itself. It becomes necessary to add the business perspective to it also. In order to integrate people competencies with business process the following steps are to be taken:

3.1 Mission:

Activities of any organization have to result into economic value to the customer directly or indirectly. In the business world, organizations are interested only in the products and services required by the customers. To build a strategic architecture top management must have a point of view on which new benefits or functionalities will be offered to the customers over the next decade or so, on what core competencies will be needed to deliver these benefits. It is not a detailed plan but it identifies the major competencies to be built. A cross sectoral team needs to be formed to identify the opportunities and correspondingly the competencies required to exploit these opportunities. A competence represents the synthesis of a variety of skills. It is critical to have ability to harmonize a wide variety of disparate skills and technologies. What are required are generalists and not just narrow specialists. We require experts who are sympathetic to other disciplines and who can overcome their perspectives of their particular area of expertise. Competence building comes from reusing a competence in multiple applications which require a synthesis of skills.

3.2 Process:

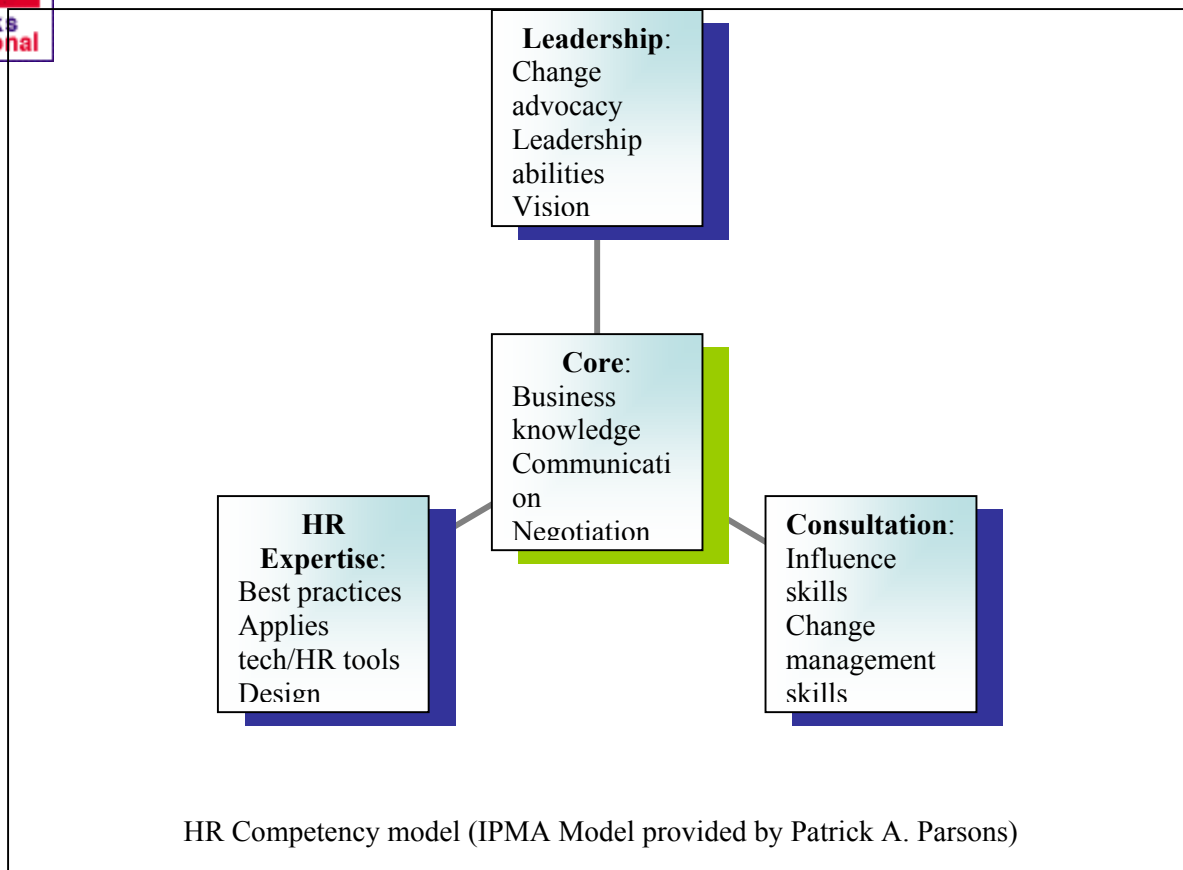
Then organizations have to define their business process to enable them to deliver outcomes to customer requirements in a brief time at an economical cost with out sacrificing quality. In this step we sub-divide what we want to be into various modules and processes. Corporate Mission identifies the focal point for competence-building in the future now we identify the path of how we want to get there. The broad division of the firm into units and departments and the process and polices are defined at this stage. The system and process play a major role in identifying the competencies at individual level. For example, if a bank wants to be now computerized (process) to meet the e-banking (mission) needs of the future, completely different competencies are called for. Thus how we want to get to the future is chalked out at this stage.

