

The Strategic Role of Professional Certification Body in Improvement of Human Resource Competency in Mining Industry

Association of Indonesian Mining Professional
(PERHAPI)

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13 Juni 2011

INTRODUCTION

The globalization in all aspects and especially in mining industry have required more transparency, standardization and accountable.

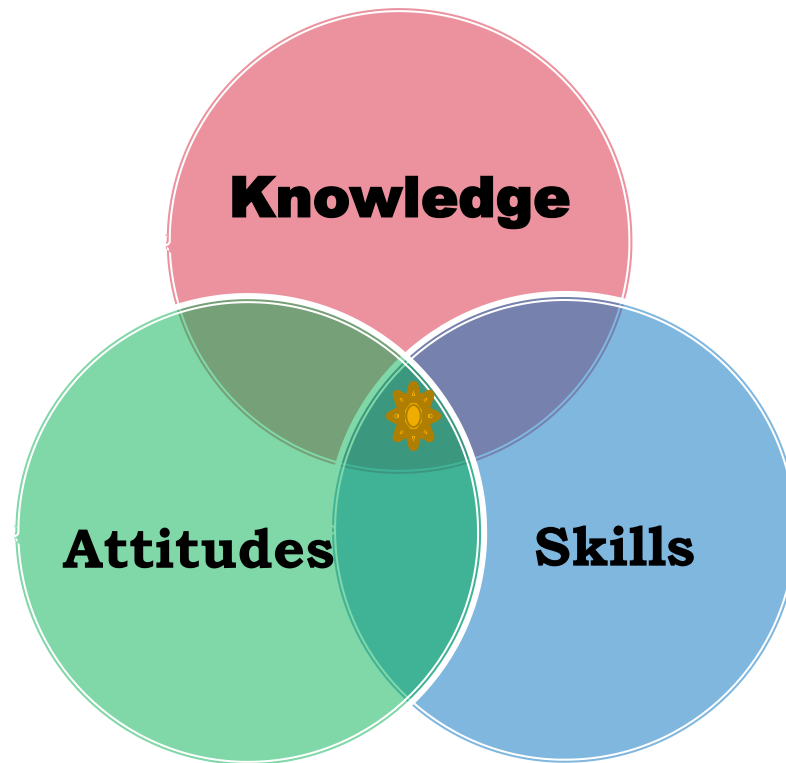
To strengthen the role of Indonesian Mining Professionals, it is necessary to have mining competence certification system.

COMPETENCY

- Knowledge, Skills and Attitudes required by individuals to handle the job successfully

Key Points:

- Knowledge: know what
- Skill: know how
- Attitude: how should



Mining Industry Trends:

Increasing Global Demand and Value Chain Consolidation



Increasing Mergers and Acquisitions

Industry consolidation requires more flexibility in information systems to combine business processes

Increasing Demand Growth

Industrialization in Asia is driving demand for commodities (copper, nickel, aluminum, and iron ore, coal, etc.)

Price Volatility

Increasing volatility of commodity prices requires greater control to manage sales revenue and cash flow to ensure profitability

Increasingly Constrained Supply Chains

Increased shipping volumes create heavy demand on ports, low stock levels drive need for constraint-based scheduling

Increasing Production Volume and Costs

Existing operations are running at max capacity, operating costs are increasing and need to be managed

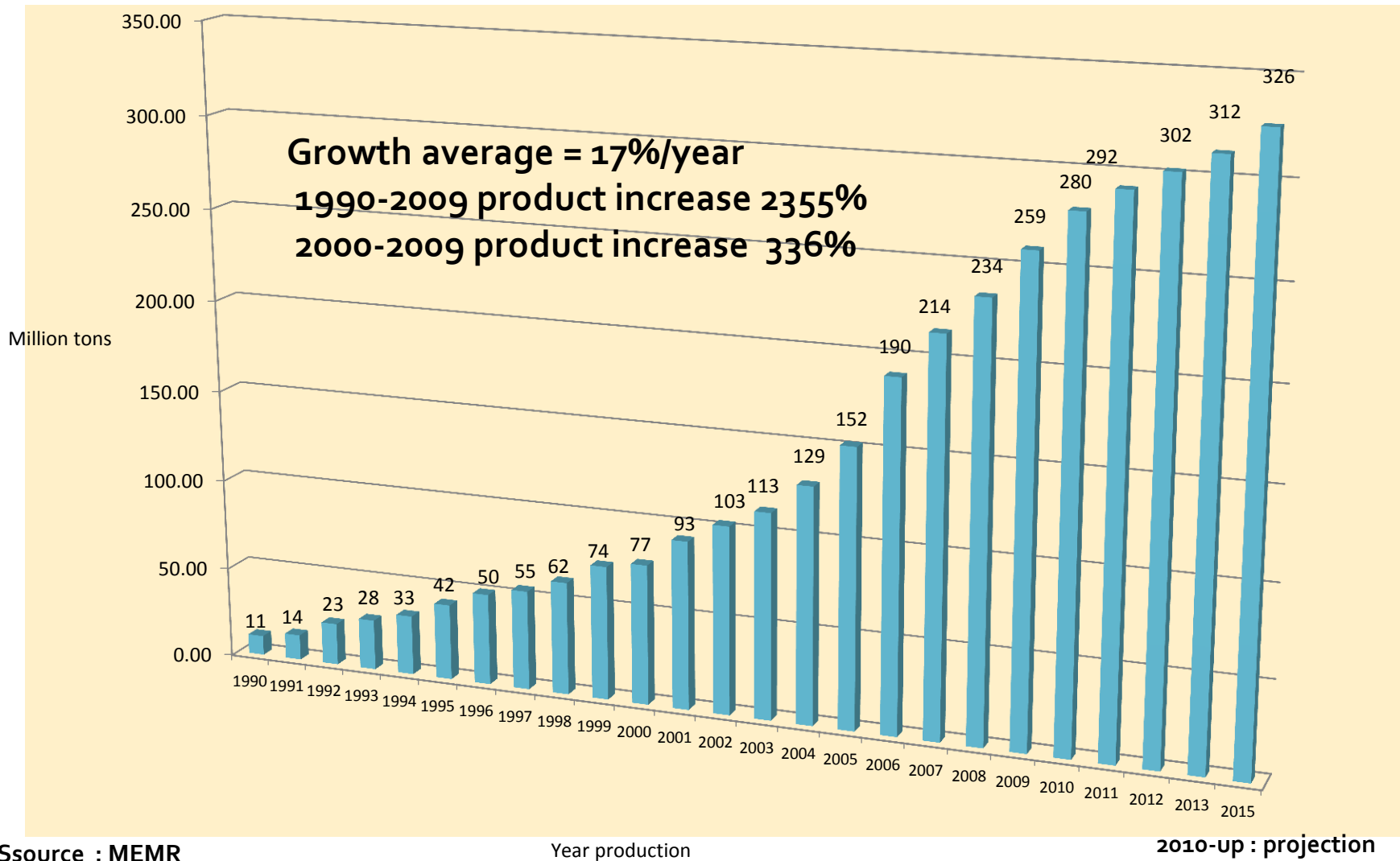
Tightening Labor Market

Lack of expert workforce to fill vacant jobs, high staff turnover leads to knowledge drain

