# A Supplement to National Occupation Skill Standards

# **Table of Content**

CORE ABILITIES	2
The Concept of Workplace Competencies	3
Development of CORE ABILITIES	3
Characteristics of CORE ABILITIES	4
CORE ABILITIES in CBTE The Performance-based Model	4
Contextual Learning	5
The Application of CORE ABILITIES in the Development of Learning Packages	5
CORE ABILITIES and the Development of NOSS	6
Field Testing of CORE ABILITIES	6
Transferability of Competencies	6
Other Aspects for the Application of CORE ABILITIES	6
Panel Members for CORE ABILITIES "DACUM" Workshop	7
Panel Members for CORE ABILITIES Ability Analysis Workshop	8
CORE ABILITIES Profile (Chart)	10
CORE ABILITIES Profile (list format)	14
Sijil Kemahiran Malaysia -SKM - Classification of Malaysian National Occupational Skill Standards Level 1 – 5	17
How to Read the CORE ABILITIES Document	18
CORE ABILITIES Performance Indicators	10
Appendix	62
Application of Academic and Related Skills Performance Indicators	-

A Supplement to National Occupational Skill Standards (NOSS)

Recent discussion concerning Technical Education and Skills Training in Malaysia, the development of National Occupational Skill Standards (NOSS), and the growing acceptance

of Competency-based Training and Education The Relationship between a Job and its Duties, Tasks, Job (CBTE) in Malaysia's Baker Competencies and Skills/Abilities training institutions have resulted in the decision to identify **Makes Bread** Makes Pastries Makes Cakes etc skills or abilities that are Duties generic to many jobs and professions within ħ all areas of industry. Makes Makes White Makes White etc Tasks Wholemeal Rolls Loaves In Malaysia, the word Loaves R4 1111 "skill" is often misinterpreted in vocational education. Mixes Shape Measures etc Competencies and is usually defined Ingredients Dough Quantities as physical Re 012 11 1 111 (psychomotor) skills. Therefore, the terms CORE ABILITIES will Calculates Plans for Weighs etc Skills/ Quantities to Required Stock Accurately be used to replace the Meet Orders Abilities "generic skill". <sup>1</sup>

These "generic skills" have be identified as the learning tools or enabling requirements, which can assist the trainee in the acquiring and applying subject or job specific knowledge skills and comprehension to his work. Incorporating Core Abilities into training provides realistic outcomes that can make learning more relevant and add to the trainee's sense of achievement.

The development of CORE ABILITIES in Malaysia conforms to the global trend towards Competency-based Training with the similar developments in the following countries:

- Key Competencies (Australia)
- Employability Skills (Canada)
- **Core Skills** (Great Britain)
- Key Qualifications, Project and Transfer Oriented Training (Germany)
- Essential Skills (New Zealand)
- Workplace Know-How / SCANS Competencies (USA)

The CORE ABILITIES in this document are to be seen as a Supplement to NOSS

cognitive, effective and psychomotor behaviour

or in traditional terms: the combination of knowledge, skills and attitude

<sup>&</sup>lt;sup>1</sup> The word 'skill' used in this document is conceived as a composite of three completely interdependent components:

#### The Concept of Workplace Competencies

The concept of 'Competency' focuses on what is expected of an employee in the workplace, rather than on the learning process; and it facilitates the ability to transfer and apply skills and knowledge to new situations and environments.

Competency is a broad concept that includes all aspects of work performance and not just narrow task skills.

Competency includes the requirement to:

- perform individual tasks (task skills)
- manage a number of different tasks within the job (task management skills)
- respond to irregularities and breakdowns in routine (contingency management skills)
- deal with the responsibilities and expectations of the work environment, including working with others (job/role environment skills)

Competency Based Training and Education (CBTE) has been introduced into Malaysia's vocational education and training with the following objectives:

- to increase the efficiency of Malaysia's workforce, and
- to focus on what people can do as a result of training.

The decision to develop CORE ABILITIES was also aimed at making vocational education and training more effective and more directly related to industry needs as CORE ABILITIES enhance the transfer and application of skills and knowledge to new situations and working environments.

### **Development of CORE ABILITIES**

The set of CORE ABILITIES described in this document was developed using the DACUM Job Analysis and Task Analysis process as applied by NVTC for the development of Malaysian National Occupational Skill Standards (NOSS).

Information from overseas sources (Australia, Canada, Germany, UK and USA) was used for supplementary reference and verification purposes.

#### **Characteristics of CORE ABILITIES**

CORE ABILITIES are considered essential for effective participation in the emerging patterns of work and work organization.

They focus on capacity to apply knowledge and skills in an integrated way in work situations. CORE ABILITIES are generic in that they apply to work generally rather than being specific to work in particular occupations, jobs and industries.

This characteristics means that the CORE ABILITIES are not only essential for effective participation in work but are also for effective participation in further education and life-long learning.

• Essential and generic to the world of work:

The set of CORE ABILITIES should be confined to those capabilities that are essential for young people entering any sector of work, as well as for people already employed, facing challenges of a changing job environment.

• Of value to all people:

The set of CORE ABILITIES has value for all people regardless of the path they follow in the world of work.

• Cross circular:

The set of CORE ABILITIES does not constitute a curriculum or set of subjects, nor do individual CORE ABILITIES relate only to particular subject areas. Rather, the CORE ABILITIES can be developed and applied across the range of areas of learning comprising the curricula of school and training programs.

- Able to be developed in a wide range of settings: The set of CORE ABILITIES can be learned through variety of educational and training settings and programs.
- Focus on outcomes:

The CORE ABILITIES describe outcomes of learning rather than processes by which these outcomes may be achieved.

• Focus on application:

Central to the concept of competence is the application of knowledge, skills and understanding in an integrated way; competencies do not constitute bodies of knowledge as such.

• Integrated in practice:

The integrated nature of the CORE ABILITIES and the ways in which they are applied to work activities means that, in practice, they overlap with each other to some extent.

• Required a foundation of knowledge, skills and understanding: The CORE ABILITIES require a basis of knowledge, skills and understanding which need to be integrated and applied to achieve a purpose or complete a task.

# CORE ABILITIES in CBTE

### The Performance-based Model

Performance-based instruction helps make the link between what is taught and what the skills learners will actually apply in their jobs or life roles.

To plan strategically for instruction, educators need to:

- Identify **WHO** the learners are.
- Set goals for **WHAT** the learners need.
- Establish criteria for determining WHEN learners have achieved their goals.
- Plan strategies for **HOW** they are going to get there.

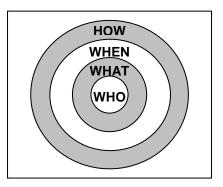
# Contextual Learning

Theory, process knowledge and practice are elements of learning, which need to be integrated and put into context when designing training curriculum.

The separation of learning into "theory" and "practical" classes should be avoided in the curriculum design for technical and training.

The Performance-based Model at right is shown as a disk, which contains the critical elements of performance-based instructional design.

In performance-based instructional design, course developers build from the centre out. By designing outwards they will determine WHAT the learner has to accomplish before deciding HOW to accomplish it.



The National Occupational Skill Standard (NOSS) describes the Tasks and the performance standards for a specific job and job level, which will serve as the guideline for the identification of WHAT.

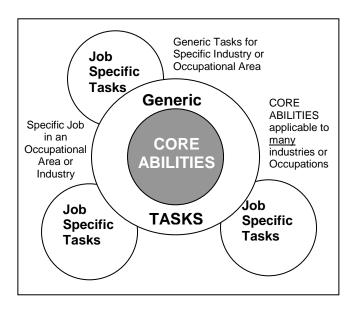
## The Application of CORE ABILITIES in the Development of Learning Packages

The WHAT of a course module includes a set of core abilities, generic and specific tasks and competencies together with their corresponding performance standards, and learning objectives.

CORE ABILITIES are enabling requirements needed for the development of specific competencies and they address skills that can be transferred beyond the context of a specific learning experience.

CORE ABILITIES are an important factor in performing TASK effectively and efficiently. NOSS Performance Standards provide the observable and measurable criteria which are essential for performance assessment.

CORE ABILITIES are incorporated into the learning activity, which describes HOW the learners will learn specific competencies.



The performance assessment activities tell learners how they will demonstrate WHEN they have mastered specific tasks/competencies. The performance indicators provided are used as a guideline.

In Competency-based Training the course developer does not "think up" test questions, instead a performance assessment task is designed which is based on the specific competency or a NOSS Performance Standard.

#### **CORE ABILITIES and the Development of NOSS**

The list of CORE ABILITIES may be utilized during the development of new and the revision of existing NOSS.

As such, the provided list should be discussed by the JOB Analysis panel to identify the respective CORE ABILITIES for the Job.

In this case, the proposed listing of the CORE ABILITIES to SKM levels may be overruled due to specific Job requirements and industrial settings.

#### Field Testing of CORE ABILITIES

Course developers and end-users, as well as industry based trainers, are encouraged to field test the set of CORE ABILITIES described in this document and to provide critical feedback for the improvement and further development of CORE ABILITIES.

#### **Transferability of Competencies**

CORE ABILITIES and job specific competencies are defined so that they are transferable to new situations.

There is evidence, however that any skill transfer may be limited unless the application of the skill is taught in multiple contexts and situations over an extended period of time. It is therefore important to teach learners to apply what they have learned to new and different situations and to utilize what earlier experience has taught them. This applies to both off-the-job and on-the-job training scenarios.

#### Other Aspects for the Applications of CORE ABILITIES

CORE ABILITIES require a foundation of knowledge, skills and comprehension. Since CORE ABILITIES are connected to SKM levels 1 to 5, some additional performance indicators for the application of academic and related skills are provided in the appendix for field testing.

