



MESYUARAT MPO BIL. 4/2017

23 OKTOBER 2017

PULAU PINANG

PENEMUAN KNOWLEDGE AUDIT JKR 2017

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INTRODUCTION

BACKGROUND

Knowledge Audit involving 10 Cawangan from Infrastructure, Building and Specialist sectors conducted within a duration of one year.





INTRODUCTION

Bil	Office	Workshop	Follow Up Session
1.	Cawangan Arkitek	24 – 25 Aug 2016	9 March 2017
2.	Cawangan Kejuruteraan Elektrik	24 – 25 Aug 2016	9 March 2017
3.	Cawangan Kejuruteraan Mekanikal	24 – 25 Aug 2016	9 March 2017



INTRODUCTION

Bil	Office	Workshop	Follow Up Session
1.	Cawangan Kejuruteraan Awam dan Struktur	13 – 15 Feb 2017	24 Feb 2017
2.	Cawangan Kontrak dan Ukur Bahan	13 – 15 Feb 2017	9 March 2017
3.	Cawangan Jalan	13 – 15 Feb 2017	7 March 2017
4.	Cawangan Kejuruteraan Geoteknik	28 – 29 Aug 2017	11 Sep 2017
5.	Cawangan Senggara Fasiliti Bangunan	28 – 29 Aug 2017	15 Sep 2017
6.	Cawangan Senggara Fasiliti Jalan	28 – 29 Aug 2017	21 Sep 2017
7.	Cawangan Alam Sekitar dan Kecekapan Tenaga	28 – 29 Aug 2017	-



INTRODUCTION

A Two (2) Day Program

What are our
Core Activities?

What Knowledge
Assets are
required for each
activity?

Where can we
find our
Knowledge
Assets?

Are they
accessible when
required?

Are they in 'good
condition'?

What are our
barriers in
accessing or
producing them?

How can we
mitigate our
gaps?

What are the
possible
interventions?

Presentations



INTRODUCTION

OBJECTIVES

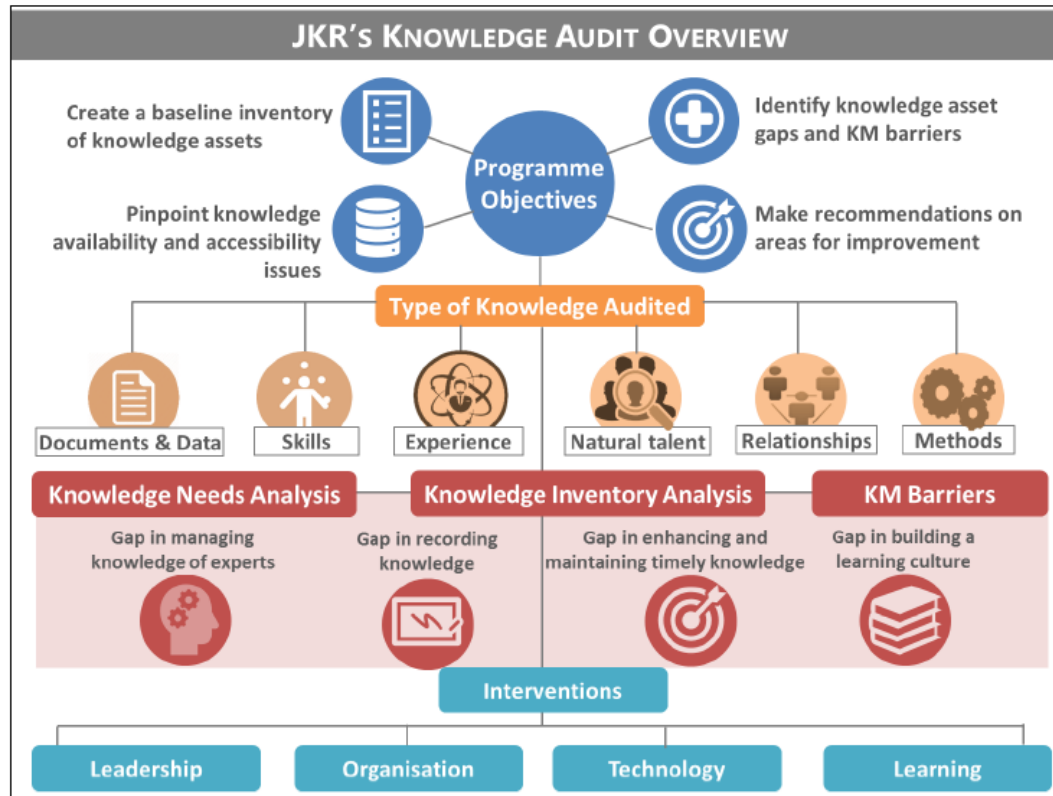
- create a baseline inventory of knowledge assets;
- pinpoint knowledge availability and accessibility issues;
- identify knowledge asset gaps and KM barriers; and
- make recommendations on areas for improvement