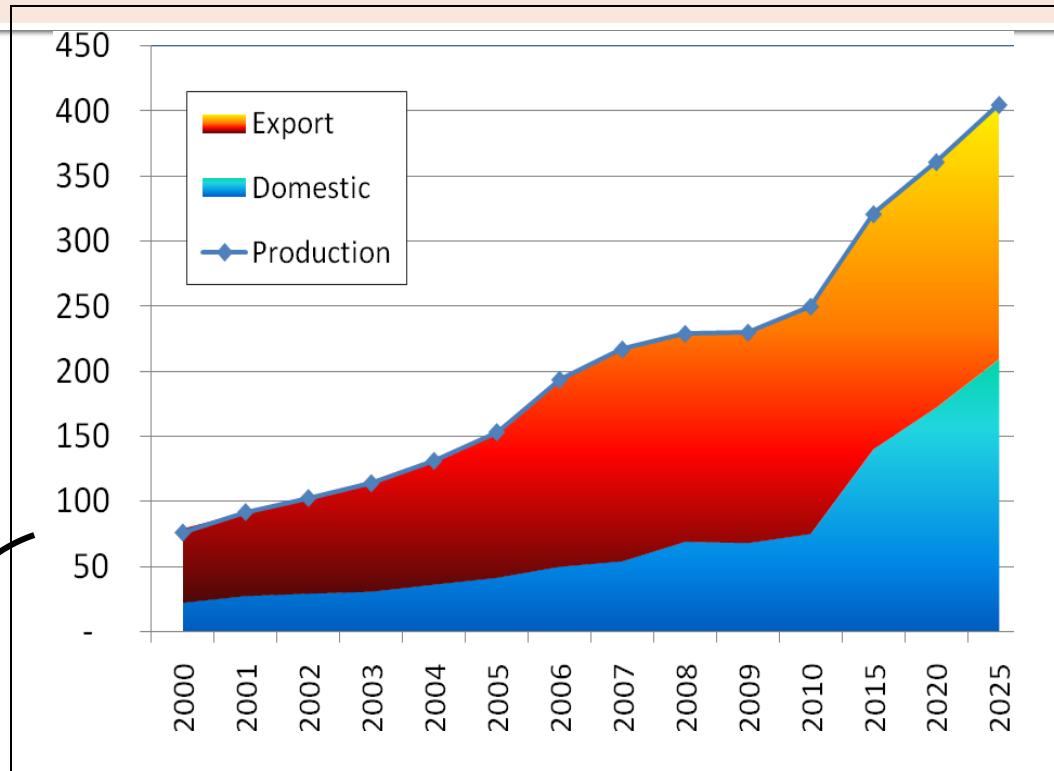
Corporate Sustainability

Managing and publicly reporting on the impact of mining activities on the community, the environment and on the safety of the people

INDONESIA'S COAL PRODUCTION (1)



Coal Issues in Indonesia

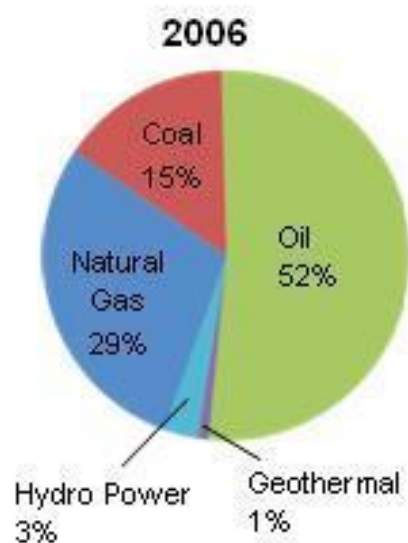


⇒ Domestic coal supply should be guaranteed

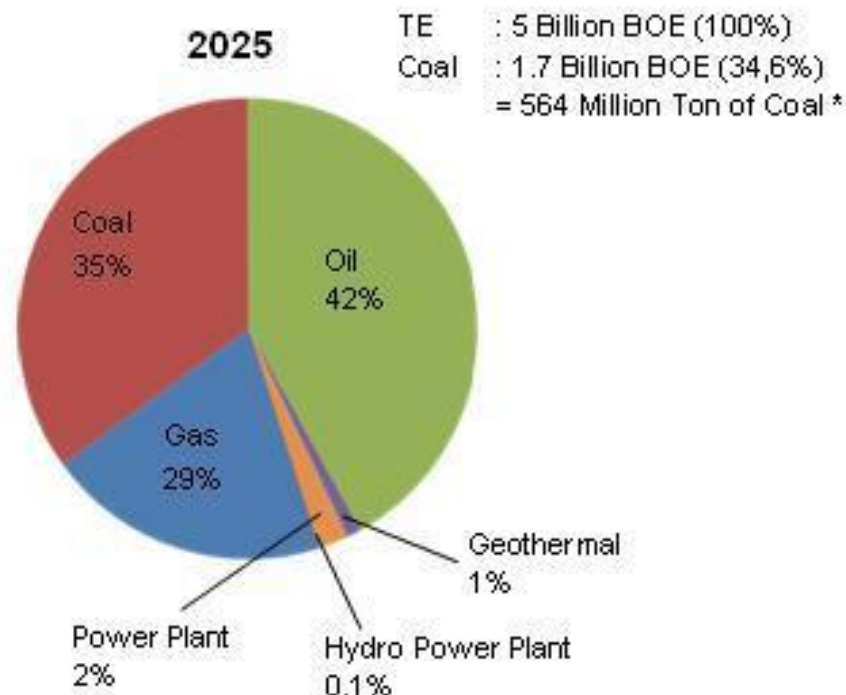
⇒ Optimizing national income

- Indonesia is one of the largest coal exporter
- So far 70% of coal production is exported