- Applied Mathematics
- Locating Information
- Reading for Information
- Applied Technology
- Listening/Speaking
- Writing
- Teamwork
- Problem Solving

# Panel Member for CORE ABILITIES – "DACUM" Workshop

Ms Helen Wong Yuet Yu Allied Link Express Sdn Bhd, Petaling Jaya

Mr Richard Lim Association of Forwarding Agents Port Klang, Port Klang

> **Mr Thirukesan Patmanathan** Binariang Sdn Bhd, Petaling Jaya

**Mr Benjamin Keng Kiat Beng** Doyan Oceanic Sdn Bhd, Port Klang

Mr Tan Kok Tien Guolene Packing Industries Berhad, Shah Alam

Mr Henry Lim Ah Chye Industrial Forwarding & Shipping Sdn Bhd, Port Klang

> Dr Tan Keng Song Institut Bank-Bank Malaysia, Kuala Lumpur

> Ms Susan Lee Institut Bank-Bank Malaysia, Kuala Lumpur

> Ms Yap Siew Eng Institut Bank-Bank Malaysia, Kuala Lumpur

> > Mr Lee See Chee Motorola Malaysia, Petaling Jaya

**En. Mohd Salleh Othman** Telekom Malaysia Bhd Telekom Training College, Kuala Lumpur

> Dr Joseph C.L. Fong United Vehicle Industries Sdn Bhd, Klang

#### Facilitator

Mr. Reihanrd Sachs National Vocational Training Council, Kuala Lumpur

# Panel Member for CORE ABILITIES Analysis Workshop

Mr Michael Ng Accord Container Line (M) Sdn Bhd, Port Klang

Mr Richard Lim Association of Forwarding Agents Port Klang, Port Klang

> Ms Woo Kit Mooi Bayers (Malaysia) Sdn Bhd, Klang

Ms Janice Lim Siok Eiah Cheng Hua Engineering Works Sdn Bhd, Klang

> **Mr Benjamin Keng Kiat Beng** Doyan Oceanic Sdn Bhd, Port Klang

Mr Tan Kok Tien Guolene Packing Industries Berhad, Shah Alam

Mr Henry Lim Ah Chye Industrial Forwarding & Shipping Sdn Bhd, Port Klang

**En. Awaldin bin Mohd. Arif** Industrial Testing & Engineering Inspection Sdn Bhd, Subang Jaya

> Dr Tan Keng Song Institut Bank-Bank Malaysia, Kuala Lumpur

> Ms Susan Lee Institut Bank-Bank Malaysia, Kuala Lumpur

> Ms Yap Siew Eng Institut Bank-Bank Malaysia, Kuala Lumpur

En. Halim Azhar bin Hj. Mohd. Yatim Institut Kemahiran Tinggi Belia Negara Sepang (IKTBN), Sepang

Ms Audra Chin Kwai Lai Malaysian Textile Manufacturers Association, Kuala Lumpur

En. Hazizul bin Zamrud Melaka Industrial Skills Development Centre, Melaka

> Mr Anthony Koh Boon Leng Motorala Malaysia Sdn Bhd, Petaling Jaya

Mr K. Velayutham Perak Entrepreneur & Skills Development Centre, Pusing

# Mr Thilainathan

Perak Entrepreneur & Skills Development Centre, Pusing

En. Mohd. Saffian bin Abdul Majid Port Klang Authority, Port Klang

Mr Tan Yew What

Siemens Components (Advanced Technology), Melaka

**Mr Ricky Lim Chee Beng** Siemens Components (Advanced Technology), Melaka

> Dr Joseph C.L. Fong United Vehicle Industries Sdn Bhd, Klang

> > Facilitator

**Mr. Reihanrd Sachs** National Vocational Training Council, Kuala Lumpur



# CORE ABILITY Profile

← → GROUP ← →	• • • • • • • • • • • • • • • • • • •			TIES		
Locate and Process Information	· · · · · · · · · · · · · · · · · · ·		Utilize basic applications	Utilize basic IT applications		
01	01.01	L1	01.02	L1	01.03	L1
			Utilize the Internet to locate and gather information		Utilize word processor to process information	
	01.04	L2	01.05	L2	01.06	L2
	Utilize database applications to locate and process information		Utilize spreadsheets applications to locate and process information		Utilize business graphic application to process information	
	01.07	L3	01.08 L3		01.09	L3
	Apply a varie mathematica	ety of al techniques	Apply thinking skills and creativity			
	01.10	L3	01.11 L3			
Exchange/Communicate Information		nterpret and follow Follow telephone/ telecommunication procedures				
02	02.01	L1	02.02	L1	02.03	L1
	Prepare brief reports and checklists using and pictorial information standard forms			Write memo	s and letters	

Prepare brie checklists us standard for	sing	Read/interpr and pictorial	et flowcharts information	Write memos	s and letters	
02.04	L1	02.05	L1	02.06	L2	



← → GROUP <del>← − −</del>	ABILITIES					
	Utilize Local Area Network (LAN)/Intranet to exchange information		Prepare pictorial and graphic information		Prepare flowcharts	
	02.07	L2	02.08	L2	02.09	L3
	Prepare repoins report	orts and	Convey infor ideas to peo			
	02.10	L3	02.11	L3		
Work and Interact with People	Apply cultura requirements workplace		Demonstrate and apply et practices		Accept responsibility own work and work a	
03	03.01	L1	03.02	L1	03.03	L1
	Seek and ac constructive feedback ab performance	y upon out	Demonstrate	e safety skills	Respond app to people an	
	03.04	L1	03.05	L1	03.06	L1
	Resolve inte	Resolve interpersonal conflicts		Develop and maintain a cooperation within work group		improve of
	03.07	L1	03.08	L2	03.09	L3
	Provide cons counselling	sultation and	Monitor and evaluate performance of human resources		Provide coad on-the job tra	
	03.10	L3	03.11	L3	03.12	L3



GROUP	• <u>•                                   </u>			TIES◀───	_	
	Develop and team harmo resolve conf	ny and	Facilitate and coordinate teams and ideas Liase to achiev identified outco			
	03.13	L3	03.14	L3	03.15	L3
	Identify and assess client/customer needs Identify staff training needs and facilitate access to training					
	03.16	L3	03.17	L3	]	
Plan and Organize Work Activities	Organize ow activities	n work	Set and revise own objectives and goals			
04	04.01	L2	04.02	L2	04.03	L2
	Apply problem solving strategies				Allocate worl	x
	04.04	L2	04.05	L2	04.06	L3
	Negotiate ac		Develop and staffing plan		Prepare proj	ect/work

Negotiate ac and support objectives a	for	Develop and staffing plans			ect/work
04.07	L3	04.08	L4	04.09	L4

Utilize science and technology to achieve goals		
04.10	L4	



# **CORE ABILITY Profile**

← → GROUP ← → ← → ABILITIES ← →							
Manage Resources	Implement p plans	Implement project/work plans		Inspect and monitor work done and/or in progress		Allocate and record usage of financial and physical resources	
05	05.01	L3	05.02	L3	05.03	L4	
		Delegate responsibilities and/or authority		Coordinate contract and tender activities			
	05.04	L4	05.05	L4			
Work within and with Systems	Understand systems		Comply with and follow chain of command		Identify and highlight problems		
06	06.01	L1	06.02	L1	06.03	L1	
				Analyse technical systems		correct of systems	
	06.04	L1	06.05	L2	06.06	L2	
	Develop and maintain networks		Identify and effect of tech the environn	nnology on			
	06.07	L3	06.08	L4			

Note: The levels (L) indicated in this CORE ABILITY Profile are considered general guidelines, and are connected to the respective SKM Levels and general job functions. However, different settings may apply depending on the work environment and industry-specific requirements.



# 01 Locate and Process Information

01.01	Identify and gather information	1
01.02	Document information, procedures or processes	1
01.03	Utilize basic IT applications	1
01.04	Analyse information	2
01.05	Utilize the Internet to locate and gather information	2
01.06	Utilize word processor to process information	2
01.07	Utilize database applications to locate and process information	3
01.08	Utilize spreadsheets applications to locate and process information	3
01.09	Utilize business graphic application to process information	3
01.10	Apply a variety of mathematical techniques	3
01.11	Apply thinking skills and creativity	3

## 02 Exchange/Communicate Information

02.01	Interpret and follow manuals, instructions and SOP's	1
02.02	Follow telephone/ telecommunication procedures	1
02.03	Communicate clearly	1
02.04	Prepare brief reports and checklists using standard forms	1
02.05	Read/interpret flowcharts and pictorial information	1
02.06	Write memos and letters	2
02.07	Utilize Local Area Network (LAN)/Intranet to exchange information	2
02.08	Prepare pictorial and graphic information	2
02.09	Prepare flowcharts	3
02.10	Prepare reports and instructions	3
02.11	Convey information and ideas to people	3

## 03 Work and Interact with People

03.01	Apply cultural requirements to the workplace	1
03.02	Demonstrate integrity and apply ethical practices	1
03.03	Accept responsibility for own work and work area	1
03.04	Seek and act constructively upon feedback about performance	1
03.05	Demonstrate safety skills	1
03.06	Respond appropriately to people and situations	1

03.07	Resolve interpersonal conflicts	1
03.08	Develop and maintain a cooperation within work group	2
03.09	Manage and improve performance of individuals	3
03.10	Provide consultation and counselling	3
03.11	Monitor and evaluate performance of human resources	3
03.12	Provide coaching/on-the job training	3
03.13	Develop and maintain team harmony and resolve conflicts	3
03.14	Facilitate and coordinate teams and ideas	3
03.15	Liase to achieve identified outcomes	3
03.16	Identify and assess client/customer needs	3
03.17	Identify staff training needs and facilitate access to training	3

# 04 Plan and Organize Work Activities

04.01	Organize own work activities	2
04.02	Set and revise own objectives and goals	2
04.03	Organize and maintain own workplace	2
04.04	Apply problem solving strategies	2
04.05	Demonstrate initiative and flexibility	2
04.06	Allocate work	3
04.07	Negotiate acceptance and support for objectives and strategies	3
04.08	Develop and negotiate staffing plans	4
04.09	Prepare project/work plans	4
04.10	Utilize science and technology to achieve goals	4

# 05 Manage Resources

05.01	Implement project/work plans	3
05.02	Inspect and monitor work done and/or in progress	3
05.03	Allocate and record usage of financial and physical resources	4
05.04	Delegate responsibilities and/or authority	4
05.05	Coordinate contract and tender activities	4

# 06 Work within and with Systems

06.01	Understand systems	1
06.02	Comply with and follow chain of command	1
06.03	Identify and highlight problems	1
06.04	Adapt competencies to new situations/systems	1
06.05	Analyse technical systems	2
06.06	Monitor and correct performance of systems	2

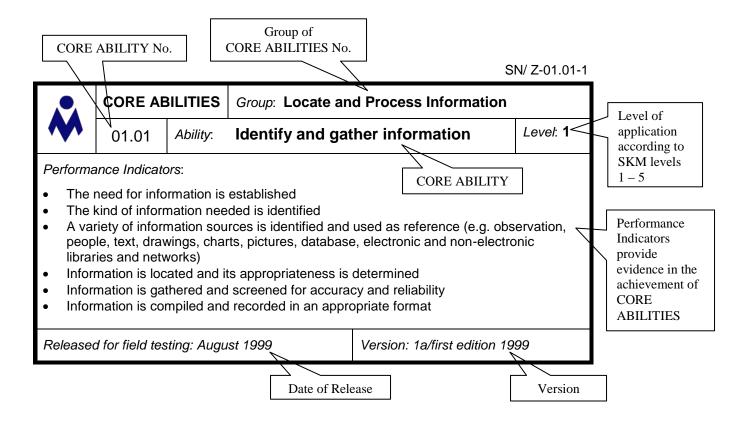
06.07	Develop and maintain networks	3
06.08	Identify and analyse effect of technology on the environment	4

Note: The levels (L) indicated in this CORE ABILITY Profile are considered general guidelines, and are connected to the respective SKM Levels and general job functions. However, different settings may apply depending on the work environment and industry-specific requirements.

# Sijil Kemahiran Malaysia (SKM)

# Classification of Malaysian National Occupation Skill Standards Levels 1 – 5

*	NOSS DEFINITION	expected o	f a skille n Malaysi	as a <b>specification of the competencies</b> ed worker/professional who is gainfully ia for an occupation area and level as
Level of Education	Job Function	Example Job Title	SKM Level	<b>Sijil Kemahiran Malaysia (SKM)</b> Malaysian Skill Certificate Definition of Levels 1 – 5
Bachelor of Technology Advanced Diploma	Management Stage	Manager, Engineer	Level 5	Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and of the allocation of substantial resources feature strongly, as do personal accountabilities for analysis and diagnosis, design, planning, execution and evaluation.
Diploma	Supervising	Executive, Assistant Engineer	Level 4	Competent in performing a broad range of complex technical or professional work activities, performed in a wide variety of contexts with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources is often required.
Advanced Certificate	Stage	Supervisor Technician	Level 3	Competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non- routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
Certificate	Operations & Production	Assistant Technician	Level 2	Competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and require individual responsibility and autonomy.
Certificate	Stage	Operator	Level 1	Competent in performing a range of varied work activities, most of which are routine and predictable.