METHODOLOGY

- map main business activities with the knowledge needed/used, and rate the importance, usage and quality of knowledge assets
- identify KM barriers in JKR
- recommend improvements



KNOWLEDGE AUDIT OVERVIEW



KNOWLEDGE AUDIT

an initiative that assesses potential stores of knowledge in an organisation. It identifies owners, users, uses and key attributes of knowledge assets. It provides a systematic examination and evaluation of organisational knowledge health.



INTRODUCTION

EXPLICIT



Documents and Data

TYPES OF KNOWLEDGE

TACIT



Skills



Experience



Relationships



Methods



Natural talent



KNOWLEDGE AUDIT BENEFITS

Improve organisation memory

- knowing where things are

Learn the knowledge needed to support goals

- what knowledge is needed to support the goals of the organisation, the individual as well as the team

Save knowledge acquisition cost

- inventory of what knowledge exists in the organisation and where it exists, revealing both gaps and duplications, thus saving search time and acquisition costs

Provide a good basis for KM initiative start up

- identify 'what an organisation knows' in order to leverage it to a greater advantage.
- understand present knowledge assets before developing an improvement process or a KM initiative



KNOWLEDGE AUDIT OUTPUT

Knowledge Needs Analysis

identifies precisely what knowledge JKR, its people and team possess currently and what knowledge they would require in order to meet their key business process activities

Knowledge Inventory Analysis

built for stock-taking knowledge assets and thus revealing the key knowledge assets

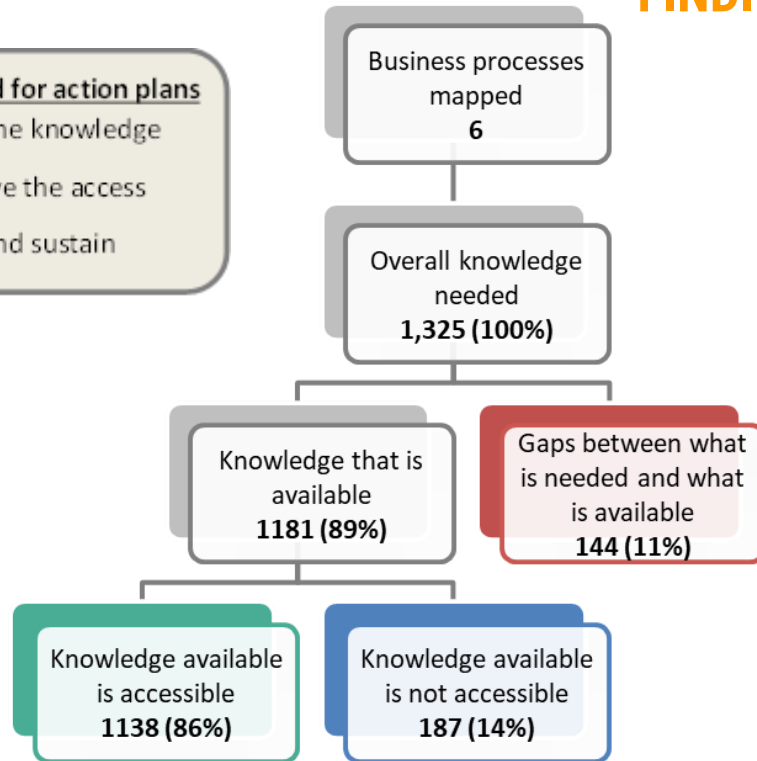
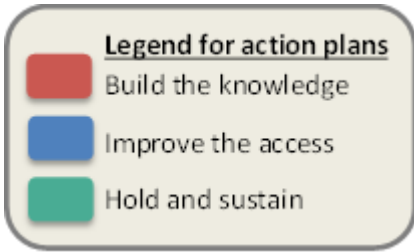
KM Barriers

pinpoints KM barriers and common knowledge issues across the organisation.