ROAD MAP INDONESIAN ENERGY MIX 2006 - 2025



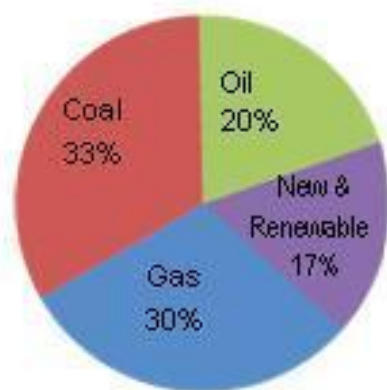
TE : 993 Million BOE (100%)
Coal : 152 Million BOE (15,34%)
= 50 Million Ton of Coal *



TE : 5 Billion BOE (100%)
Coal : 1.7 Billion BOE (34,6%)
= 564 Million Ton of Coal *



2025 (Optimizing Energy Management)



TE : 2.8 Billion BOE (100%)
Coal : 923 Million BOE (33%)
= 301 Million Ton of Coal *

*) Using Conversion Factor : Lignite 1 MT = 3,0649 BOE

Coal Mining Productivity by Country (2007)

Country	Productivity tonnes per man per year
Australia	22,500
USA	20,000
Canada	16,000
China	10,000 (large mines)
South Africa	8,000
Colombia	5,500
Venezuela	4,400
Indonesia	3,500
UK	2,500
Poland	800-1,000
Germany	<1,000

For the same with productivity in South Africa, Indonesia must increase 4 times production

**Technology
Equipment**

COMPETENCY



MAN POWER RESOURCES DATA IN COAL CONT WORK (CCoW/PKP2B) 2005-2010



	COMPANY	GENERATION	2005		2006		2007		2008		2009		2010*	
			TKI	TKA	TKI	TKA	TKI	TKA	TKI	TKA	TKI	TKA	TKI	TKA
I	CONTRACT OF WORK/ CoW(KK)	II	1.245	16	1.224		1.074	6	1.065	6	1.043	7	544	5
		III	467	9	420	7	445	5	580	9	1.208	18	639	11
		IV	4.515	107	9.396		8.440	145	4.874	73	4.481	70	4.338	64
		V	11.091	230	16.396	238	16.276	259	14.621	239	13.967	212	3.326	75
		VI	1.345	34	2.316	104	3.159	103	2.093	67	1.934	76	1.526	75
		VII	483	7	4.897	16	1.795	28	1.366	30	1.109	29	404	4
		Sub Total	19.146	403	34.649	365	31.189	546	24.599	424	23.742	412	10.777	234
		Total	19.549		35.014		31.735		25.023		24.154		11.011	
II	CCoW/PKP2B	I	6.233	71	6.824	86	6.996	70	7.741	65	8.601	68	8.886	72
		II	2.382	71	2.940	88	3.228	74	3.296	67	3.510	56	3.483	25
		III	2.211	45	3.374	35	4.370	40	4.733	84	4.905	72	3.823	52
		Sub Total	10.826	187	13.138	209	14.594	184	15.770	216	17.016	196	16.192	149
		Total	11.013		13.347		14.778		15.986		17.212		16.341	
II	SUB CONTRACTOR	KK						4.704	74	6.866	141	2.129	58	
		PKP2B	7.021	5	60.816	157	56.225	159	78.853	186	82.130	226	78.525	225
		Sub Total	7.021	5	60.816	157	56.225	159	83.557	260	88.996	367	80.654	283
		Total	7.026		60.973		56.384		83.817		89.363		80.937	
TOTAL			37.588		109.334		102.897		124.826		130.729		108.289	

Source : Directorate of mineral and Coal Enterprises Development, MEMR

2010* 1st quarterly 2010

MANPOWER NEEDS (Mining sector)



- For 2005-2009 data, PKP2B: every increase in production of 2.000 tons (average) will need an additional 1 MP
Until the year 2013 from 2009 will be required additional workforce of about 50,000 people (owners of concession + contractor)

2.000 tons / year, assuming SR = 5:1 and working hours to 8 hours / day, 350 day / year means productivity mp approximately 4.1 bcm / hrs

Competence in the Law Perspective

MANDATORY

- ❑ Law No. 13/2003: about employment
 - ❖ Article 11: Every labor is entitled to obtain and / or enhance and / or develop "job competence" according to their talents, interests and abilities through job training
 - ❖ Article 12 paragraph 1 : Employers are responsible for improving and / or development of job competencies through job training

- ❑ Law No. 4 / 2009 : about Mineral and Coal
 - ❖ Article 147: Government and regional governments must promote, implement, and / or facilitate the implementation of education and training in the field of mineral and coal