3.3 Task:

Then companies have to define the time, cost and quality standards of each task of the business process. The role definition and the tasks that each role needs to perform are listed here. The parameters of each task like those mentioned above are standardized or benchmarked with those of the industry leaders. Till now we are just breaking the organization competencies into little task so that we can then link those to individual competencies in the next step.

3.4 Task to Competencies:

Then define the competencies required for each task in terms of knowledge, skills and attitudes to complete the task within the quality standards defined. These refer to competencies that are required by people within a specific functional area, such as marketing, finance etc. For example, let's take into consideration the competencies of the HR function itself and let's try to identify the competencies required by a HR professional.



Given below is a list of the competencies required for a HR person. The competencies are not limited to the particular assigned role. In reality, competencies will be fluid among the various HR roles. This model is a compilation of IPMA (International Personnel Manager Association), NAPA, and OPM models. Also included are concepts from Human Resources Champions by David Ulrich:

Role: STRATEGIC PARTNER

- Organizational Awareness
- Problem Solving
- Customer Service
- Stress Tolerance
- Oral Communication
- Understanding of public service environment
- Knowledge of agency's mission
- Knowledge of organizational development principles
- Understanding on client's organizational culture
- Knowledge of business system thinking
- Understanding of business process & how to change and improve efficiency and effectiveness
- Innovation & encourages risk-taking
- Interacts with customers in a way that demonstrates customer concerns and problems are heard, builds confidence and trust
- Links HR policies and programs to the organization's mission & service outcomes
- Applies organizational development principles
- Adapts HR services to the client's organizational culture



- Designs and/or carries out HR services that incorporate business system applications
- Uses HR principles that change business processes to improve its efficiency and effectiveness

Role: LEADER

- Decision Making
- Planning & Evaluation
- Conflict Management
- Self-Management
- Self-Esteem
- Oral Communication
- Analytic, strategic & creative thinking
- Knowledge of staff & line roles
- Knowledge of business system and information technology
- Acts decisively
- Manages resources e.g. human, funds, equipment
- Applies conflict resolution methods in organizational situations
- Uses consensus & negotiation coalition building skills to improve overall communication

Role: EMPLOYEE CHAMPION

- Flexibility
- Teaching Others
- Learning
- Interpersonal Skills
- Oral Communication
- Develops employee & agency's relationships
- Understands, values, & promotes diversity
- Balances both agency's & employees' demands & resources
- Develops other's talents to maximize human potential
- Mentors individuals to develop talent
- Assesses & balances competing values e.g., policies & mission needs
- Builds trust relationships

Role: TECHNICAL EXPERT

- Technical Competence
- Legal, Government, & Jurisprudence
- Personnel & Human Resources
- Information Management
- Customer Service
- Writing
- Reading
- Memory
- Attention to Detail
- Oral Communication
- Knowledge of human resources law & policies
- Knowledge of work-life & organizational plans
- Knowledge of information technology
- Applies expertise in the full range of the HR arena to support agency's mission and business needs
- Uses surveys and other tools to provide information to help create an effective & efficient work environment
- Adapts information technology to HR management