KNOWLEDGE NEEDS ANALYSIS

FINDINGS AND PROPOSED INTERVENTIONS

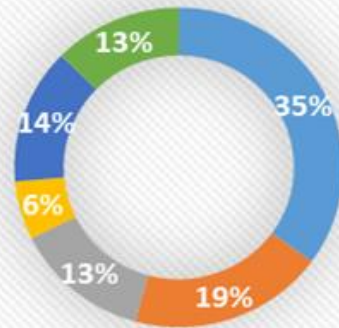


- **Hold and sustain (green box)**
Knowledge items are available and access is good. Items in this area are strengths and sustainability is key
- **Improve the access (blue box)**
Knowledge items are available but access needs to be improved. Items in this area could be prioritised and improved over a period 1-12 months
- **Build the knowledge (red box)**
Knowledge items are currently not available. Items in this area could be prioritised and built over a period of 12-30 months



KNOWLEDGE INVENTORY ANALYSIS

Different Categories of Knowledge Assets in the 10 Divisions



- Document & Data (Explicit)
- Skills
- Experience
- Natural Talent
- Relationships
- Methods

FINDINGS

Explicit knowledge accounts for **35%** of knowledge assets in JKR

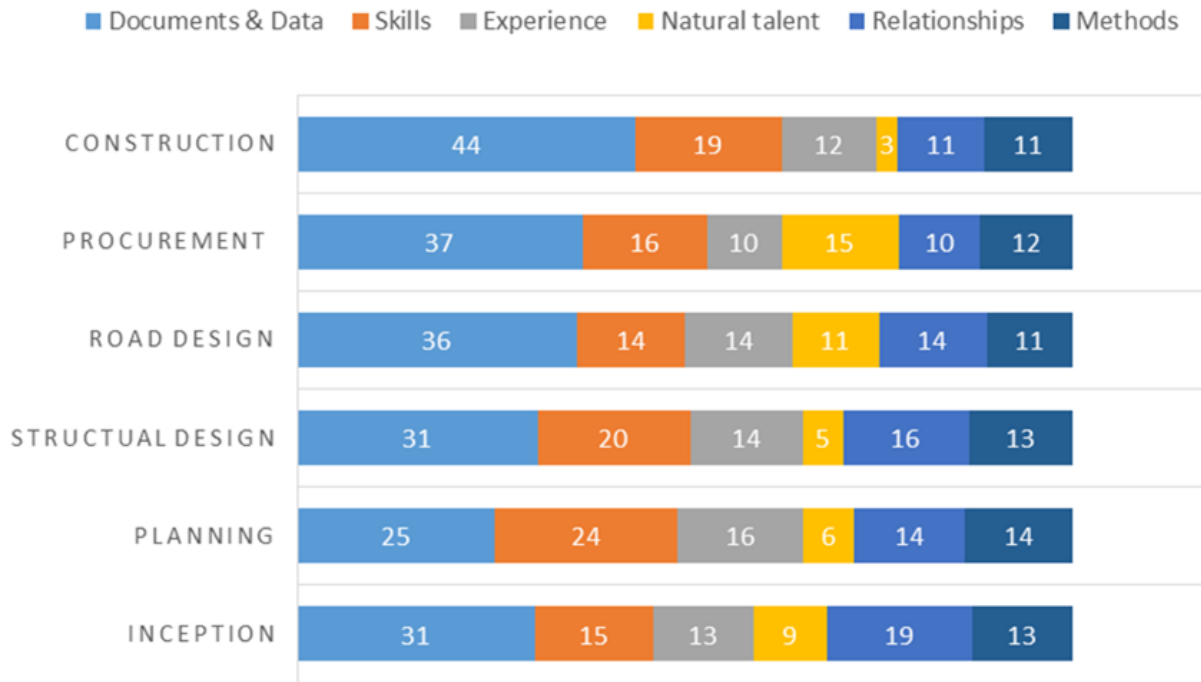
65% are tacit knowledge.



KNOWLEDGE INVENTORY ANALYSIS

Knowledge Inventory Map by Business Process

(Figures are represented by %)



FINDINGS

- ❑ **Construction process** has highest dependency on **explicit knowledge** (44% of knowledge is in the forms of documents and data).
- ❑ **Planning process** relies heavily on **tacit knowledge** (75% of knowledge is in tacit form). Skills and experience make up 40% of the knowledge assets.
- ❑ **Procurement and Road design processes** relies on **experience and natural talent** (25% of knowledge is in the form of experience and natural talent).