RECOGNITION OF COMPETENCE

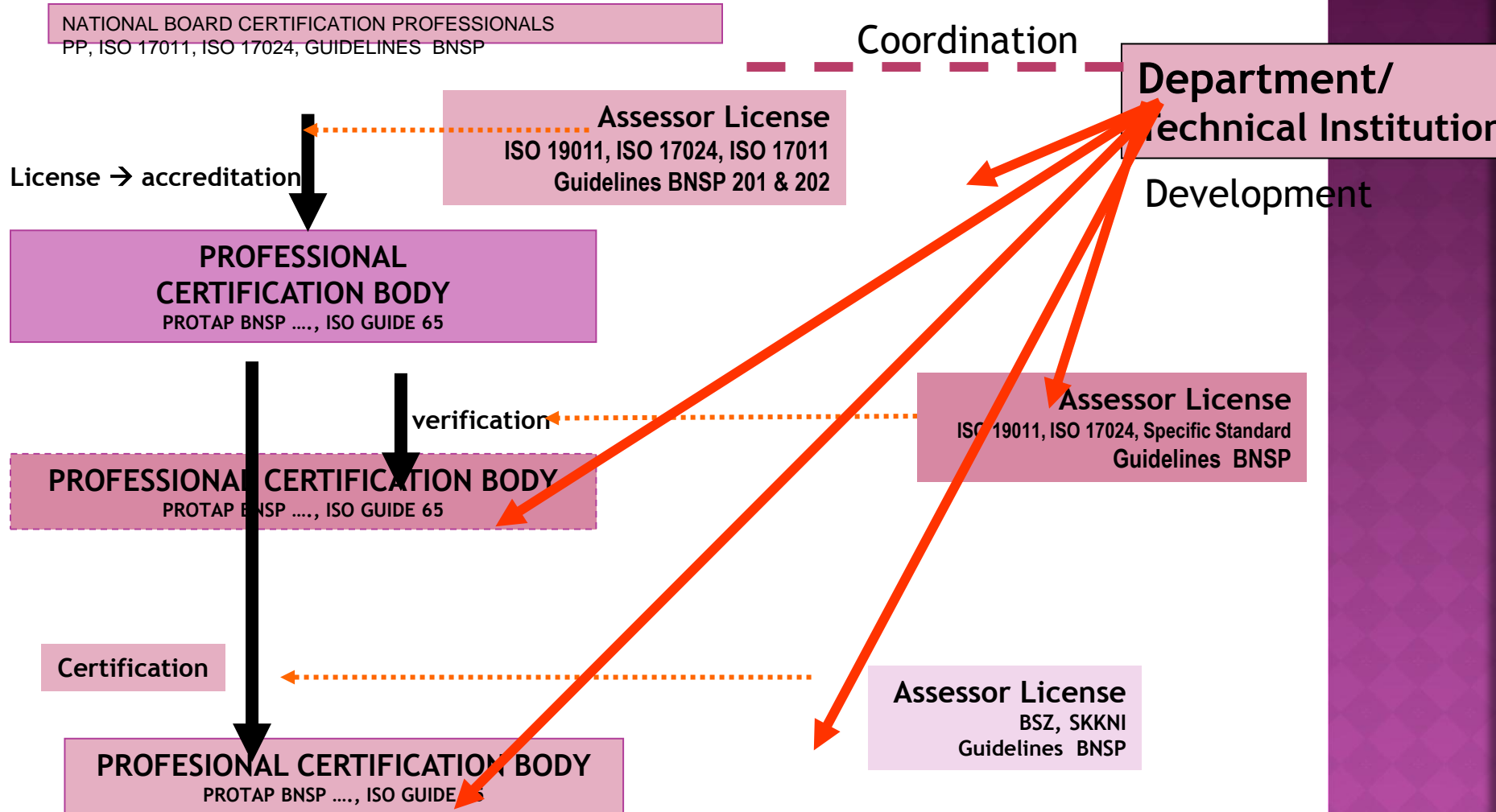


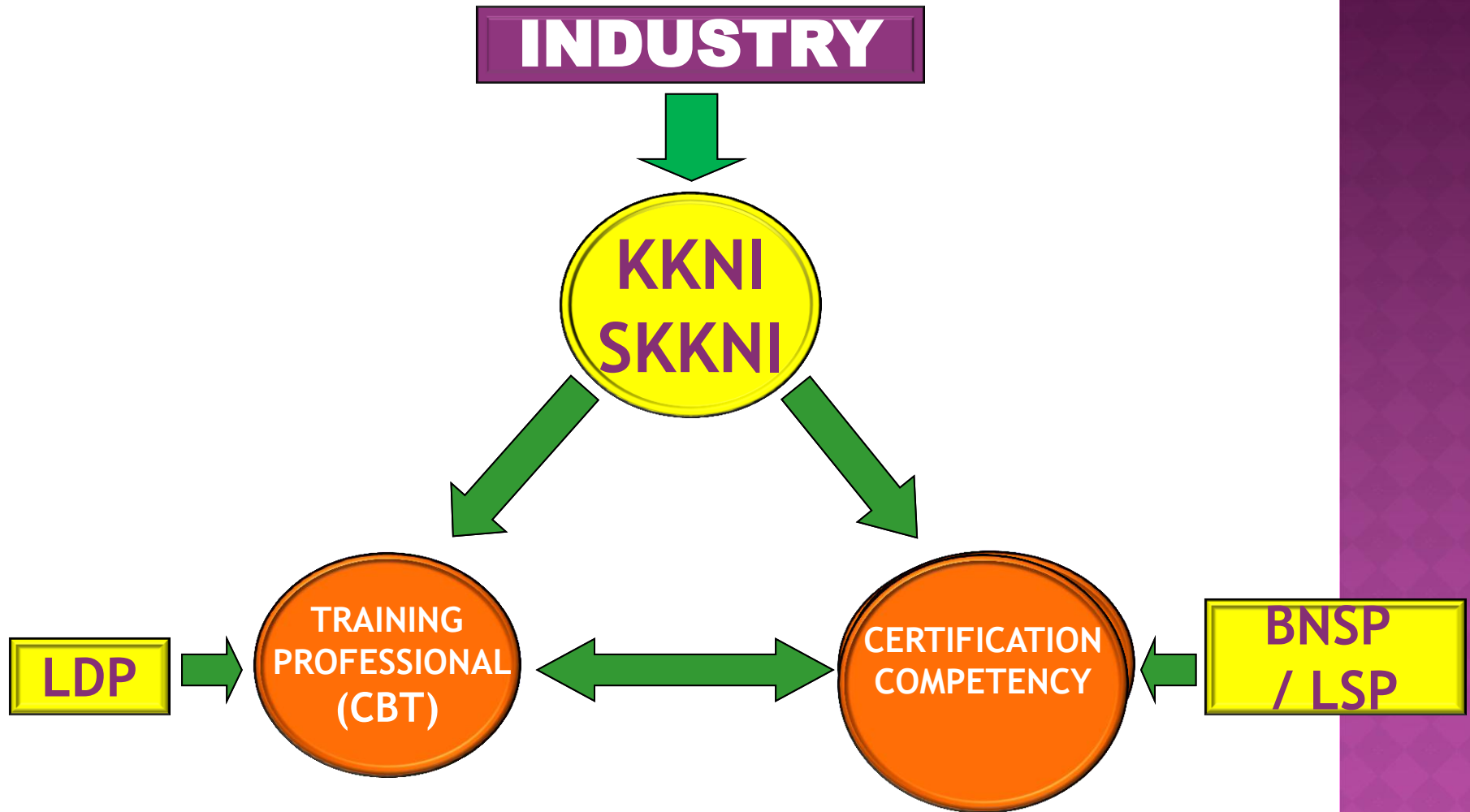
CERTIFICATION

- Law No. 13/2003:
- Article 18.1: Labor is entitled to recognition of job competence after participating in job training institutions (government, private, self)
- Article 18.2: Recognition of job competence is done through job competency certification
- Article 18.3: Certification of competence can also be followed by an experienced workforce

Competencies can be developed through training, apprenticeship, or assignments.