Performance Indicators

	CORE ABILITIES		Group: Locate	te and Process Information		
$\mathbf{N}$	01.01	.01 Ability: Identify and gather information				
Performance Indicators:						
The need for information is established						
• The	kind of info	rmation need	led is identified			
<ul> <li>A variety of information sources is identified and used as reference (e.g. observation, people, text, drawings, charts, pictures, database, electronic and non-electronic libraries and networks)</li> </ul>						
<ul> <li>Infor</li> </ul>	mation is lo	ocated and its	appropriatenes	ss is determined		
<ul> <li>Information is gathered and screened for accuracy and reliability</li> </ul>						
<ul> <li>Information is compiled and recorded in an appropriate format</li> </ul>						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999		

SN/ Z-01.02-1

COR		ABILITIES	Group: Locate and Process Information			
01.02 <i>Ability</i> : Document informatic processes				nation, procedures or	Level: <b>1</b>	
Performance Indicators:						
• The	The purpose is established					
	<ul> <li>Information, procedures or processes are examined and screened for relevance and importance</li> </ul>					
	typical forn et group	nat to record	/document is ide	entified and applied according to p	urpose and	
• Ethic	al principa	l are adhered	I to (e.g. confide	entiality etc.)		
• Sour	ces and cr	edits of the in	formation etc, a	re acknowledged and recorded		
<ul> <li>Documents are filed and stored according to established procedures (e.g. filing system, access rights, etc.)</li> </ul>						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999		

#### SN/ Z-01.03-1

	<b>CORE ABILITIES</b> Group: Locate and Process Information						
$\mathbf{N}$	01.03	Ability: Utilize basic IT applications					
Perform	ance Indica	ators:					
• The	The purpose for the IT application is established						
	<ul> <li>The operation of computers in a stand- alone ( or in a network ) environment is demonstrated</li> </ul>						
• Basi	c command	ds of operatin	g system softwa	are are applied			
• Files	and disks	are managed	ł				
Suita	able softwa	re, equipmen	t and tools for th	ne task are selected			
<ul> <li>Prob man</li> </ul>		errors with eq	uipment and so	ftware are handled in a measure a	re systematic		
• Com	puter-virus	problems are	e taken into con	sideration and counter measures a	are applied.		
out (	<ul> <li>The transfer of concepts, knowledge and skills from one technology to another is carried out (e.g. paper information to IT- format etc.) according to established formats and quality standards</li> </ul>						
Ethical behaviour in computer use is demonstrated							
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE A	CORE ABILITIES Group: Loca		and Process Information		
	01.04 <i>Ability</i> : Analyse information <i>Level</i> : 2					
Perform	ance Indica	ators:				
The purpose is established						
	<ul> <li>The information is observed in systematic manner (e.g. note-taking, skimming, concept maps, etc.)</li> </ul>					
• The	relevance,	importance a	and reliability is e	established		
Patte	erns, interre	elationships a	ind trends are ic	lentified		
Fact	s and issue	es are clarifie	d and establishe	ed		
	<ul> <li>Relevant professional, technical and industry standards are met in research methodology used to examine evidence</li> </ul>					
Con	clusions are	e made and a	are supported by	/ facts		
Findings are recorded and shared with people involved, if necessary						
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999		

SN/ Z-01.05-2

	CORE ABILITIES		Group: Locate	ocate and Process information		
01.05 <i>Ability</i> : Utilize the Internet to locate and gather <i>Level</i> :				Level: <b>2</b>		
Perform	Performance Indicators:					
• The	operation c	of computer h	ardware and inf	ernet application software is demo	nstrated	
• The	information	n requirement	ts are establishe	ed		
• Appr	opriate sea	arch engines	are identified ar	nd utilized		
Infor	mation is fi	Itered and se	lected according	g to requirements		
<ul> <li>Safe</li> </ul>	ty precaution	ons and virus	-protection (e.g	. firewall, virus scanning etc. ) are a	adhered to	
• Dow	<ul> <li>Downloaded information is stored in adequate format</li> </ul>					
• Ethic	Ethical and legal principles in Internet use are demonstrated.					
Released	for field tes	sting: August 1	999	Version: 1a/first edition 1999		



Ability:

Group: Locate and Process Information

01.06

Utilize word processor to process information

Level: **2** 

Performance Indicators:

- Operation of computer in a stand-alone and a network environment is demonstrated
- Files and disks are managed
- Suitable word processing software, equipment and tools for the task are selected
- The format about type of the information is determined
- The transfer of concepts, knowledge and skills from one technology to another is carried out (e.g. paper information to IT-format, scanning/OCR technology, etc.) according to established formats and quality standards
- The document is composed, edited and formatted according to the requirements and the software features (e.g. spell-checking etc.)
- The integration of other software features is demonstrated (e.g. database, spreadsheet, graphics)
- The document is printed using hardware and software features
- Information is filed/stored, retrieved and back-ups are made according to established formats and procedures
- Problems and errors with equipment and software are handles in a logical and systematic manner
- Computer-virus problems are taken into consideration, and counter measures are applied.
- Ethical standards of computer usage are adhered to

Released for field testing: August 1999

Version: 1a/first edition 1999

	CORE ABILITIES Group: Loca		Group: Locate	and Process Information			
	01.07		ilize database ocess information	applications to locate and tion	Level: <b>3</b>		
Perform	Performance Indicators:						
• Ope	Operation of computers in a stand-alone and network environment is demonstrated						
Files and disks are managed							
Suita	Suitable database applications, equipment and tools for the task are selected						
• The	format and	type of the in	nformation is de	termined			
out (	<ul> <li>The transfer of concepts, knowledge and skills from one technology to another is carried out (e.g. paper information to IT-format, scanning/OCR technology, etc.) according to established formats and quality standards</li> </ul>						
		•	d, edited and for ng, sorting, etc)	matted according to the requireme	ents and the		
	integration easheet, gi		ware features is	demonstrated (e.g. reports, impor	t/export,		
• The	report/data	base is printe	ed using hardwa	are and software features			
	mation is fi ats and pro		etrieved and bac	k-ups are made according to estab	blished		
	<ul> <li>Problems and errors with equipment and software are handles in logical and systematic manner</li> </ul>						
• Computer-virus problems are taken into consideration, and counter measures are applied							
Ethical standards of computer usage are adhered to							
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE ABILITIES		Group: Locate	Locate and Process Information			
	01.08 <i>Ability</i> : Utilize spreadsh information		•	eet applications to process	Level: 3		
Perform	ance Indica	ators:					
• Ope	ration of co	mputers in a	stand-alone ne	twork environment is demonstrated	I		
• Files	and disks	are managed	ł				
Suitable spreadsheet applications, equipment and tools for the task are selected							
• The	format and	type of the ir	nformation is de	etermined			
out	<ul> <li>The transfer of concepts, knowledge and skills from one technology to another is carried out (e.g. import of database information, scanning/OCR technology, etc.) according to established formats and quality standards</li> </ul>						
• Spre	adsheets a	are composed	d using mathem	atical concepts, etc.			
			ed and formatteng, sorting, calc	ed according to the requirements, a culations, etc.)	nd the		
	integration base, grapl		vare features is	demonstrated (e.g. report, import/e	export,		
• The	spreadshe	et is printed u	ising hardware	and software features			
	mation is fi ats and pro		trieved, and ba	ck-ups are made according to esta	blished		
<ul> <li>Prot man</li> </ul>		errors with eq	uipment and sc	ftware are handled in a logical and	systematic		
• Com	Computer-virus problems are taken into consideration, and measures are applied						
Ethical standards of computer usage are adhered to							
Release	d for field tes	sting: August 1	999	Version: 1a/first edition 1999			

					SN/ Z-01.09-3	
	CORE A	BILITIES	Group: Locate	and Process Information		
$\mathbf{M}$	01.09		tilize business formation	graphic application to process	Level: 3	
Perform	ance Indica	ators:				
• Ope	ration of co	mputers in a	a stand-alone and	d a network environment is demon	strated	
• Files	and disks	are manage	d			
<ul> <li>Suita</li> </ul>	able compu	ter graphics	applications, eq	uipment and tools for the task are	selected	
• The	format and	type of the	graphic informati	on is determined		
out (		t of graphics		ills from one technology to another ology, etc.) according established		
Grap featu		omposed, ec	lited and formatte	ed according the requirements and	the software	
	U U		ware features is blishing etc.)	demonstrated (e.g. import/export,	merging with	
• The	graphics ar	re printed us	ing hardware an	d software features		
	mation is fi ats and pro		etrieved and bac	k-ups are made according to estat	blished	
<ul> <li>Prob man</li> </ul>		errors with e	quipment and so	ftware are handled in a logical and	systematic	
• Com	Computer-virus problems are taken into consideration, and counter measures are applied					
• Ethic	Ethical behaviour in computer use is demonstrated					
Released	l for field tes	ting: August	1999	Version: 1a/first edition 1999		

	CORE A	ABILITIES	Group: Locate	and Process Information			
	01.10	Ability: A	oply a variety o	f mathematical techniques	Level: <b>3</b>		
Perform	ance Indica	ators:					
• The	situation th	at requires m	nathematics is id	lentified			
form	ulas, eleme	entary algebr	0	sed (including, geometric represen escriptive statistical methods, and			
• The	degree of a	accuracy for t	he answers is e	stablished			
• Estir	nations to a	answers are i	made				
Math	nematical o	perations to i	mplement selec	ted strategies are executed			
<ul> <li>Appr</li> </ul>	opriate tec	hnology and	tools are utilized	d (e.g. calculator, computers, sprea	adsheets, etc)		
	<ul> <li>Numerical answers are checked for errors and the appropriate fir between problem and answers</li> </ul>						
• The transfer of mathematical strategies from one situation to another is demonstrated.							
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE A	ABILITIES	Group: Locate	and Process Information					
$\mathbf{N}$	01.11	Ability:         Apply thinking skills and creativity         Level: 3							
Perform	Performance Indicators:								
• The	subject und	der discussio	ns is clearly ider	ntified					
• Disti	nctions bet	ween facts a	nd opinion are e	established					
Infer	ences and	relations to c	other sources of	information are recognized					
• A va	riety of sou	rces is utilize	ed to synthesize	information					
	s or princip Iem solving	•	g relationships l	between objects are identified and	applied to				
	native solu dentified	itions, proces	ses or decisions	s are formulated and its potential c	onsequences				
	points/argunsidered	uments are s	upported with re	asons and evidence and feedback	form others				
• The	transfer of	thinking strat	egies from one	situation to another is demonstrate	ed				
<ul> <li>Beha</li> </ul>	Behaviour is consistent with the ethical standards within ad occupation or profession								
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999					