Role: *CHANGE CONSULTANT*

- Teamwork
- Reasoning
- Influencing/Negotiating
- Integrity/Honesty
- Creative Thinking
- Oral Communication
- Stress Tolerance
- Organizational development principles
- Understanding of marketing
- Representation of HR products and services
- Understanding of team behavior
- Assesses the readiness for change & identifies appropriate change strategies
- Designs & implements change processes
- Applies organizational development principles
- Applies innovative strategies including identifying and recommending solutions to various personnel & HR issues
- Uses consensus, consultation & negotiation/consensus building
- Influences others to act
- Practices & promotes integrity & ethical behavior
- Works in teams
- Communicates well

Thus here we have defined the competencies required for each role. The next logical step would be to find whether the people we employ have these competencies, and where we would need to improvise.

3.5 Competence Profiling:

The simple truth is that you get what you measure. Employees respond to those things that they believe are important, and surely if the organization "measures" it, must be important. In the first place, proper assessment "tools" should be developed to assess all the elements of competence. The reliance on simple interviews and/ or psychometric tests simply does not allow one to make detailed, accurate and useful assessments. Secondly, assessment should as far as possible be transparent to the individual, even to the point of making use of self-assessment. This is the only way assessment will become credible and useful also to the individual. The HR department has a uphill task here. Competency profiling is business/company specific. It actually covers a part of the above step to or should I say takes inputs from the above step of linking the tasks to the competencies required. Competency profiling cannot be bought 'off the shelf'. Before undertaking competency profiling HR Professionals should pose certain questions relating to the following issues:

- Do I have clear understanding of my company's business environment vis-à-vis competencies required to survive in the fast changing business scenario?
- What are the perceptions of executives and employees on their own competencies?
- Why this issue of competency profiling has cropped in the organization?
- How do I assess the competencies?
- Have I realistically assessed the +ve and -ve qualities of executives and employees?
- Do I have logic for articulating the difference in competence requirements for managers at different levels of work?
- Do I have a methodology for developing / customising competency profiling?



- Do I have ability to integrate competencies with the HR systems in the organization?
- Do I have change management approach to support the introduction of competencies?
- What are the likely issues that may crop up with executive associations and trade unions while introducing the competency profiling?
- As a HR professional can I link the competencies to the work product outcomes or tasks those employees must be able to perform to be successful in the organizations or jobs?

With this knowledge we will now have what the company needs and what is currently available. Now we need to analyze what is the difference between them or do the Gap analysis.

3.6 Gap Analysis or Mapping the competence:

Competence mapping is to make a connection between what the company needs and what the worker can perform and eventually detect a gap. One assumption that must be present to uncover this gap is that current status of the competence can be documented. The company also has to define what is needed now and in the future. With this knowledge one can be able to uncover a competence gap and prescribe what to do next. To map the competence of a company or an institution is not easy, and below we will take a closer look to competence mapping and related items.

Why map competence?

The companies and institutions experience a gap ("the competence gap") between the existing knowledge in the organization and the needed knowledge. This gap has come into being because the market is demanding and only companies/institutions that adapt to these higher demands will survive. These demands deal with quality, price, time of delivery etc. That means workers have to learn new skills, both regarding to the product or the service produced and to the marketing and transport of the product. We have to sure that each worker and the company as a whole has the correct knowledge to fulfill these tasks. Therefore we have to map the competence and compare this existing competence with the wanted competence, the competence that is needed to make a better product and thereby to survive in a competitive market. One more important aspect of "competence mapping" is that the mapping process initiates other processes in the company/institution that is very important. Since the mapping process can be quite extensive each worker will be more active in relation to the company's goal and strategic plans of the company

Problems with competence mapping

Competence mapping should focus more on what the organizations as a whole can manage than looking at the formal knowledge that each individual worker has. But of course, we have to start with each individual, to fulfill that each individual has the wanted formal knowledge and the necessary skills and know-how to do a god job for the company. The problem is that it is here the gap comes true, it's between what we can measure and what we know about each individual on one side and what is needed by the company on the other side. The problem is the silent/tacit knowledge, because it his here the competence gap most often is uncovered. Tacit knowledge is visible when the individual performs a task, preferably a task relevant for the new challenges the company is meeting. Otherwise tacit knowledge is not visible.