CERTIFICATION SYSTEM WHICH CREDIBLE AND TRACEABLE





COMPETENCY STANDARDS

**COMPETENCY
STANDARD**

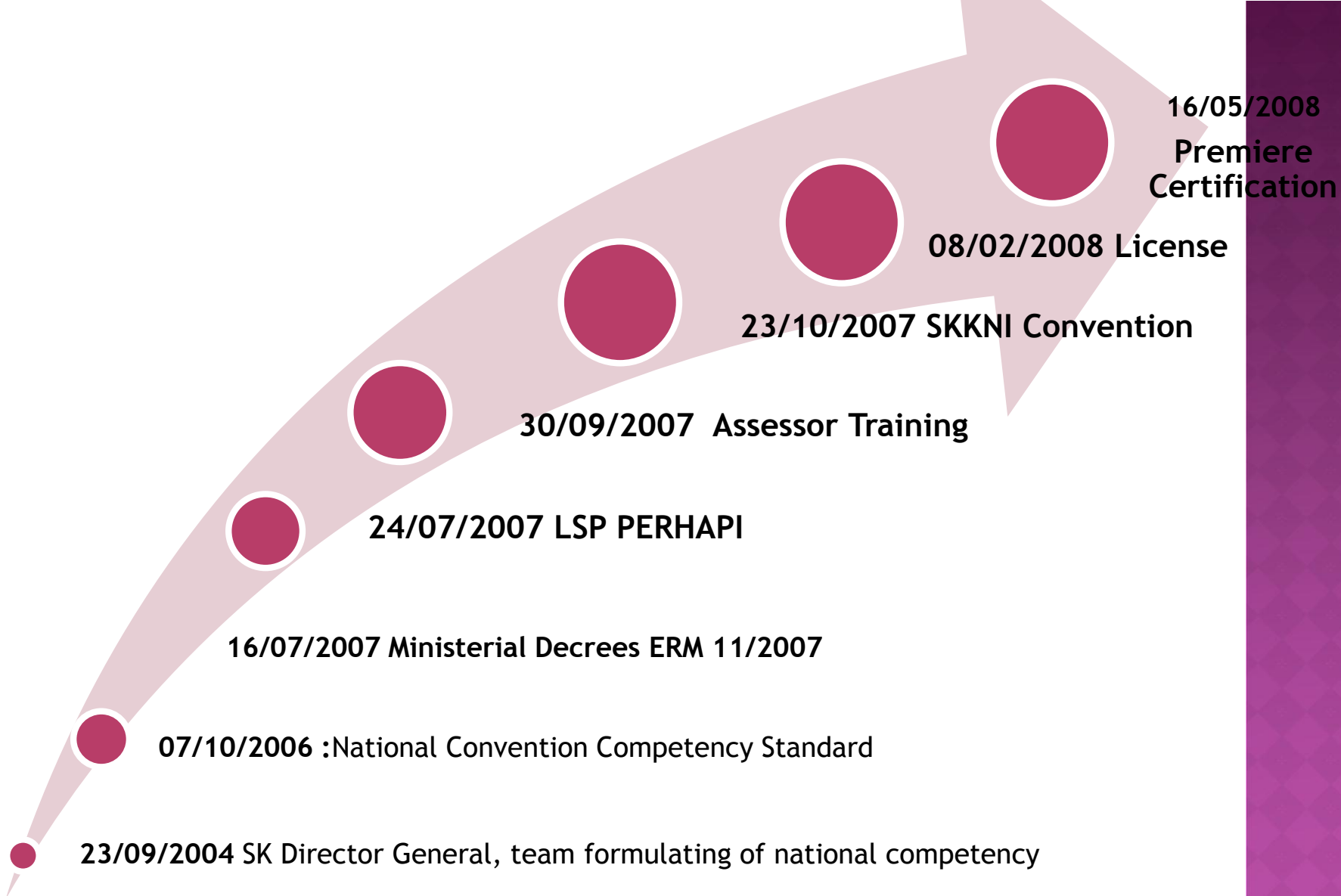
REFERENCES

capability based on knowledge, skills and attitudes are supported and in the application of workplace refers to the performance required

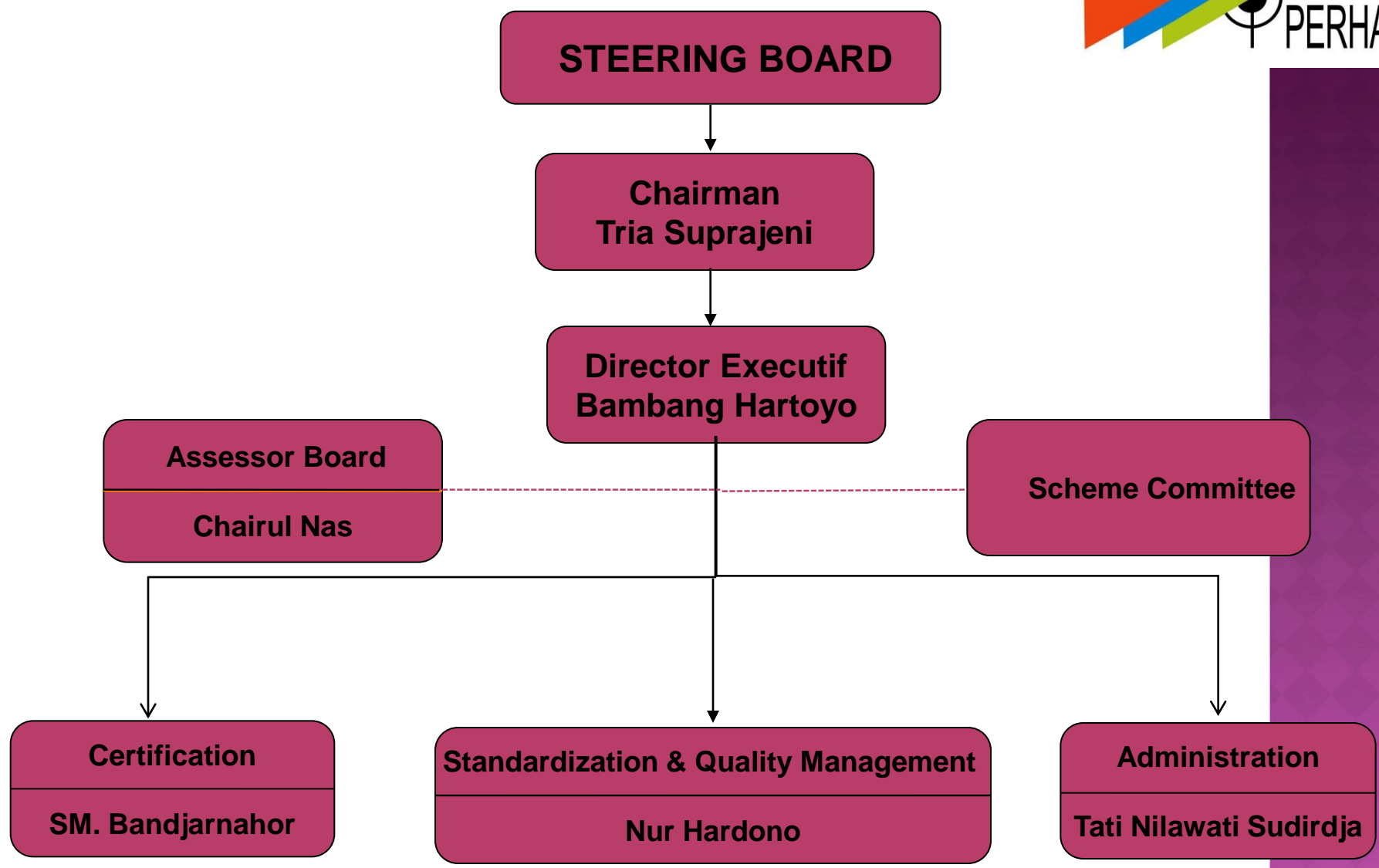
**TYPES OF STANDARD UNDER PP
31/2006 ABOUT SISLATKERNAS**