	CORE A	BILITIES	Group: Exchange Communicate Information					
	•			ow manuals, instructions, and ion Procedures (SOP)	Level: <b>1</b>			
Perform	Performance Indicators:							
• The	purpose of	information i	s identified					
char				ation is obtained (e.g. people, text, and non-electronic libraries and ne				
	•	•	ng observing effender nfamiliar terms,	ectively are demonstrated (note tak etc.)	king, asking			
<ul> <li>Understanding of the instructions is demonstrated through appropriate actions or applications.</li> </ul>								
Released	l for field tes	ting: August 1	999	Version: 1a/first edition 1999				

SN/ Z-02.02-1

	CORE ABILITIES Group: Exc			nge Communicate Information		
	02.02 <i>Ability:</i> Follow telephone / telecommunication procedures				Level: <b>1</b>	
Perform	ance Indica	ators:				
• The	purpose of	the telecomr	nunications is e	stablished		
	appropriate e-mail)	e medium of t	telecommunicati	ion is selected (e.g.telephone, fax,	e-mail,	
• The	contact pai	rticular are id	entified (e.g. na	me, company, telephone /fax etc)	and updated	
	•		communication polling, etc.)	equipment is demonstrated (e.g. s	pecial	
Calls	are receiv	red and scree	ened / forwarded	1		
• Esta	blished tele	ephone etique	ette is adhered t	0		
• Effect	ctive listeni	ng and speał	king skills are de	monstrated using acceptable lang	uage	
Infor	mation exc	hanged is cle	ear and accurate	e with necessary details and clarific	cation	
• Mess	<ul> <li>Message are recorded and forwarded according to established procedure</li> </ul>					
Released	for field tes	sting: August 1	999	Version: 1a/first edition 1999		

#### SN/ Z-02.03-1

	CORE A	ABILITIES	Group: Excha	nge Communicate Information			
	02.03	Ability: Co	Ability: Communicate clearly Level:				
Perform	ance Indica	ators:					
• Tho	ughts and ii	nformation ar	e expressed cle	arly and concisely			
• The	choice of w	vords /jargon	is adjusted to m	eet the needs of others			
• Effe	ctive listeni	ng skills and	feed back is der	nonstrated			
	impact of n / language)		ommunication a	nd cultural diversity is taken into ac	ccount (e.g.		
	ons to over ching, etc.)	•	ge difference or	difficulties are utilized (e.g. using	of signs,		
• App	ropriate rec	ording metho	ods are utilized (	note taking, recording devices)			
Release	d for field tes	sting: August 1	999	Version: 1a/first edition 1999			

SN/ Z-02.04-1

	CORE A	ABILITIES	Group: Excha				
			epare brief rep andard forms	oorts and checklist using	Level: <b>1</b>		
Perform	ance Indica	ators:					
• The	purpose is	established					
• The	appropriate	e format / stai	ndard from is se	elected according to established pro	ocedures		
• The	necessary	information /	data is identifie	d, verified and assembled			
• Appr	opriate lan	guage / jargo	on is used				
• The	information	n is checked b	pefore submission	on			
• Esta	Established deadlines for submission are met						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE A	CORE ABILITIES Group: Exchange / Communicate Information					
		ead / Interpret flowcharts and pictorial formation		Level: <b>1</b>			
Perform	ance Indica	ators:					
• The	purpose of	the graphic i	nformation is es	tablished			
	Ų	f symbols and gends, etc.)	d signs is under	stood and clarified (e.g. making inc	luiries, using		
	0		rve effectively ar miliar terms / sy	re demonstrated (note-taking, askir mbols, etc.)	ng for		
<ul> <li>Understanding of the graphic instructions is demonstrated through appropriate actions and feed back.</li> </ul>							
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE A	BILITIES	Group: Excha	nge / Communicate Information				
$\mathbf{N}$	02.06	Ability: Write memos and letters Level: 2						
Performance Indicators:								
• The	purpose of	communicat	on is establishe	d				
Infor	mation sou	rces are ider	tified (e.g. note	s, data, etc )				
Addr	essee is id	entified						
• Idea:	s and inforr	mation are ga	thered, organiz	ed and compiled				
• Form	nat is estab	lished (hand	written, typed, w	vord processing)				
• Appr	opriate writ	ting tools are	utilized. (e.g. w	ord processor)				
A cle	ar and con	icise languag	e and tone is us	sed				
<ul> <li>Stan appli</li> </ul>		of language a	and structure (ja	irgon, grammar, spelling, punctuati	on) are			
• The	information	is checked b	efore submissi	on				
• File of	copies are	produced and	d filed					
Established deadlines for submissions are met.								
Released	l for field tes	ting: August 1	999	Version: 1a/first edition 1999				

	CORE ABILITIES Group: Exch			nge / Communicate Information				
•	02.07 <i>Ability</i> : Utilize Local Area Network (LAN) / Intranet to exchange information				Level: <b>2</b>			
Perform	Performance Indicators:							
	source ope onstrated	eration of com	nputer hardware	and LAN/ Intranet application soft	ware is			
• The	information	requirement	s are establishe	ed				
	ess is estab ess rights)	lished accord	ding to establish	ed procedures (addressee ID, pas	sword, ID,			
Infor	mation is tr	ansmitted an	d received					
<ul> <li>Date</li> </ul>	safely pre	cautions and	virus-protection	l (e.g. firewall, etc) are adhered to				
Infor	mation is s	tored in an a	dequate format					
Ethic	Ethical principles in LAN use are demonstrated							
Released	l for field tes	ting: August 1	999	Version: 1a/first edition 1999				

	CORE A	ABILITIES	S Group: Excha	inge / Communicate Informat	ion				
$\mathbf{N}$	02.08	I and graphic information	Level: 2						
Performance Indicators:									
• The	purpose is	establishe	ed						
<ul> <li>Infor</li> </ul>	mation sou	irces are id	dentified (e.g. note	es, date, observation, etc.)					
Orig	nal ideas a	and inform	ation are gathered	l, organised, compiled and verif	ied				
	opriate gra er (comple	•		ording to the purpose and suitab	ility for the				
<ul> <li>Appr etc.)</li> </ul>	opriate too	ls and tec	hnology are utilize	d (e.g. computer graphics appli	cations software,				
<ul> <li>Stan</li> </ul>	dard rules	of graphic	language and str	ucture (symbols, icons, etc.) are	e applied				
	graphic info nission	ormation is	s checked for cons	sistency of meaning with the ori	ginal before				
• File	copies are	produced	and filed						
Established deadlines for submission are met.									
Released	l for field tes	sting: Augus	st 1999	Version: 1a/first edition 1999					

## SN/ Z-02.09-3

	CORE A	BILITIES	Group: Excha	nge / Communicate Information					
$\mathbf{N}$	02.09	2.09 Ability: Prepare flowcharts							
Perform	Performance Indicators:								
• The	purpose is	established							
• Infor	mation sou	rces are ider	ntified (e.g. proc	ess data, observations, etc.)					
• Origi	nal ideas a	ind information	on are gathered,	organized, compiled and verified					
	opriate flov plexity, fan		t is selected acc	ording to the purpose and suitable	to the reader				
• Appr etc.)	opriate too	Is and techn	ology are utilized	d (e.g. computer flowchart applicati	ons software				
Stan	dard rules	of flowchart	anguage and st	ructure (symbols, icons, etc.) are a	pplied.				
	flowchart ir re submiss		checked for con	sistency of meaning with the origin	nal idea				
• File	copies are	produced an	d filed						
• Esta	Established deadlines for submission are met.								
Released	Released for field testing: August 1999 Version: 1a/first edition 1999								

-			_		3N/ 2-02.10-3	
	CORE A	BILITIES	Group: Excha	nge / Communicate Information		
$\mathbf{N}$	02.10	Ability:	Prepare reports	and instructions	Level: <b>3</b>	
Perform	ance Indica	ators:				
• The	purpose is	established	1			
Infor	mation sou	irces are id	entified (e.g. note	s, technical data, abservations, etc	:.)	
• Origi	nal ideas a	and informa	tion are gathered	, organized, compiled and verified.		
		guage and xity, familia		d according to the purpose and suit	tability for the	
		ls and tech tware, scar		d (e.g. computer word processor, g	Iraphics	
A cle	ar and cor	ncise langua	age and tone is us	sed		
<ul> <li>Stan appli</li> </ul>		of language	e and structure (ja	argon, grammer, spelling, punctuati	ion) are	
	<ul> <li>Complex structures are re-framed using visual, numerical and symbolic representations (maps, drawings pictures, charts, etc.)</li> </ul>					
• The	The information is checked for consistency of meaning with the original before submission					
• File	File copies are produced and filed					
Established deadlines for submission are met						
Released	l for field tes	sting: August	1999	Version: 1a/first edition 1999		

					5N/ 2-02.11-5	
	CORE A	BILITIES	Group: Excha	nge / Communicate Information		
$\mathbf{N}$	02.11	Ability: Ca	anvey informat	ion and ideas to people	Level: 3	
Perform	ance Indica	ators:				
• The	purpose is	established				
• Indiv	idual and c	cultural differe	ences are recog	nized and taken into account		
		l ideas are pr conclusions	esented in a co	ncise, organized way, with clearly s	stated	
		l ideas are pr rms suited to		y which meets the needs of other	and is	
• Mes	sages are e	easily unders	tood through us	e of plain, clear language suited to	the receiver	
• Complex concepts or arguments are presented effectively through organization of material (e.g. visuals) and choice of language suited to the receiver						
• Peop	<ul> <li>People are given the opportunity to seek clarification thorough questions and answers</li> </ul>					
Receivers are encouraged to provide feedback.						
Released for field testing: August 1999 Version: 1a/first edition 1999						

SN/ Z-03.01-1

	CORE ABILITIES Group: W			k and Interact with People			
$\mathbf{N}$	03.01	Ability: Ap	oply cultural re	quirement to the workplace	Level: <b>1</b>		
Performance Indicators:							
• The	beliefs and	l customs of v	/arious ethnic gi	oups are recognized			
• An u	nderstandi	ng and respe	ct for the sensit	ivities in various cultural groups is	maintained		
• Effect	ct of cultura	al differences	within teams is	considered			
Cultu	ural, ethnic	and gender s	sensitivity is den	nonstrated			
• Beha	Behaviour that reduce tension, social isolation and prejudice are exhibited						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999			

	CORE ABILITIES		Group: Work and Interact with People			
			emonstrate integrity and apply ethical ractices		Level: <b>1</b>	
Perform	ance Indica	ators:				
• An u	nderstandi	ng of the con	cept of honest a	and integrity is demonstrated		
	mitments t oured	o and person	al undertakings	with clients and colleagues are co	nsistently	
Offic	ial informat	tion is used ir	n a way which m	naintains confidentiality		
• Priva	Privacy principles are adopted and complied with					
Established standards and codes of practise are adhered to						
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999		

SN/ Z-03.03-1

		Group: Work and Interact with People				
		-	Accept responsibility for own work and work area		Level: <b>1</b>	
Perform	ance Indica	ators:				
• The	work area i	is kept clean	and safe accord	ling to set standards and policies		
• Task	s are comp	oleted to the	standard expect	ed in the workplace		
		nitored accor of environme	• .	nents for job quality, timelines, reso	ources use	
<ul> <li>Appropriate work site locations, facilities and equipment are used to complete assigned tasks</li> </ul>						
Released	for field tes	ting: August 1	999	Version: 1a/first edition 1999		