After the gap analysis we are clear about the requirements of our competencies to fill this gap. If the required competencies are not available, then either they need to be developed or some new people have to be hired for the same. The next step is optional and may be conducted if we heed to hire to fill the Competency gap. Both methods, development and recruitment, have been listed below under 3.6, use either one or both of them as need be.



3.7 Competency-based Behavioral Interviewing

The goal of any selection interview is to learn enough about a candidate to be able to predict future-on-the-job performance and behavior. That information can then be used to make an informed hiring decision or recommendation. Behavioral interviewing is a technique based on the idea that candidates' past and present behavior is the best predictor of how they will behave in the future. But behavioral traits don't appear on a resume — they can only come from an interview. Furthermore, interviewers need to obtain repeated examples of behavior to confirm they really exist. Interviews not based on behavioral interviewing techniques inevitably focus exclusively on education, experience, and knowledge — exactly the information that's already on the resume. While these are clearly important, they only reveal what a candidate actually did. Behavioral interviewing helps get at the "how" and "why" behind a candidate's performance.

Competency-based behavioral interviewing uses "competencies" to describe behavioral qualities. Examples include analytical, problem solver, team player and customer-oriented. Behavioral competencies should be used to describe job requirements ("must be articulate, adaptable, committed," and so on) before the interview as well as to evaluate candidates after an interview.

Competency	Level 1	Level 2	Level 3
Management of Financial Resources	<ul style="list-style-type: none"> ▪ Demonstrates basic knowledge of company's accounting and budget procedures. Reviews expenses within assigned scope of responsibility. 	<ul style="list-style-type: none"> ▪ Demonstrates understanding of the company's accounting and budgeting practices in order to contribute to budget development and capital expense proposals within assigned scope of responsibility. 	<ul style="list-style-type: none"> ▪ Demonstrates solid understanding of the company's financial planning practices in order to submit operating budgets and prepare project/capital expense requests within assigned scope of responsibility.
Management of Work Processes	<ul style="list-style-type: none"> ▪ Understands the established work roles, work standards and scheduling procedures for own area of responsibility. 	<ul style="list-style-type: none"> ▪ Understands performance measurement concepts and practices and the detailed flow of business processes relevant to area of responsibility. 	<ul style="list-style-type: none"> ▪ Understands a range of workload analysis practices and work standardization and reengineering methods relevant to area of responsibility.



<p>Management of People Resources</p> <ul style="list-style-type: none"> ▪ Staffing • Employee Development ▪ Rewards Recognition & 	<ul style="list-style-type: none"> ▪ Demonstrates basic knowledge of procedures and administrative tools for internal and external hiring process. ▪ Demonstrates basic knowledge of the training requirements and developmental activities suitable for reporting staff. ▪ Demonstrates basic knowledge of the company's employee compensation and recognition practices in order to describe them to reporting staff. 	<ul style="list-style-type: none"> ▪ Demonstrates proficiency in following all aspects of established policies and procedure for employee recruitment and selection in standard hiring situations in one's area. ▪ Demonstrates knowledge of the company's resources and practices for coaching employees on typical individual development assessment and goal setting issues. ▪ Demonstrates working knowledge of the company's employee compensation and recognition programs in order to develop pay recommendations on reporting staff. 	<ul style="list-style-type: none"> ▪ Demonstrates broad knowledge of key policy issues such as diversity and competitive hiring factors for recruitment and selection within one's area in order to resolve exceptions and advise reporting managers as required. ▪ Demonstrates strong knowledge of the company's career planning objectives and programs by guiding reporting managers in development of their employees and managing talent supply needs for assigned area. ▪ Demonstrates strong understanding of the company's reward strategies and programs and external pay market conditions in order to propose overall reward approaches for reporting staff and address exceptions to company pay policies.
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4. PCMM Model for Competence evaluation:

The primary objective of the People CMM is to improve the competency of the entire workforce. This can be defined as the level of knowledge, skills, and process abilities available for performing an organization's current and future business activities. The People CMM consists of five maturity levels. Each maturity level is an evolutionary plateau at which one or more domains of the organization's processes are transformed to achieve a new level of organizational competency level. The five levels are as follows:

Maturity Level	Focus	Process areas
5. Optimizing	Continuously improve and align personal, workgroup, and organizational capability	<ul style="list-style-type: none"> • Continuous Workforce Innovation • Organizational Performance Alignment • Continuous Capability Improvement
4. Predictable	Empower and integrate workforce competencies and manage performance quantitatively.	<ul style="list-style-type: none"> • Mentoring • Organizational Capability Management • Quantitative Performance Management • Competency-Based Assets • Empowered Workgroups • Competency Integration
3. Defined	Develop workforce competencies and workgroups, and align with business strategy and objectives	<ul style="list-style-type: none"> • Participatory Culture • Workgroup Development • Competency-Based Practices • Career Development • Competency Development • Workforce Planning • Competency Analysis
2. Managed	Managers take responsibility for managing and developing their people.	<ul style="list-style-type: none"> • Compensation • Training and Development • Performance Management • Work Environment • Communication and Coordination • Staffing
1. Initial	Workforce practices applied inconsistently.	

Process Areas of the People CMM

At *Level 1*, an organization has no consistent way of performing workforce practices. Most workforce practices are applied without analysis of impact.

At *Level 2*, organizations establish a foundation on which they deploy common workforce practices across the organization. The goal of Level 2 is to have managers take responsibility for managing and developing their people. For example, the first benefit an organization experiences as it achieves Level 2 is a reduction in voluntary turnover. The turnover costs that are avoided by improved workforce retention more than pay for the improvement costs associated with achieving Level 2.



At *Level 3*, the organization identifies and develops workforce competencies and aligns workforce and workgroup competencies with business strategies and objectives. For example, the workforce practices that were implemented at Level 2 are now standardized and adapted to encourage and reward growth in the organization's workforce competencies.

At *Level 4*, the organization empowers and integrates workforce competencies and manages performance quantitatively. For example, the organization is able to predict its capability for performing work because it can quantify the capability of its workforce and of the competency-based processes they use in performing their assignments.

At *Level 5*, the organization continuously improves and aligns personal, workgroup, and organizational competency. For example, at Maturity Level 5, organizations treat continuous improvement as an orderly business process to be performed in an orderly way on a regular basis.



5. Case study of Competency-based management at Microsoft (Thomas H. Davenport, 1997)

5.1 Introduction

Since its founding in 1975, one of the competitive advantages of Microsoft Corporation has been the quality of its people. The highly successful software firm goes to extraordinary lengths to hire people with strong intellects and capabilities. According to the authors of *Microsoft Secrets*, a book about the company, one of Microsoft's key strategies is, "Find smart people who know the technology and the business." One of the reasons why Microsoft people need high levels of competence is the fast-changing nature of the industry in which it competes. Microsoft rose to its position of industry dominance in a period of a few years, and Bill Gates, the company's well-known CEO, is determined that the company will stay on top. For example, Gates and other Microsoft executives recently concluded that the company needed to embrace the Internet and incorporate it into virtually all products and services. As a result, software developers and marketers need to be able to acquire new skills quickly.

This unusual attention to human resource capabilities, however, is not restricted to product-oriented personnel. Microsoft's internal Information Technology (IT) group, for example, faces the same pressures to produce software and to adapt to rapid industry change. The IT group consists of over 1000 employees who develop applications, build infrastructure, and operate computers and networks. Unlike many firms, Microsoft's IT group does not tolerate "legacy people" whose skills have become obsolete. If Microsoft's product set includes, for example, OLE (object linking and embedding) technology, then the internal IT group must rapidly incorporate it into the company's internal systems. The knowledge base for Microsoft IT must always be current.