- **SPECIFIC STANDARD**
- **INTERNATIONAL STANDARD**
- **INDONESIAN NATIONAL STANDARD JOB COMPETENCE (SKKNI)**

MILESTONE LSP PERHAPI



STRUCTURAL ORGANIZASION LSP PERHAPI



LISENSI BNSP : Kep-06/BNSP/II/2008
NOMOR : BNSP-LSP-025-ID

THE ROLE OF LSP PERHAPI

- COMPETENCY STANDARDS DEVELOPMENT
ASSESSMENT OF COMPETENCY
MAINTENANCE OF COMPETENCY–Surveillance
MAINTENANCE OF QUALITY SYSTEM CERTIFICATION

DEVELOPMENT OF COMPETENCY STANDARD (1)

DESIGN OF NATIONAL COMPETENCY (MINERBA)

PerMen ESDM 006/2007



80 units competency

Competency

Managerial Competency (8)

- Business ethics and commitment organization
- Budget
- Sensitivity to social and cultural environment
- Business insight
- Leadership
- Decision making
- Writing and submission report
- Cooperation

Technical Competency (68)

- Geology/eksplorasi (10)
- Mining planning/development (9)
- Production/mining (9)
- Health, Safety and environment (5)
- Maintenance (8)
- Processing (13)
- Project management (1)
- Community empowerment (1)
- Logistic (1)
- Human resources (4)
- Finance (4)
- Marketing and business development (1)
- Information Technology (1)
- Corporate Planning (1)

Basic Competency (4)

- Safety & health work
- Communication
- Achievement motivation
- To plan and manage job

COMPETENCY STANDARD DEVELOPMENT (2)

COMPETENCY of MINERBA



Obligation (Law No. 4 / 2010)	Competencies Required *
Applying a good rule mining technique	<ul style="list-style-type: none"> • Mine Planning • Operation and Control of Mine • Occupational Safety and Health • Management and Environmental Monitoring (including reclamation and post mining) • Conservation of resources • Management of the remaining mine • Mining geology • Maintenance mining equipment
Managing Finance in accordance with Indonesia accounting system	<ul style="list-style-type: none"> • Mining Accounting • Finance (financial analysis) • Budgeting • Taxation
Increasing the added value of mineral resources and / or coal	<ul style="list-style-type: none"> • Processing • Upgrading Technology (especially coal) : UBC, Gasifikasi, Liquefaction, Briket • Beneficiation and diversification of resources

COMPETENCY STANDARDS DEVELOPMENT (3)

COMPETENCY for Mining



Obligation (Law No. 4 / 2010)	Competencies Required *
Implement development and empowerment of local communities	<ul style="list-style-type: none">•Community Facilitation• Sociology community• Conflict Resolution•Application of applied technology
Comply with tolerance limit of environmental capacity	<ul style="list-style-type: none">• Environment Morphology• Hydrology• Ecology

*) every field has its own unit of competency, for example mine Planning (9 units): feasibility studies, short-term mine planning , long-term mine planning, Geology and Geotechnology in mine planning, drilling and blasting of Planning, Planning for supporting the mine, mine reclamation planning, Evaluation and mine development, mining and environmental K3 Principles in mine planning.

ASSESSMENT COMPETENCY (4)

National Qualifications Framework

(Ref f : SK Menakertrans 70.A/MEN/2003)

Group	Managerial Position	Specialist
NQF-9	Div. Head, VP, General Manager	Advisor/Consultant
NQF-8	Senior Mgr, Manager	
NQF-7	General Superintendent/Superintendent	Chief Engineer
NQF-6	General Spv/Foreman/Assistant Manager	Sr. Engineer/Sr. Specialist
NQF-5	Sr. Supervisor/Sr. Foreman	
NQF-4	Supervisor/Foreman	Specialist/Engineer
NQF-3		Mechanics, Operators, Electric, Technician
NQF-2		
NQF-1		General Ass.

CERTIFICATION SCHEME LSP - PERHAPI



	NQF 4	NQF 5	NQF 6	NQF 7	STANDARD
Short-term Open Mining Planning	0	0			Specific Standard
Long-term Open Mining Planning			0	0	SKKNI
Mining Operation	0	0			Specific Standard
Mining Equipment Maintenance	0	0			Specific Standard
Mining Processing	0	0			Specific Standard
Geology/ Exploration	0	0			Specific Standard