	CORE ABILITIES		Group: Work and Interact with People			
$\mathbf{M}$	03.04	-	eek and act constructively upon feedback bout work performance	Level: <b>1</b>		
Perform	ance Indica	ators:				
• Wor	k performai	nce is discus	sed on a regular bass with supervisor / team meml	bers		
• Con	structive cri	iticism is acc	epted			
<ul> <li>Strategies for improvement, agreed at feedback meetings with supervisors and others, are implemented within a determined time frame</li> </ul>						
• Sug	uggestions for areas of self development are sought from supervisors, staff members and					

 Suggestions for areas of sell development are sought from supervisors, stan members ar clients

Released for field testing: August 1999

Version: 1a/first edition 1999

SN/ Z-03.05-1

	CORE ABILITIES Group: Wo			c and Interact with People				
03.05		Ability: Demonstrate safety skills		Level: <b>1</b>				
Performance Indicators:								
• Wor	<ul> <li>Work is performed in accord with Occupational Health and Safety policies and rules</li> </ul>							
	<ul> <li>Hazardous chemicals and goods are used, moved, stored and disposed of in accord with OH &amp; S policies/ rules</li> </ul>							
	arent hazar opriate way	•	ed to superviso	r and/or safety officer in a timely ar	nd			
	<ul> <li>Emergency and evacuation procedures are known and workplace can be evacuated with due regard to safety of people and environment</li> </ul>							
Release	Released for field testing: August 1999 Version: 1a/first edition 1999							

	CORE ABILITIES		Group: Work a	Group: Work and Interact with People		
$\mathbf{N}$	03.06 <i>Ability</i> : <b>Respond appropriately to people and sit</b>		riately to people and situations	Level: <b>1</b>		
Performance Indicators:						
• Indiv	idual and c	ultural diffe	erences are recog	nized and taken into account		
• Resp	onses are	adjusted to	meet the needs	of others		
<ul> <li>Issues and ideas are raised and addressed assertively when interacting with others both individually and in a group</li> </ul>						
<ul> <li>Inquiries are referred to other sources when it is appropriate</li> </ul>						
Released for field testing: August 1999Version: 1a/first edition 1999						

#### SN/ Z-03.07-1

	CORE ABILITIES		Group: Work a	and interact with people				
03.07 <i>Ability</i> : <b>Resolve interpersonal conflicts</b>				sonal conflicts	Level: <b>1</b>			
Perform	Performance Indicators:							
• The	nature of th	ne conflict an	d parties involve	ed are identified				
• An a	ttempt is m	hade to maint	ain communicat	tion				
Prob	lems are c	larified						
• Poss	sible solutio	on are examir	ned, discussed o	or proposed				
• Reas	sonable co	mpromises a	re offered / read	ched				
• A wi	n-win situat	tion is sought	to resolve disp	utes				
	<ul> <li>The impact of assertive, aggressive and passive behaviour is identified n the prevention and de-fusing of conflicts</li> </ul>							
<ul> <li>A mediator is involved to interact in deadlock situations when necessary</li> </ul>								
Released	Released for field testing: August 1999Version: 1a/first edition 1999							

	CORE ABILITIES Group: Work			and Interact with People			
$\mathbf{M}$	03.08 <i>Ability</i> : <b>Develop and mai</b> work group		intain a cooperation within	Level: <b>2</b>			
Performance Indicators:							
• An u	nderstandi	ng of the con	tributions of oth	ers to the work group is demonstra	ated		
• Assi	stance is o	ffered to othe	ers in the work g	roup when appropriate			
• Assi	stance is a	ccepted whe	n offered by oth	er team members			
	nderstandi group is d	•	al and cultural o	differences when working with othe	ers in the		
• Con	structive su	uggestions ar	e made in meeti	ings of the work group			
• Issu	es are raise	ed and pursu	ed assertively w	ithin the work group			
	<ul> <li>The requirements and views of others in the work group are considered when solving problems</li> </ul>						
• An u	<ul> <li>An understanding of how work group decisions are made is demonstrated</li> </ul>						
Others are informed of developments affecting their work functions							
Released for field testing: August 1999 Version: 1a/first edition 1999							

SN/ Z-03.09-3	
---------------	--

	CORE A	ABILITIES	Group: Work and Interact with People			
$\bigstar$			lanage and improve performance of ndividuals		Level: <b>3</b>	
Perform	ance Indica	ators:				
form				f member's performance is given t based on mutually agreed perform	•	
	<ul> <li>Performance problems are addressed in a fair, constructive and timely manner in accordance with relevant guidelines and procedures</li> </ul>					
<ul> <li>Strategies for the improvement of performance are discussed and implemented (e.g. training activities)</li> </ul>						
Released	Released for field testing: August 1999   Version: 1a/first edition 1999					

#### SN/ Z-03.10-3



 CORE ABILITIES
 Group: Work and Interact with People

 03.10
 Ability:
 Provide consultations and counselling
 Level: 3

Performance Indicators:

- Personal and cultural differences are taken into account when dealing with staff
- Day-to-day supervision and guidance of staff is undertaken in accordance with principles of equity and non-discrimination using counselling practices
- Counselling skills are used in formal and informal counselling sessions in accordance with organizational policies
- Standard of professional and ethical behaviour for employees are set by the example of their superiors
- Work contributions or suggestions from staff are continually sought and encouraged.

Released for field testing:	August	1999
Reference for hold toothing.	ruguor	1000

Version: 1a/first edition 1999

SN/ Z-03.11-3

	CORE ABILITIES Group: W		Group: Work a	and Interact with People		
	03.11	Ability: Monitor and evaluate performance of human Lev				
Perform	ance Indica	ators:				
• Perfe	ormance st	andards and	expectations ar	e established and explained to stat	ff	
•	-			f member's performance is given the structure of the second structure of the structure of t	0	
	structive fee mal proces	0	oup / team perfo	ormance is given through both form	nal and	
			addressed in a fa idelines and pro	air, constructive and timely manner cedures	in	
	<ul> <li>Records of performance evaluation / performance appraisal are updated according to established procedures</li> </ul>					
Proposal to upgrade performance are discussed with candidates or team						
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999		

#### SN/ Z-03.12-3

Level: 3



CORE ABILITIES Group: Work and Interact with People

Provide coaching / on-the-job training

Performance Indicators:

03.12

- Training needs of the staff in the area are identified, assessed and recorded
- On-the-job training is provided to the requirement standard

Ability:

- The application of information concerning the job and it's relevance to task is explained and conveyed to relevant parties
- · Learning opportunities are provided to allow staff to develop relevant skills
- Staff are encouraged to attend training courses and to take up other development opportunities
- Work group goals are met by the provision of technical supervision or guidance
- Training is used as a means of resolving problems in the work area

Released for field testing: August 1999

Version: 1a/first edition 1999

	CORE A	BILITIES	Group: Work a	and Interact with People			
	03.13 <i>Ability</i> :		Develop and maintain team harmony and resolve conflicts		Level: 3		
Performance Indicators:							
• Tear	n goals are	established	according to co	mpany policies and procedures			
Hiera	archy and o	operating pro	cedures are est	ablished and understood by team r	members		
• Co-c	peration in	the workplace	ce is actively fos	tered through appropriate work all	ocation		
• The	appreciatio	on of all achie	vement is demo	onstrated			
• Tear	n members	s are encoura	aged to share inf	formation, ideas and opinions			
	<ul> <li>Conflict is identified (e.g. assertive, aggressive or passive behaviour) and resolved with minimum disruption to work group function</li> </ul>						
	Cultural differences are taken into account when dealing with conflicts in a cross cultural setting						
<ul> <li>Active participation of team members in team building and problem solving activities is fostered.</li> </ul>							
Released	for field tes	sting: August 1	999	Version: 1a/first edition 1999			

SN/ Z-03.14-3

	CORE ABILITIES		Group: Work and Interact with People					
		03.14 Ability: Fa		acilitate and co	ordinate teams and ideas	Level: <b>3</b>		
Per	Performance Indicators:							
•	Goals and politics are established and explained to team							
•	Posit	ions and a	reas of resp	onsibility are esta	ablished and logically justified			
•	Cred	ibility and I	eadership is	established thro	ough competence and integrity			
•	Worł	contributio	ons or sugge	stions from staff	f are sought and encouraged			
•	Sugg	jestions are	e accepted,	or rejected in a c	constructive manner			
•	Worł	flow and p	practices are	established, util	lizing the skills of the team member	rs		
•	<ul> <li>Staff are provided with support guidance and supervision necessary to perform work safely and successfully</li> </ul>							
•	Conflict between staff members is addressed in accordance to personnel practices.							
Rel	eased	for field tes	ting: August a	1999	Version: 1a/first edition 1999			

	CORE A	ABILITIES	Group: Work a	and Interact with People			
$\mathbf{N}$	03.15 <i>Ability</i> : Liase to achieve identified outcomes						
Perform	ance Indica	ators:					
• The	purpose is	established					
			•	s period contractors, and/or suppli ation to the work	ers) are		
	mal comm tained	unication cha	innels within and	d outside the organization are deve	eloped and		
•	ken and wr d to the ree	•	e are easily und	erstood through use of plain, clear	language		
				ted affectively through the organiz ited to the receiver	ation of		
Issue     outce	-	otiated with k	ey parties in a w	vay which works towards an establ	ished		
Outc	Outcomes are recorded						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999			

SN/ Z-03.16-3

	CORE ABILITIES		Group: Work and Interact with People				
03.16 <i>Ability:</i> Identify and assess client/customer needs					Level: 3		
Perform	Performance Indicators:						
<ul> <li>Clier accu</li> </ul>		nd expectation	ns are defined a	nd checked with the client to ensu	re they are		
Clier	nt needs ar	e assessed a	gainst product o	or service provider's capacity to me	et them		
<ul> <li>Feed prov</li> </ul>		client is soug	pht in regard to h	nis level of satisfaction with service	s/products		
<ul> <li>Problems are resolved without disruption to work and/or brought to the client's attention where necessary</li> </ul>							
Clients are advised of actions to be taken to facilities the completion of work							

Released for field testing: August 1999Version: 1a/first edition 1999

	CORE ABILITIES		Group: Work and Interact with People				
	03.17	Ability:         Identify staff training needs and facilitate access to training         Level:					
Perform	ance Indica	ators:					
• Job	profiles are	established	and discussed with staff				
	petency de lopment pl	•	equirements are assessed in accordance with esta	blished staff			
• Trair	ning needs	of staff are ic	lentified and discussed with relevant staff members	S			
• Trair	ning strateg	gies are devel	loped and discussed with parties concerned				
• Trair	ning needs	are referred	to training providers (on-the-job and off-the-job trai	ning)			
• On-t	he-job train	ning provided	to the required standard				
	<ul> <li>Staff are encouraged to attend training courses and to take advantage of other development opportunities</li> </ul>						
	<ul> <li>Training is recommended/coordinated in accordance with identified needs, organizational policy and work flow requirements</li> </ul>						
Appl	Application of new skills and knowledge in the workplace is encouraged and supported						
• The	effectivene	ess of training	measures is monitored and recorded				