Therefore, the IT group has focused heavily on the issue of identifying and maintaining knowledge competencies. Neil Evans, the former head of the IT group, is now addressing the issue as a researcher on a National Science Foundation project at the Northwest Center for Emerging Technologies. Chris Gibbon, the current IT director, hired Susan Conway as a Program Manager to take on the issue of knowledge competencies. Conway had developed similar competency programs at Computer Sciences and Texaco before coming to Microsoft. Conway's goal is to create an online competency profile for jobs and employees within Microsoft IS. A pilot in an 80-person application development group was completed in November 1995, and full implementation is proceeding. The project, called Skills Planning "and" Development (thus affectionately known as "SPUD"), is focused not on entry level competencies, but rather on those needed and acquired to stay on the leading edge of the workplace. However, shortcomings in the educational system must be addressed by competencies acquired on the job.

The SPUD initiative is being managed by the "Learning and Communication Resources" group within Microsoft IT, which also has responsibility for training and education for IT personnel. The goal is to use the competency model to transfer and build knowledge, not merely to test it. When Microsoft IT employees have a better idea of what competencies are required of them, they will be better consumers of educational offerings within and outside Microsoft. The project is also expected to lead to better matching of employees to jobs and work teams. Eventually the project may be extended throughout Microsoft and into other companies.

There were five major components to the SPUD project:

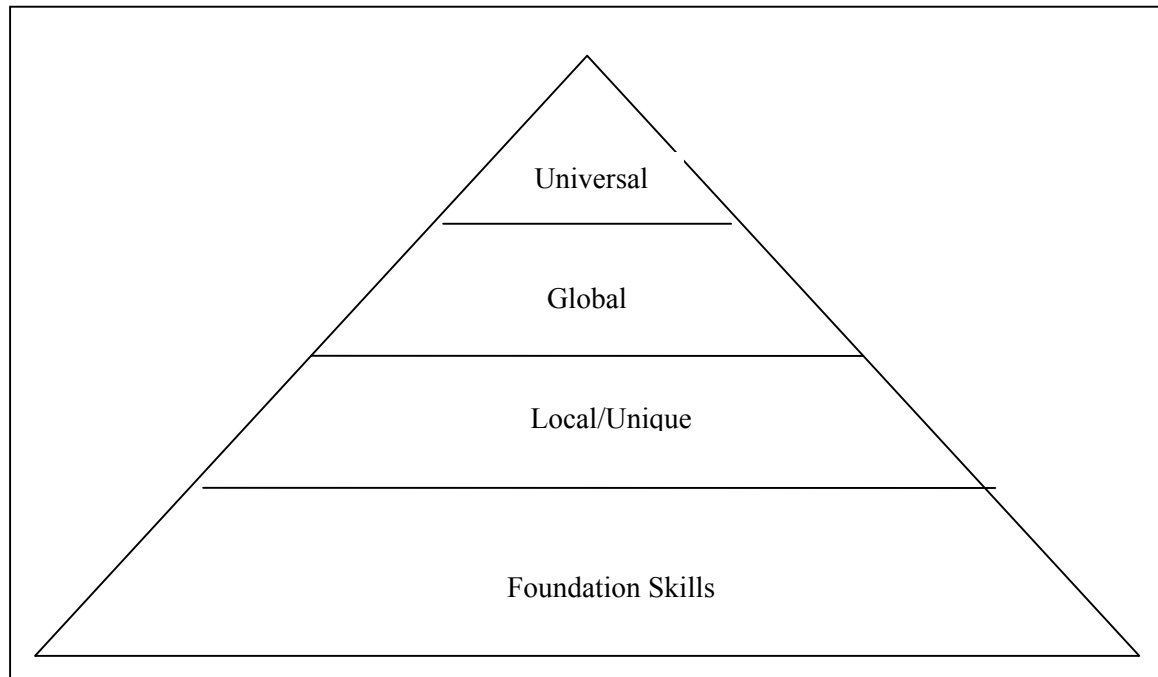
- Development of a structure of competency types and levels;
- Defining the competencies required for particular jobs;
- Rating the performance of individual employees in particular jobs based on the competencies;
- Implementing the knowledge competencies in an online system;
- Linkage of the competency model to learning offerings.