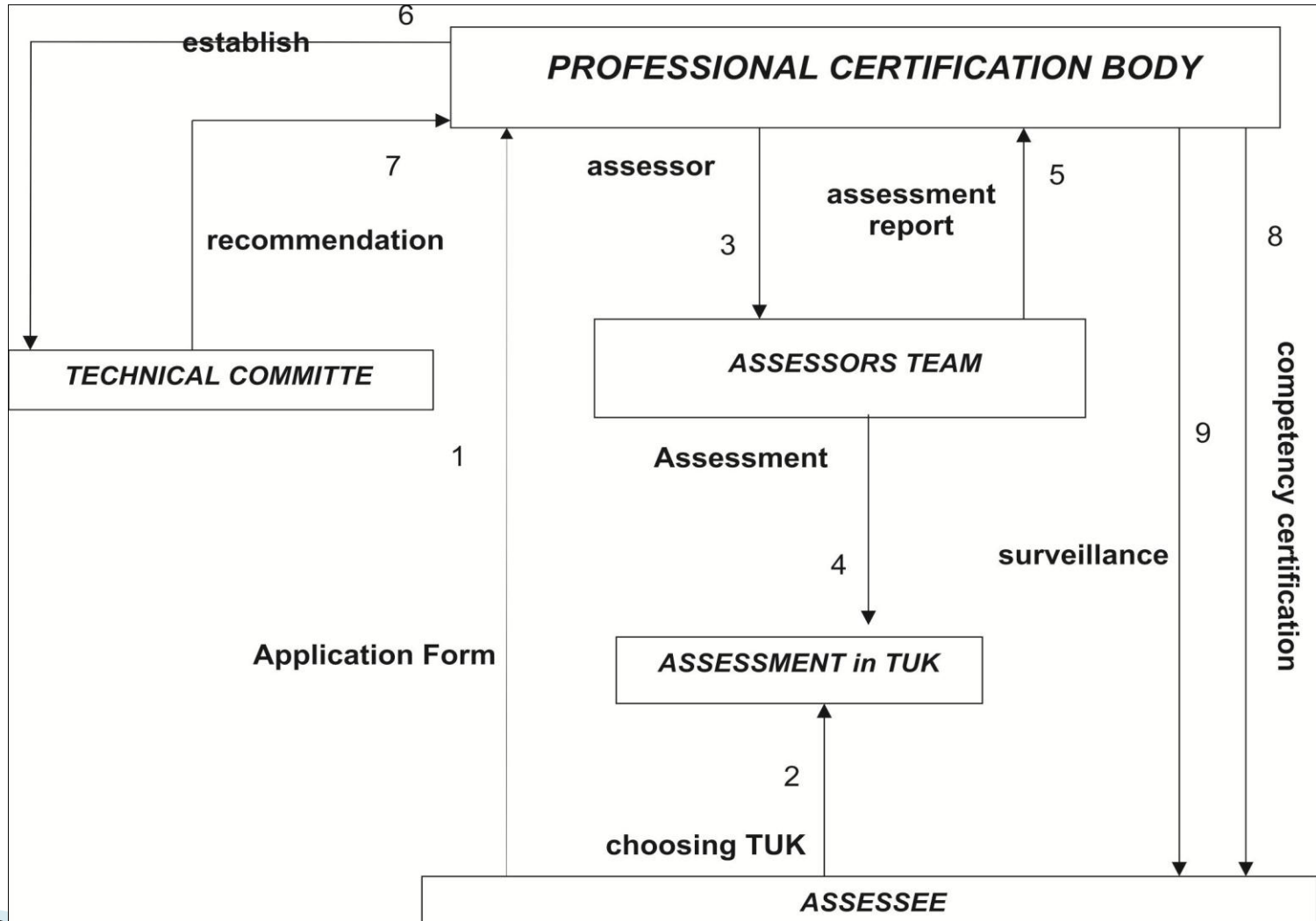
ASSESSMENT OF COMPETENCY (6) PLACE OF TEST COMPETENCY (TUK)

A professional workplace or places that have facilities with criteria equivalent to the professional workplace are verified by the LSP to be a competency test

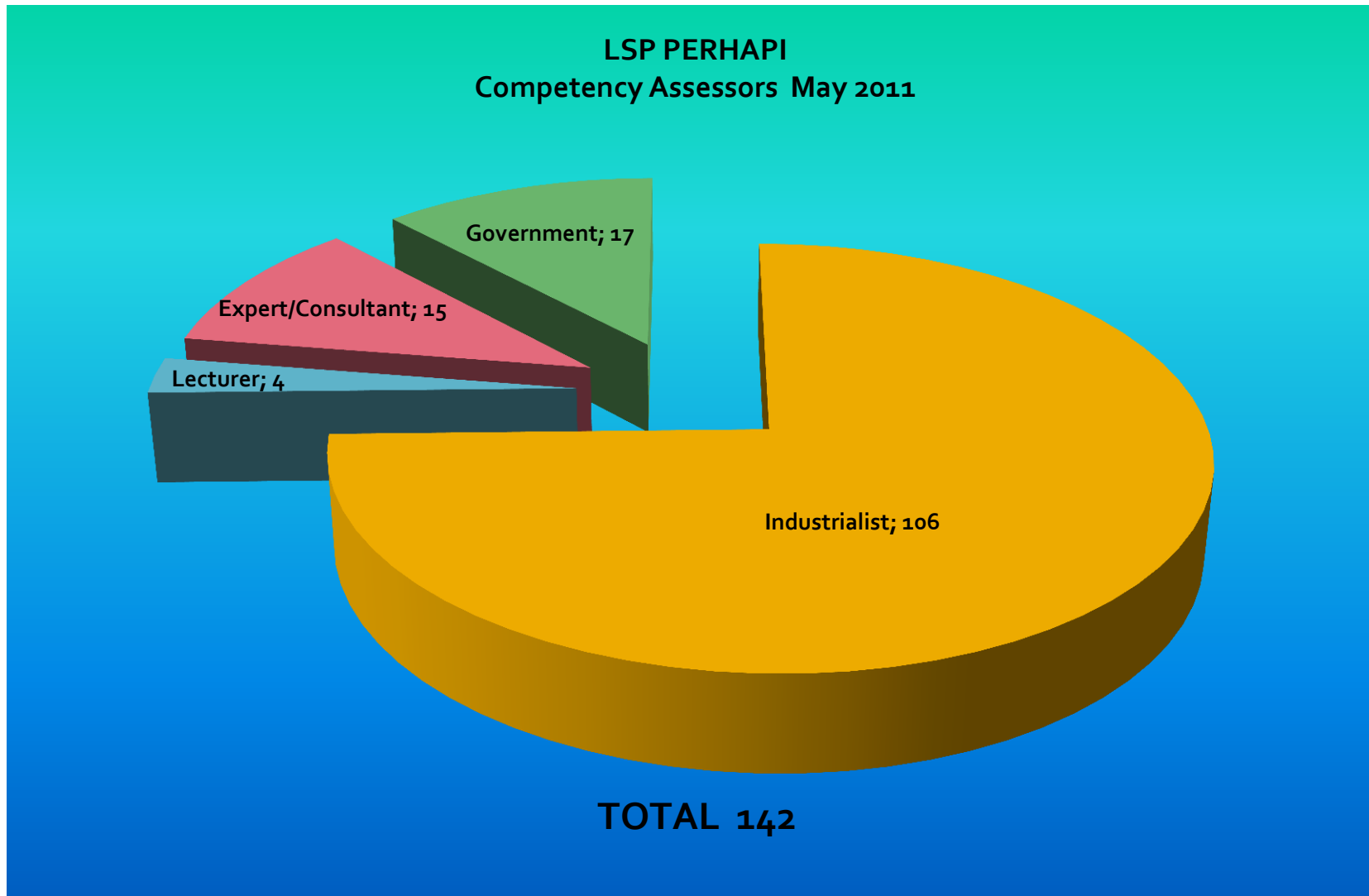


ASSESSMENT COMPETENCY (7)