Released for field testing: August 1999

Version: 1a/first edition 1999

	CORE ABILITIES		Group: Plan a	nd organize Work Activities			
$\mathbf{N}$	04.01	Ability: O	rganize own wo	ork activities	Level: 2		
Performance Indicators:							
• The	nature of w	ork is assess	sed				
• The	desired out	tcome and co	onstraints are de	etermined			
• The	appropriate	e technology	or method is ide	entified			
Prior	ities are se	et before the	work commence	es in consultation with others			
• Effect	ctive time n	nanagement	techniques are u	used to meet priorities on time			
• Wor	k deadlines	are establis	hed and work is	completed within a specified time			
Prior	ities/deadli	nes are revie	wed regularly a	nd work altered according to revie	w		
	<ul> <li>Responsibility for judgments and decisions is exercised in accordance with the established level of accountability (*advanced levels only)</li> </ul>						
Professional and technical standards of excellence are adhered to							
Released	for field tes	sting: August 1	999	Version: 1a/first edition 1999			

SN/ 2	Z-04.	02-2
-------	-------	------

	CORE A	ABILITIES	Group: Plan and organize Work Activities					
$\mathbf{N}$	04.02	Ability: Se	Ability: Set and revise own objectives and goals					
Perform	Performance Indicators:							
• Reas	sonable/rea	alistic work re	sult or client ne	eds are identified				
• Obje	ctives/actio	on plans are s	stated as measu	rable targets with clear time frame	S			
• The	efficient us	age of resour	ces (e.g. mone	y, space, technology, time) is estat	olished			
• The	work perfo	rmance and u	usage of resource	ces is determined				
• Area	s for impro	vement are id	dentified					
• Pers	Personal training needs to achieve goals are discussed with supervisors							
Action is taken to revise goals and objectives								
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999				

	CORE A	ABILITIES	Group: Plan a	Group: Plan and organize Work Activities			
$\mathbf{N}$	04.03	Ability: <b>(</b>	organize and ma	aintain own workplace	Level: 2		
Perform	ance Indica	ators:					
	k place and onment.	l equipment	are adjusted to s	suit the ergonomic requirement of t	he work		
	pment is us ating guide		accordance with	n occupational health and safety st	andards and		
	ty/defective er/supervise		and/or tools are	identified and reported to issuing			
• Goo	Good house-keeping standards are established						
<ul> <li>Maintenance is carried out in accordance with standard workplace operating procedures and/or in accordance with manufacturers specifications</li> </ul>							
Released	l for field tes	sting: August	1999	Version: 1a/first edition 1999			

## SN/ Z-04.04-2

	CORE ABILITIES Group: Plan and organize Work Activi							
$\mathbf{N}$	04.04	Ability: 🖡	opply problem s	olving strategies	Level: <b>2</b>			
Perform	Performance Indicators:							
	lems as su Ild be )	ich are ident	ified (i.e. identify	ing a discrepancy between what is	and what			
• Poss	sible reasor	ns for the pr	oblem are identif	ied				
	ctive or deo lems	ductive reas	oning is applied t	to identify the cause of and possible	e solutions to			
Alter	natives and	d their conse	equences in relat	ion to the problem are identified				
• Poss	sible solutio	ons to the pr	oblem are explor	ed using a variety of resources				
Adva	antages and	d disadvanta	ages of each solu	ution are determined				
• Appr	opriate act	ion is deterr	nined and discus	sed				
<ul> <li>Appropriate action is implemented and its results are evaluated and shared with relevant parties</li> </ul>								
Released	l for field tes	sting: August	1999	Version: 1a/first edition 1999				

	CORE A	ABILITIES	Group: Plan a	nd organize Work Activities			
$\mathbf{N}$	04.05 Ability: Demonstrate initiative and flexibility						
Performance Indicators:							
• The	task is ider	ntified					
• Prob	lems or ch	allenges requ	uiring changes ir	n procedures or processes are ider	ntified		
• Alter	native worl	k methods ar	e identified and	suggested			
• Willin	ngness to t	ake on new ta	asks is demonst	trated			
• Worl	k practices	are modified	to adapt to char	nge			
• Poss	sible option	is are taken ir	nto account whe	n following instructions			
• Sugg	Suggestions for improving work practices are communicated to others						
<ul> <li>Problems in carrying out instructions or completing work are identified and communicated to others</li> </ul>							
Released for field testing: August 1999 Version: 1a/first edition 1999							

# SN/ Z-04.06-3

	CORE A	ABILITIES	Group: Plan and organize Work Activities			
$\mathbf{N}$	04.06 <i>Ability</i> : Allocate work				Level: 3	
Perform	ance Indica	ators:				
• Indiv	idual work	assignments	are identified			
• Worl	k is allocate	ed so that it c	an be complete	d within a specified time and budge	et	
• The	requiremer	nts to achieve	specified qualit	ty standards are determined (e.g. I	SO 9000)	
	<ul> <li>Instructions are communicated taking into account the individual differences and skills of staff</li> </ul>					
<ul> <li>Feedback and advices is provided to staff about tasks, work methods and performance standards (time and quality)</li> </ul>						
Released for field testing: August 1999Version: 1a/first edition 1999						

		ABILITIES	Group: Plan and organize Work Activities			
		-	egotiate acceptance and support for ojectives and strategies		Level: 3	
Perform	ance Indica	ators:				
• Obje	ctives and	strategies ar	e drafted			
<ul> <li>Parti</li> </ul>	ies concern	ned are identi	fied			
<ul> <li>Task</li> </ul>	ks, roles, ar	nd responsibi	lity of the parties	s involved are drafted		
Parti	ies are info	rmed and inv	ited/involved in	the planning and implementation p	rocesses	
		ented in a for win-win situa		to the audience and in a way whic	h gains their	
Reas	sonable co	mpromises a	re negotiated			
• The results / decisions are incorporated into the planning / implementation process						
Released	d for field tes	sting: August 1	999	Version: 1a/first edition 1999		

SN/ Z-04.08-4

	CORE A	ABILITIES	Group: Plan and organize Work Activities			
	04.08	Ability: D	evelop and neg	otiate staffing plans	Level: <b>4</b>	
Perform	ance Indica	ators:				
• The	nature and	complexity of	of the work is ide	entified		
Parti	cular comp	petency requi	rements for staf	f members are identified		
	loyees' ski bers to tas	•	e and experience	e are all considered when matching	g staff	
Staff	training ar	nd developm	ent are consider	ed		
	availability artment, etc		cussed with the	parties involved (e.g. staff, superv	isors, HR	
• Job	profiles for	additional sta	aff are identified	and discussed with respective par	ties	
	<ul> <li>Occupational Health and Safety matters and hazards that may arise on the job are taken into account</li> </ul>					
<ul> <li>Staffing plans are generated and forwarded to parties involved</li> </ul>						
Released	l for field tes	sting: August 1	999	Version: 1a/first edition 1999		

	CORE A	ABILITIES	Group: Plan a	nd organize Work Activities	
$\mathbf{N}$	04.09 <i>Ability</i> : <b>Prepare project / work plans</b>				Level: 4
Perform	ance Indica	ators:			
• Plan	s are deve	loped which a	are consistent w	ith and linked to the company's ob	jectives
				ed which identified the methods to later be checked	be employed
	vant perso ning proces		g other supervis	sors and staff, are consulted as pa	rt of the
				epted organization practice and p re, database systems)	rocedures
Mate	erials, servi	ces and equi	pment are ident	ified	
• Plan	s reflect an	n optimum us	e of available re	sources over a designated time fra	ame
• Plan	s and evalu	uations are co	ommunicated to	others within the organization as	necessary
• Plan	s are prepa	ared in accore	dance with relev	ant legislation, standards and guid	delines
<ul> <li>Occupational Health and Safety matters and any special hazards (e.g. environmental impact, etc.) are identified</li> </ul>					
Released for field testing: August 1999Version: 1a/first edition 1999					

	CORE ABILITIES Group: Plan and organize Work Activities						
$\mathbf{N}$	04.10 Abii		<i>bility:</i> Utilize science and technology to achieve goals				
Perform	Performance Indicators:						
• Scie	ntific princi	ples in proble	m-solving and o	decision-making are identified and	applied		
	opriate app onstrated	olication of m	athematics to th	ne collection, analysis and use of in	formation is		
	<ul> <li>Technology and equipment used to analyse, simulate, and solve problems are utilized (e.g. computers, experts systems, database systems etc.)</li> </ul>						
Appropriate application of technology to provide services etc. is demonstrated							
Released	Released for field testing: August 1999 Version: 1a/first edition 1999						

	CORE	ABILITIES	Group: Manag	e Resources			
$\mathbf{N}$	05.01	05.01 Ability: Implement project / work plans Level: 3					
Performance Indicators:							
• Det	ails of work	plans are co	mmunicated to c	others within organization when rec	quired		
<ul> <li>Resplay</li> </ul>		acquired, allo	ocated and used	I to meet agreed project objectives	, according to		
• Wo	rk methods	are designed	and organized	to meet job, client and staff require	ments		
• Mat	erials and e	equipment are	e provided prom	ptly to employees			
	k factors are maintained		nd contingency p	plans for allocation of resources are	e developed		
Saf	ety equipme	ent etc. requir	ed for work is a	cquired and provided to employees	6		
• Wo	rk plans are	monitored a	ccording to regu	lations			
• Wo	rk conforms	to prior estin	nates and any va	ariations have been coasted			
	<ul> <li>Monitoring result and evaluations are communicated to others within the organization as required</li> </ul>						
Released for field testing: August 1999 Version: 1a/first edition 1999							
<u> </u>				1			

	CORE A	ABILITIES	Group: Manag	je Resources				
•	05.02		spect and mor ogress	itor work done and / or in	Level: 3			
Perform	Performance Indicators:							
• Worl	<pre>specificat</pre>	ions are esta	blished					
		ed in accorda e/budget requ		lished standards in compliance wi	th quality,			
	• •		•	ked and recorded accurately for co	onsistency			
• Worl	k is certified	d in accordar	ice with establis	hed standards				
		variations to v		ed and promptly communicated to	employees			
	<ul> <li>Effective solutions are selected and developed to overcome problems, so that remedial action is taken when necessary</li> </ul>							
<ul> <li>Verbal and/or written reports on the progress of the work are provided to clients and other when required</li> </ul>								
Released for field testing: August 1999Version: 1a/first edition 1999								

					SN/ 2-03.03-4	
	CORE A	ABILITIES	Group: Manag	e Resources		
~	05.03	5.03 <i>Ability</i> : Allocate and record usage of financial and physical resources				
Perform	ance Indica	ators:				
• Res	ources and	budget are i	dentified and ve	rified		
• Res	ources are	acquired and	deployed prom	ptly in accordance with relevant gu	uidelines	
• Wor	k plans refle	ect an optimu	um use of availa	ble resources over a designated ti	me frame	
		ources alloca nes and proc	•	and current and are completed acc	ording to	
	<ul> <li>Systems which enable timely collection, management and processing of information are utilized and maintained</li> </ul>					
Pote	ential for over	erspending is	s identified and r	emedial action taken when require	d	
• Exp	enditure is i	made within a	approved budge	t		
• Esta	blished pric	ces are reflec	cted on invoices/	/bills		
	<ul> <li>Costs associated with work are reported in accordance with organization practices and procedures</li> </ul>					
<ul> <li>Esta price</li> </ul>		ces paid for s	services/product	are at or below the generally acce	pted market	
• Esta	Established prices are in line with period contracts or individually negotiated prices					
Release	d for field tes	sting: August 1	999	Version: 1a/first edition 1999		