5.2 Developing the Competency Structure

Before the project began Microsoft had already defined certain competencies, but they were largely restricted to entry-level skills. The Northwest Center was also studying entry-level skills for software developers, e.g., requirements definition for a new system. These base-level competencies became known as **foundation** knowledge in the four type model used in the SPUD project show below.

Types of Competencies



Above the foundation level there are **local** or unique competencies. These are advanced skills that apply to a particular job type. A network analyst, for example, might need a fault diagnosis competency for local area networks.

The next levels of competencies are **global** and would be present in all employees within a particular function or organization. Every worker in the Controller organization, for example, would be competent in financial analysis; every IT employee would be competent in technology architectures and systems analysis.

The highest level in the competency structure is **universal** competencies; universal, that is, to all employees within a company. Such competencies might be knowledge of the overall business a company is in, the products it sells, and the drivers of the industry. A course for all employees sought to provide general knowledge of the software industry and Microsoft's strategies.

Within each of the four foundation competencies there are two different types. Explicit competencies involved knowledge of and experience with specific tools or methods, e.g. Excel or SQL 6.0. Requirements definition competency, for example, is an implicit competence. Implicit competencies involve more abstract thinking and reasoning skills. At Microsoft, the implicit competencies are expected to remain quite stable over time, although one new one, Web authoring, was recently added. Explicit competencies, of course, change frequently with rapid changes in fortunes of particular languages and tools. Within all four competency types, there are 137 implicit competencies and 200 explicit ones.

Within each type of competency there are also four defined skill levels. A worker might have, or a job might require, any of the levels below:



- Basic
- Working
- Leadership
- Expert

Each skill level for each competency is described in three or four bullet points that make the level clear and measurable. The goal of the skill descriptions is to avoid ambiguity in rating jobs and employees. A sample competency description for data administration is shown in below:

Sample Competency Description

T430	Data Administration/Repository Mgt.
Definition: Development and maintenance of a flexible, efficient and shared data environment utilizing facilities such as data models, data definitions, common codes, reference data bases and data tool-sets.	
Level 1: Basic knowledge of data administration and repository management <ul style="list-style-type: none"> • Basic knowledge of the principles and practices employed in the management of data and repositories. • Familiar with information models and modeling. • Understands the rationale behind maintaining a centralized, reusable library of the business and enterprise models of a corporation. 	Level 3: Mastery of data administration and repository management <ul style="list-style-type: none"> • Knowledge and demonstrated experience in data management. • Can assess the impact of functional/regional data changes on the enterprise model. • Able to integrate the business data and process models into the enterprise model. • Recognized as a data expert in a functional area.
Level 2: Working knowledge of data administration and repository management <ul style="list-style-type: none"> • Working knowledge of the principles, practices and tools associated with the access to and updating of local repositories. 	Level 4: Leadership and recognized expertise in data administration and repository management <ul style="list-style-type: none"> • Subject-matter expertise in the management of local, regional and enterprise wide information/data models. • Recognized as a data expert in major functional areas. • Reviews information models for compliance, content quality, consistency and impact on enterprise models.

5.3 Defining Competencies for Particular Jobs

Since one of the purposes of the SPUD project was to match jobs and employee capabilities, each job in Microsoft IT had to be rated in terms of the competencies required to perform it. This task was typically performed by the manager to whom the job would report. There are 40 to 60 competencies in the average job template.

One early problem that emerged with the job ratings was that it took a manager between two and three hours to rate a job in terms of the competencies needed. In order to deal with this issue, managers were encouraged to rate only the highest priority competencies, i.e., those requiring the highest skill levels. The goal was to have the job rating process require only about a half hour.