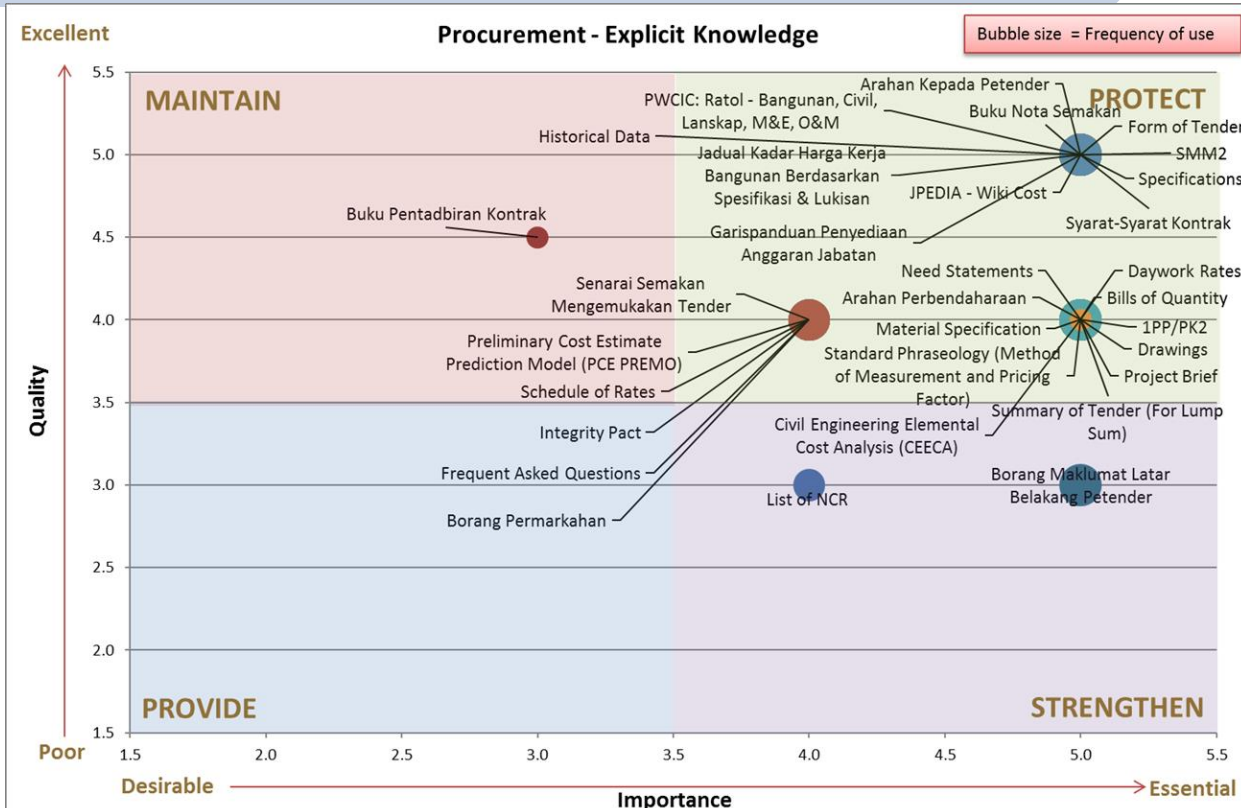


KNOWLEDGE INVENTORY ANALYSIS

EXAMPLE

PROPOSED INTERVENTION for EXPLICIT KNOWLEDGE USED IN PROCUREMENT PROCESS

- PROTECT the quality of the knowledge





KNOWLEDGE MANAGEMENT BARRIERS

Theme/Sub-themes	Description	Frequency	Rank
LEARNING / SKILLS	The skills and competencies of staff do not keep up with the demands of the job and so the organisation cannot respond effectively to new needs or opportunities.	28%	1
	Training courses attended by staff have minimal impact on their work performance		
	Training or recruitment of staff is not sufficient to manage the needs of managers in delivering their targets.		
LEARNING/ NEW HIRES	New staff are not well trained and provided with minimal support that impacts the technical aspects of their work		
	No measures to accelerate learning curve of new hires and assist them to perform effectively		
	New staff are not well introduced to their job and the lack of documentation impacts their work performance.		
LEARNING/ CHANGE	The culture is resistant to changes that are required for the organisation to remain effective		
MEMORY / LOSS	Tacit knowledge in people's heads is not captured or transferred effectively, meaning it is lost when these people leave.	10%	2
	Internal team change is frequent which impact knowledge loss and productivity		
	Policies and plans are not well documented and if documented are stored in silos		
COORDINATION / DECISIONS	Decision making is compromised because decision makers do not have easy and timely access to relevant and accurate information.	9%	3
COORDINATION / SILOS	It is difficult for workgroups to collaborate because they cannot gain access to each other's information, so they have to search or find the right people to talk to.		
COORDINATION / CONFLICT	Conflict can arise between workgroups because there are no standard ways of passing information or agreeing on common goals between groups.		