	CORE A	ABILITIES	Group: Manage Resources			
$\mathbf{N}$	05.04	Ability: D	elegate respon	sibilities and/or authority	Level: <b>4</b>	
Performance Indicators:						
• Hiera	archy and a	authority is e	stablished			
• Area	s of respor	nsibility and a	authority for the I	respective parties are identified		
• Exist	ence of inc	dividual and	cultural differenc	es are recognized and taken into	account	
• Task	s to be del	egated are c	lefined and are w	vithin the competence of staff		
• Trair	ning require	ements are id	lentified and acc	ess to training is provided in a tim	ely manner	
• Dele	gation of re	esponsibilitie	s is supported by	y appropriate authority		
Parti	es concern	ned with the o	delegation of res	ponsibilities/ authority are informe	d	
A monitoring/report system is established						
Released for field testing: August 1999       Version: 1a/first edition 1999						

SN/ Z-05.05-4

	CORE ABILITIES Group: Manage Resources						
$\mathbf{N}$	05.05	Ability: Co	oordinate conti	ract and tender activities	Level: <b>4</b>		
Performance Indicators:							
	<ul> <li>Contracts or tender are called for and approved in accordance with established guidelines and standards</li> </ul>						
	der specific elines	ations and de	ocuments are pr	epared in accordance with establis	hed		
Bids	are receive	ed in accorda	ance with contra	ct and tender guidelines			
Bids	are proces	sed within sp	pecified time and	d budget constraints			
• App	lications are	e evaluated a	igainst agreed s	pecifications			
	• Accepted tender is monitored and assessed against document specifications and permitted variations are incorporated						
<ul> <li>Contract or tender is completed within accepted tender cost and time constraints to the organization's or client's satisfaction</li> </ul>							
Released for field testing: August 1999 Version: 1a/first edition 1999							

#### SN/ Z-06.01-1



CORE ABILITIES Group: Work within and with Systems

06.01 Ability: Understand systems

Performance Indicators:

- Social, organizational and technological systems in the workplace are established
- The relationships between system structures and goals is recognized
- Demands from the systems/organization are recognized and responded to
- The need to operate effectively within social, organizational and technological systems is accepted and demonstrated
- The acceptance of formal and informal codes of social / organizational systems Is demonstrated

Released for field testing: August 1999

Version: 1a/first edition 1999

SN/ Z-06.02-1

	CORE A	ABILITIES	Group: Work within and with Systems					
$\mathbf{N}$	06.02	Ability: C	omply with and	follow chain of command	Level: <b>1</b>			
Perform	Performance Indicators:							
• An u	nderstandi	ng of hierard	hy and authority	is demonstrated				
• The	roles and t	he contributi	ons of others to	the work process is identified				
• An u	An understanding of the own role and responsibilities is demonstrated							
• Guid	Guidance is sought when it is required							
• The	The acceptance of authority is demonstrated							
• Infor	Information on where to find things / people to get job done is shared with the work team							
Released	Released for field testing: August 1999 Version: 1a/first edition 1999							

	CORE A	ABILITIES	Group: Work within and with Systems				
$\mathbf{N}$	06.03	Ability: Id	entify and high	Level: <b>1</b>			
Perform	ance Indica	ators:					
• An u	nderstandi	ng of establis	hed procedures	and quality standards is demonst	rated		
• A mo	onitoring sy	vstem is estat	olished				
• Proc	edures and	d system perf	ormance are mo	onitored			
• Disc	Discrepancies between reality and expectations are recognized						
<ul> <li>Attempts are made to identify the root of the problem and to correct problems within established guidelines</li> </ul>							
<ul> <li>Appropriate personnel is informed about situations and problems</li> </ul>							
Released for field testing: August 1999 Version: 1a/first edition 1999							

SN/ Z-06.04-1

	CORE A	BILITIES	Group: Work w	vithin and with Systems			
~	06.04		Ability: Adapt competencies to new situations/ systems		Level: <b>1</b>		
Perform	ance Indica	ators:					
Curr	ent skills ar	nd knowledge	e or set of comp	etencies are assessed			
Situa	ations are r	ecognized wł	nich require ada	ptation of skills or competencies			
	<ul> <li>Competencies required for new situation or systems are identified and plans are made to acquire them</li> </ul>						
	<ul> <li>Goals are established for broadening the scope of competencies for personal and employment purpose</li> </ul>						
<ul> <li>Assistance is sought to transfer competencies to new situations if necessary</li> </ul>							
Released	Released for field testing: August 1999Version: 1a/first edition 1999						

#### SN/ Z-06.05-2

	CORE A	BILITIES	Group: Work w	vithin and with Systems		
	06.05	Ability: Ar	alyse technica	Level: <b>2</b>		
Perform	ance Indica	ators:				
• The	system is i	dentified and	investigated			
• The	function of	different part	s of machines c	r systems is identified		
	dependenc stigated	cies and intera	actions with oth	er machines, technologies or syste	ms are	
	<ul> <li>A variety of techniques and sources are employed to collect and organize information (e.g. computers, observations, manuals, charts, SOP, experts, etc.)</li> </ul>					
• Cau	se and effe	ct of technica	l systems is and	alysed		
<ul> <li>Conclusions are discussed and recorded in an appropriate format (e.g. chart, drawings, reports)</li> </ul>						
<ul> <li>Verbal and/or written reports are provided to clients and others as needed</li> </ul>						
Released	Released for field testing: August 1999Version: 1a/first edition 1999					

	CORE ABILITIES		Group: Work w	Group: Work within and with Systems		
$\mathbf{N}$	06.06 <i>Ability</i> : <b>Monitor and cor</b>			ect performance of systems	Level: 2	
Perform	ance Indica	ators:				
• The	technical s	ystem is ider	ntified and perfor	mance criteria are established		
• Perfe	ormance cr	riteria is inter	preted and verifi	ed		
			collected using a	appropriate methods an technology	y (e.g.	
	mation is c es, etc)	converted into	o an appropriate	format for comparison (e.g. charts	, graphs,	
		′or logical coi statistics, etc		ed to interpret data and informatior	1	
• Tren	<ul> <li>Trends in the performance of systems are established</li> </ul>					
Cone	Conclusions are discussed and recorded					
	<ul> <li>Effective solutions are selected or developed to overcome problems, and remedial action is taken where necessary</li> </ul>					
<ul> <li>Verbal and/or written reports are provided to clients and others as needed</li> </ul>						
Released	Released for field testing: August 1999   Version: 1a/first edition 1999					

	CORE A	BILITIES	Group: Work within and with systems				
$\mathbf{N}$	06.07	Ability: D	Level: <b>3</b>				
Perform	ance Indica	ators:					
• The	need and p	ourpose for ne	etworks (person	al contacts) is identified			
Mutu	al interests	s or needs ar	e identified				
	<ul> <li>Contacts (peers, bosses, subordinates, clients, period contractors, and/or suppliers) are identified for formal and informal liaison in relation to work</li> </ul>						
	<ul> <li>Informal communication channels within and outside the organization are developed and maintained</li> </ul>						
<ul> <li>Opportunities to meet and exchange information and ideas are created or utilized (formal and informal settings, events, Internet, etc)</li> </ul>							
Released	Released for field testing: August 1999Version: 1a/first edition 1999						

			Group: Work w	within and with systems		
$\mathbf{M}$				lyse effect of technology on	Level: <b>4</b>	
Perform	ance Indica	ators:				
• The	technology	to be applie	d is identified an	nd investigated		
• Envi	ronmental	protection lav	ws and regulatio	ns are identified		
Rest	trictions for	the use of sp	pecific technolog	gies or processes are determined		
• The	effects of te	echnology or	the natural and	social environment are considered	d	
	<ul> <li>A variety of techniques and sources are employed to collect and organize information on the effects (e.g. computers, observations, manuals, charts, SOP, experts, simulations, etc)</li> </ul>					
• Cau	se and effe	ect of technolo	ogy on natural e	nvironment is analysed		
• Cau	<ul> <li>Cause and effect of technology on social environment is analysed</li> </ul>					
• Any	Any negative impact of technology or system on the environment is identified					
Alter	Alternative technologies are investigated to minimize the environmental impact					
	<ul> <li>Conclusions are discussed and recorded in an appropriate format (e.g. chart, drawings, reports)</li> </ul>					
<ul> <li>Verbal and/or written reports are provided to respective parties as needed or required by law.</li> </ul>						
Released for field testing: August 1999 Version: 1a/first edition 1999						

# Appendix

# Application of Academic and Related Skills Performance Indicators

CORE ABILITIES require a foundation of knowledge, skills and understanding.

Since CORE ABILITIES are connected to all SKM levels, some performance indicators for the application of academic and related skills are provided for field testing.

- Applied Mathematics
- Locating Information
- Reading for Information
- Applied Technology
- Listening/Speaking
- Writing
- Teamwork
- Problem Solving

Sources:

The "Levels of Work Keys" described in this document are based on American College Testing (ATC) Work Keys Score Interpretation Guide, modified and adapted to the Malaysian Skill Certification System SKM Levels 1 - 5.

The definition for "*Problem Solving*" are adapted from *Hay Group, Hay Guide chart for evaluating Problem Solving*.

# **Applied Mathematics**

Applied Mathematics measures skill in applying mathematical reasoning to work-related problems. There are five levels of complexity, 3 through 7, with Level 3 being the least complex and Level 7 the most complex.

#### Work Key Level 3 applicable to SKM Level 1

- Perform basic mathematical operations (addition, subtraction, multiplication and division) and conversions from one form to another, using whole numbers, fractions, decimals or percentages.
- Translate simple verbal problems into mathematical equations.
- Directly apply logical information provided to solve problems, including those with measurements and Ringgit and Sen.

#### Work Key Level 4 *applicable to SKM Level 2*

- Perform one or two mathematical operations (such as addition, subtraction or multiplication) on several positive or negative numbers.
- Add commonly know fractions, decimals or percentages (e.g. ½, 0.75, 25%) or add three fractions that share a common denominator.
- Calculate averages, simple ratios, proportion and rates, using whole numbers and decimals.
- Reorder verbal information before performing calculations.
- Read simple charts or graphs to obtain information needed to solve a problem.

#### Work Key Level 5 *applicable to SKM Level 3*

- Look up and calculate single-step conversions within English or non-English measurement systems (e.g. converting ounces to pounds or centimetres to metres) or between measurement systems (e.g. converting inches to centimetres).
- Make calculations using mixed units (e.g. hours and minutes).
- Determine what information, calculations and unit conversions are needed to find a solution.

#### Work Key Level 6 applicable to SKM Level 4

- Calculate using negative numbers, fractions, ratios, percentages, mixed numbers and formulas.
- Identify and correct errors in calculations.
- Translate complex verbal problem into mathematical expressions, using considerable set-up and multiple-step calculations or conversions.

## Work Key Level 7 applicable to SKM Level 5

- Solve problems requiring multiple steps of logic and calculation.
- Solve problems involving more than one unknown, non-linear functions (e.g. rate of change) and applications of basic statistical concepts (e.g. error of measurement).
- Solve problem with unusual content or format or with incomplete or implicit information.

# Locating Information

Locating Information measures skill in using information taken from workplace graphics such as diagrams, blueprints, floor plans, tables, forms, graphs, charts and instrument gauges.