The system also included a "measurement model" with suggestions for the supervisor about how a particular competency might be evaluated. Because the goal was knowledge transfer rather than testing, employees also had access to the measurement model.

5.4 Rating Employees on Job Competencies

Another key step in the project involved evaluating workers in terms of the competencies they have exhibited in their current jobs. The initial rating is built in an iterative fashion by the employee and his or her supervisor; eventually the entire work team will participate. After an initial rating by both parties they meet and resolve their differences. The rating process is intended to serve as an occasion for conversation about the employee's competencies; the supervisor may not be aware, for example, of experience with a competency area prior to the current job.

The overall goal of the employee rating process is to build a competency inventory that can be used all across Microsoft. A manager seeking to build a team for a new project can no



longer know personally all of the employees who might be qualified for the job. Therefore, the supervisor could query the on-line system and ask, "Give me the top five candidates who have leadership skill levels on 80% of the competencies for this job and who are based in Redmond (Microsoft's headquarters location in Washington)."

In the pilot of the SPUD project, both supervisors and employees tended to require extremely high skill levels to give good ratings. Susan Conway expected that this problem would be solved when the detailed characterizations of skill levels were available, so that the specific experience of the job and the worker could be easily compared to the skill level.

5.5 Building an Online Competency System

The SPUD project involved building an online system that contained the competency structure, the job rating system and ratings database, and the competency levels for employees. Conway had built a prototype of the system for the pilot using Microsoft Access; though it had worked well, the system needed greater performance and robustness, and was being ported to SQL Server. The system would have a Web front end for easy access around the world through Microsoft's Intranet.

Though the technical implementation was fairly straightforward, there were issues to be resolved. One of these was the location of data. After discussion it had been determined that job data would be managed centrally; employee data needed to reside in the group/country of origin, but would be replicated to a central database. Access and security issues were a concern because people data were involved; it was viewed as inappropriate even for managers to have access to all competency profiles for employees at levels below them. It would also be undesirable for managers composing teams to "raid" existing teams for members with desired competencies. The details of access had yet to be determined.

5.6 Implementing the Competency Model

The pilot for the SPUD project had gone well, and now implementation was proceeding with all 1000 people and their jobs in the Microsoft IT group. Implementation was proceeding across geography and function, starting with the Operations function, then the Applications function, and all jobs in Europe.

One issue to be determined was how the competency model might spread to product-oriented software developers within Microsoft. Many of the same competencies were obviously relevant in the product domain. As one way to accomplish this migration, Conway was working on how the competency model might be integrated into Framework, Microsoft's methodology for product development. Since Framework was also marketed externally, embedding the competency model within it might also create a demand for the competency model in other software companies.

Another unresolved issue was the relationship between the competency model and Employee and Management Development, part of Microsoft's overall human resources function. This group had supplied some of the competency descriptions used in the model, specifically some implicit ones (e.g., "team spirit," "intellectual horsepower") that were desired throughout Microsoft. Conway envisioned that the group would arbitrate disputes between supervisors and employees on competency ratings, and they would obviously help to define competencies and education linkages outside of the IT domain. But their specific role relative to the competency model had not yet been negotiated.

Some aspects of the role of the competency model within Microsoft could only be determined over time. Susan Conway hoped, for example, that the model would become a vehicle for institutionalizing innovation in this fast-changing industry. If Bill Gates, for example, determined that employees at Microsoft needed to master a new form of knowledge (e.g., Web-based application development), then he could force development of the competency by insisting upon its presence in all job competency requirements. A means by which needed innovations could be identified and rapidly implemented would seem to be critical in Microsoft's business and



industry. Conway also realized that the success of the project depended upon the behaviors of the individuals who would use it. "This won't go anywhere unless people feel they are getting something from it," she commented. She felt that it is critical for employees and supervisors to feel that they contributed to the development of templates for jobs. Then they will buy into the competency model because they had a hand in the design and implementation of it, she hopes.

Ultimately, this ambitious attempt to advance knowledge by focusing on individual knowledge competencies requires the active involvement by everyone in the organization.



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