PROCEDURES FOR CERTIFICATION



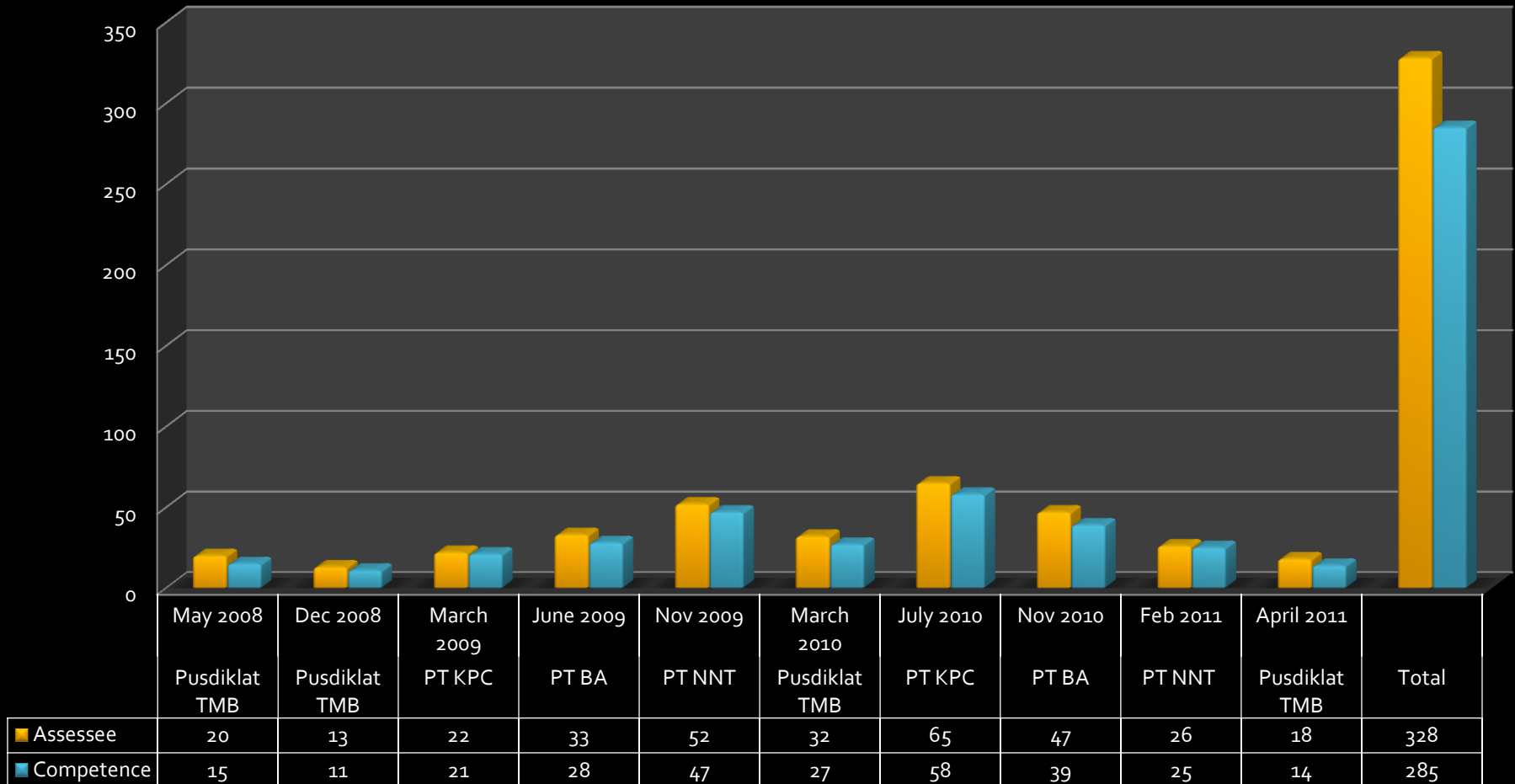
ASSESSMENT OF COMPETENCY (8)



ASSESSMENT COMPETENCY (9)



LSP PERHAPI Assessment Competency 2008 - 2011*



BENEFITS OF CERTIFICATION



❖ NATIONAL

Human resource development professionals in the mining sector
International Equality - protection profession

❖ PERSONAL

Validity of professional status in the Mining sector
Sustainable development opportunity
Creature professional career paths in mining sector
Ease of access by the assignor

❖ INSTITUTIONAL

Available sources of information
Available professional working climate in the Mining sector
Available instruments determining reward / billing rate
Pushing performance of institutions

MAINTENANCE OF COMPETENCE AND QUALITY CERTIFICATION (SOP PERHAPI LSP)



- | | |
|---|--|
| <ul style="list-style-type: none">• Internal Audit• Database Participants• Complaints and appeals• Management reviews• Implementation assessment• Reporting and evaluation• Training• Granting Certificates• Registration• Determination of the certification decision• Development of competency test material (MUK)• Development of Indonesia's National Work• Competence Standards (SKKNI)• Control of documents• Control recordings | <ul style="list-style-type: none">• The addition and reduction of the scope of certification• Performance assessment• Rejection recognition• Delays and certificate revocation• The appointment of a competency test (TUK)• Preparation of assessment• Competency requirements• Procedure• Recertification• Certification scheme• Subcontracting assessment• Surveillance• Precaution• Corrective actions |
|---|--|

CONCLUSIONS (1)



- The mining industry is required to adapt quickly from internal and external influences.
- It takes a competent workforce to manage a variety of challenges.
- The company with its own consciousness or are forced to continuously develop their competence or their workers will be left behind by the competition.
- The Government had arranged through the Law for competence development of workers can be done systematically and continuously.

CONCLUSIONS (2)



- Certification bodies play a role in the recognition of professional competence through certification of workers that is credible, transparent and professional.
- LSP- PERHAPI was formed by mining stakeholders and has a strategic role in the development of competence, certification, maintenance of competence and strengthening certification of quality systems in the mining industry.

CHALLENGES



Still a lot of homework to be done by the LSP-PERHAPI including the development of new certification schemes, increasing the number of assessors, the development of TUK, a more efficient implementation of certification and professional such as a web-based, or improvement of the quality system that can follow the needs of the mining industry in Indonesia

THANK YOU

BE COMPETENT