There are four levels of complexity, 3 through 6, with Level 3 being the least complex and Level 6 the most complex. The levels build on each other, each incorporating the skills of the preceding levels.

# Work Key Level 3 applicable to SKM Level 1

- Find one or two pieces of information in elementary workplace graphics, such as simple order forms, bar graphs, tables, flowcharts and floor plans.
- Fill in one or two pieces of information that are missing from elementary workplace graphics.

## Work Key Level 4 *applicable to SKM Level 2*

- Find several pieces of information in straightforward workplace graphics, such as basic order forms, line graphs, tables, instrument gauges, maps, flowcharts and diagrams.
- Summarize and/or compare information and trends in a single straightforward graphic.
- Summarize and/or compare information and trends among more than one straightforward workplace graphics, such as a bar chart and a data table showing related information.

## Work Key Level 5 *applicable to SKM Level 3*

- Summarize and/or compare information and trends in single complicated workplace graphics, such as detailed forms, tables, graphs, maps, instrument gauges and diagrams.
- Summarize and/or compare information and trends among more than one complicated workplace graphics, such as a bar chart and a data table showing related information.

## Work Key Level 6 applicable to SKM Level 4 to 5

• Make decisions, draw conclusions, and/or apply information to new situations using several related and complex workplace graphics that contain a great amount of information or have challenging presentations (e.g. very detailed graphs, charts, tables, forms, maps, blueprints, diagrams).

# Reading for Information

Reading for Information measures skill in reading and understanding work-related reading materials. There are five levels of complexity, 3 through 7, with Level 3 being the least complex and Level 7 the most complex.

Although Level 3 is the least complex, it still represents a level of reading skill well above "no skill at all". The levels build on each other, each incorporating the skills of the preceding levels.

## Work Key Level 3 applicable to SKM Level 1

- Identify uncomplicated key concepts and simple details.
- Recognize the proper placement of a step in a sequence of events, or the proper time to perform a task.
- Identify the meaning of words that are defined within a passage.
- Identify the meaning of simple words that are not defined within a passage.
- Recognize the application of instructions from a passage to situations that are described in the passage.

# Work Key Level 4 *applicable to SKM Level 2*

- Identify details that are more subtle than those in Level 3.
- Recognize the application of more complex instructions, some of which involve several steps, to describe situations.
- Recognize cause-effect relationships.

## Work Key Level 5 *applicable to SKM Level 3*

- Identify the paraphrased definition of jargon or technical terms that are defined in a passage and recognize the application of jargon or technical terms to stated situations.
- Recognize the definition of acronyms that are defined in a passage. Identify the appropriate definition of words with multiple meanings. Recognize the application of instructions from a passage to new situations that are similar to the situations described in reading materials.
- Recognize the applications of more complex instructions to described situations including conditional and procedures with multiple steps.

## Work Key Level 6 applicable to SKM Level 3 to 4

- Recognize the application of jargon or technical terms to new situations.
- Recognize the application of complex instructions to new situations. Recognize the less common meaning of a word with multiple meanings from context.
- Generalize from a passage to situations not described in the passage. Identify implied details.
- Explain the rationale behind a procedure, policy or communication.
- Generalize from a passage to a somewhat similar situation.

## Work Key Level 7 applicable to SKM Level 4 to 5

- Recognize the definitions of difficult, uncommon jargon or technical terms from context.
- Generalize from a passage to situations neither described in nor completely similar to those in a passage.

# Applied Technology

Applied Technology measure skills in solving problems of a technological nature, involving the basic principles of mechanics, electricity, fluid dynamics and thermodynamics as they apply to machines and equipment found in the workplace. There are four levels of complexity, 3 through 6, with Level 3 being the least complex and Level 6 the most complex.

Although Level 3 is the least complex, it still represents a level of applied technology skill well above "no skill at all". The levels build on each other, each incorporating the skills of the preceding levels.

# Work Key Level 3 applicable to SKM Level 1

- Apply the elementary physical principles underlying the operation of uncomplicated systems or tools.
- Recognize and identify relevant aspects of simple problems that involve one uncomplicated system or tool.
- Select appropriate methods or materials needed to solve problems.

## Work Key Level 4 *applicable to SKM Level 2*

- Recognize, identify and order relevant aspects of one moderately complex system or more than one uncomplicated system.
- Evaluate alternative solutions to determine the most appropriate one for the situation presented.

## Work Key Level 5 applicable to SKM Level 3

- Solve problems based on one complex system, or one or more uncomplicated tools or systems.
- Understand and apply moderately difficult principles of mechanics, electricity, thermodynamics and fluid dynamics, in addition to understanding complex machines and systems.
- Recognize, identify and order relevant aspects of a problem before reaching an appropriate solution.

## Work Key Level 6 *applicable to SKM Level 4 to 5*

- Solve problems that do not contain all the information needed to solve them, and/or in which the information provided may be out of logical order.
- Solve problems that contain extraneous information.

- Solve problems involving one or more tools or systems having a wide range of complexity.
- Apply difficult physical principles.
- Understand and correctly interpret the interaction of several complex systems.

# Listening/Speaking/Oral Communications

Listening measures skills in listening to and understanding work-related messages; receiving information from customers, co-workers, or suppliers; and then writing down the information to communicate it to someone else. Learners demonstrate their ability to distinguish and communicate critical information and non-critical information. **Critical information** consists of those details that the recipient of the message must have in order to understand the message or act upon it (e.g. names, phone numbers, addresses, times). **Non-critical information** can improve a message by providing details that further explain the message or its tone, but the absence of this non-critical information does not interfere with the recipient's ability to understand and accurately act upon the message. Each *Listening* level describes the **content and quality** of messages learners write to describe an audio message.

# Listening skills apply to Speaking skills as well (Oral Communications)

## Level 0

• No meaningful information or totally inaccurate information.

## Level 1

• Minimal pertinent information; enough context to provide clues as to gist of situation or source of further information.

## Work Key Level 0 – 1 is considered not sufficient for a work environment

## Work Key Level 2 applicable to SKM Level 1

• Some pertinent information; may have incorrect critical information, but sketch of the situation is correct.

## Work Key Level 3 applicable to SKM Level 2

• All the critical information that is present is correct; may be missing a few pieces of critical information.

## Work Key Level 4 applicable to SKM Level 3

• All critical information is given and is correct; may be missing subtle details or tone; may have incorrect non-critical information that does not interfere with central meaning.

#### Work Key Level 5 applicable to SKM Level 4

• All critical information is present and correct; response conveys insight into situation through tone and/or subtle details.

#### Writing

*Writing* measures skill at writing work-related messages; receiving information from customers, co-workers, or suppliers; and then writing down the information to communicate it to someone else. Each *Writing* level rates the **writing mechanics** (such as sentence structure and grammar) **and writing style** of messages learners write to describe an audio message.

#### Level 0

• An attempt is made at the message, but the message is completely garbled with no recognizable sentence structure.

#### Level 1

• Message conveyed inadequately; overall lack of proper sentence structure.

#### Work Key Level 0 – 1 is considered not sufficient for a work environment

#### Work Key Level 2 applicable to SKM Level 1

• Message conveyed inadequately; weak sentence structure; large number of mechanical errors.

#### Work Key Level 3 applicable to SKM Level 2

Message conveyed clearly; most sentences structure; some mechanical errors.

#### Work Key Level 4 applicable to SKM Level 3

 Message conveyed clearly; all sentences are complete; may have a few minor mechanical errors; may have a choppy style.

#### Work Key Level 5 *applicable to SKM Level 4*

• Message conveyed clearly; good sentence structure; no mechanical errors; highly appropriate for business setting and situation; smooth, logical style.

# Teamwork

*Teamwork* measures skill in choosing behaviour and/or actions that simultaneously support team inter-relationships and lead towards the accomplishment of work tasks. There are four levels of complexity, 3 through 6, with Level 3 being the least complex and Level 6 the most complex.

Although Level 3 is the least complex, it still represents a level of teamwork skill well above "no skill at all". The levels build on each other, each incorporating the skills of the preceding levels.

# Work Key Level 3 applicable to SKM Level 1 to 2

- Identify team goals and ways to work with other team members to accomplish those goals.
- Choose actions that support the ideas of other team members to accomplish team goals.
- Recognize that a team is having problem finishing a task and identify the cause of those problems.

# Work Key Level 4 *applicable to SKM Level 3*

- Identify the organization of tasks and the time schedule that would help accomplish team goals efficiently and effectively.
- Select approaches that accept direction from other team members in order to accomplish tasks and to build and keep up good team relations.
- Identify behaviours that show appreciation for the personal and professional qualities of other team members and respect for their diversity.

## Work Key Level 5 *applicable to SKM Level 4*

- Identify courses of action that give direction to other team members effectively.
- Choose approaches that encourage and support the efforts of other team members to further team relationships and/or task accomplishment.
- Consider the possible effects of alternative behaviours on both team relationships and team accomplishments and select the one that would best help the team meet its goals.

## Work Key Level 6 *applicable to SKM Levels 4 and 5*

- Identify the focus of team activity and select a new focus if that would help the team meet its goals more effectively.
- Select approaches that show the willingness to give and take direction as needed to further team goals (e.g. recognize the organization of team members' tasks that would best serve the larger goals of the team).
- Choose approaches that encourage a team to act as a unit and reach agreement when discussing specific issues.

• Identify actions that would help manage differences of opinion among team members, moving the team towards its goals while valuing and support individual diversity.

## Problem Solving

*Problem Solving* is the 'self starting' thinking required by the job, which is used for analysing, evaluating, creating, reasoning, arriving at and drawing conclusions. To the extend that thinking is circumscribed by the standards or covered by procedures, or referred to others.

Problem Solving has two dimensions:

- A. The environment in which thinking takes place
- B. The challenge presented by the thinking to be done

## A. The environment in which thinking takes place

(a) **Strict routine**: (SKM L 1)

Thinking with detailed rules, instructions and/or rigid supervision

(b) *Routine:* (*SKM L* 1)

Thinking within standard instructions and/or close supervision

#### (c) **Semi-routine**: (SKM L 1)

Thinking within well defined procedures and precedents, somewhat diversified and/or supervised.

# (d) **Standardized:** (SKM L 2)

Thinking within substantially diversified, established (company) procedures and standards, and general supervision.

(e) Clearly defined: (SKM L 2)

Thinking within clearly defined (company) policies, principles and specific objectives, under readily available direction.

(f) **Broadly defined:** (SKM L 3)

Thinking within broad policies and objectives, under general direction.

# (g) Generally defined: (SKM L 1)

Thinking with general policies, principles and goals under guidance.

(h) Abstractly defined: (SKM L 1)

Thinking within business philosophy and/or principles controlling human affairs.

## B. The challenge presented by the thinking to be done

1) **Repetitive:** (SKM L 1)

Identical situations requiring solutions by simple choice of things learned.

2) **Patterned:** (SKM L 2) Similar situations requiring solutions by discriminating choice of things learned.

# 3) Variable: (SKM L 3)

Differing situations requiring the identification and selection of solutions through acquired knowledge.

# 4) **Adaptive:** (SKM L 4)

Situations requiring analytical interpretative, and/or constructive thinking and a significant degree of evaluative judgment.

# 5) **Uncharted:** (SKM L 5)

Pathfinding situations requiring creative thinking and the development of new concepts and approaches contributing significantly to the advancement of knowledge and thought.