FINDINGS

- Ineffective learning
- Loss of tacit knowledge
- Poor coordination



KNOWLEDGE GAP ANALYSIS

FINDINGS – GAPS AND STRENGTHS

STRENGTHS

About **89%** of knowledge that is needed to meet the business process activities is available in JKR

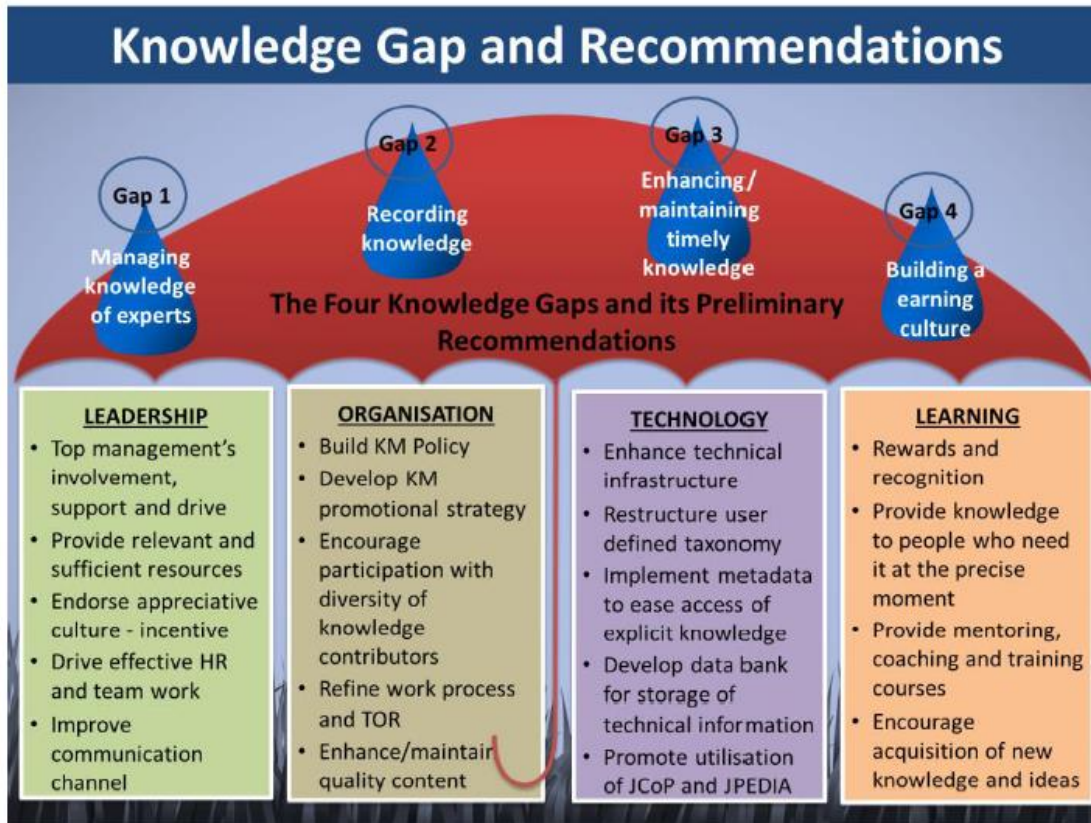
86% of knowledge available is classified as accessible

GAPS

1. Gap in Managing Knowledge of Experts (Memory/Loss)
2. Gap in Recording Knowledge (Memory/Records)
3. Gap in Enhancing and Maintaining Timely Knowledge (Coordination/Decisions)
4. Gap in Building a Learning Culture (Learning/Skills)



KNOWLEDGE GAP ANALYSIS



ACTION PLAN TO CLOSE KNOWLEDGE GAPS

- LEADERSHIP
- ORGANISATION
- TECHNOLOGY
- LEARNING

CONCLUSIONS

“ Knowledge Audit is indispensable to the success of KM. It provides **an evidence-based assessment** of where the organisation needs to focus on its KM effort.

The results of this form of audit yields a number of potential benefits that include **the identification of critical knowledge** and the subsequent **recommendations of KM interventions** that can be used for better managing the knowledge of JKR.