

**KURSUS PENGENALAN CPAB**  
**16 NOVEMBER 2016**

# INTRODUCTION TO ENTERPRISE CONTENT AND KNOWLEDGE MANAGEMENT



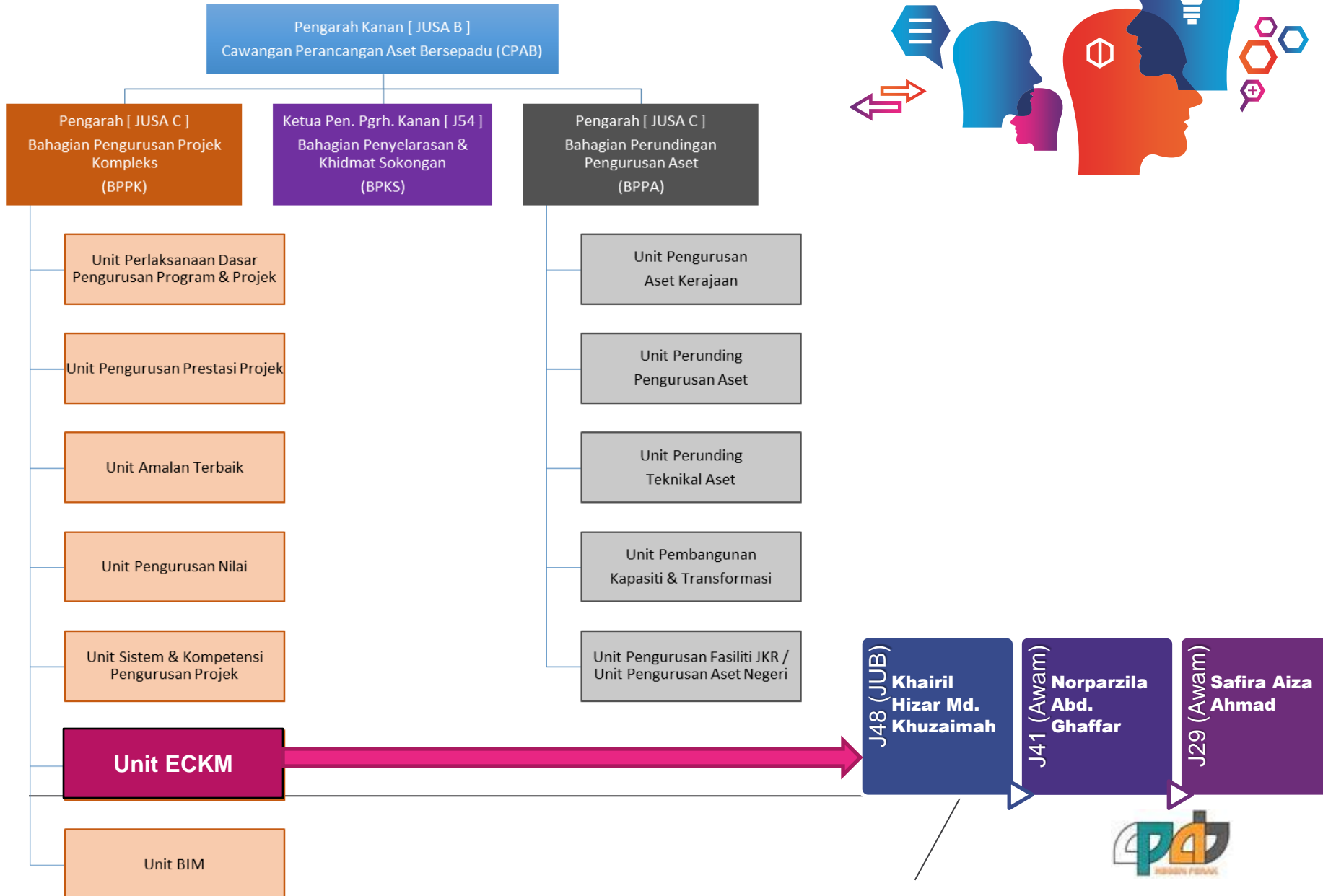
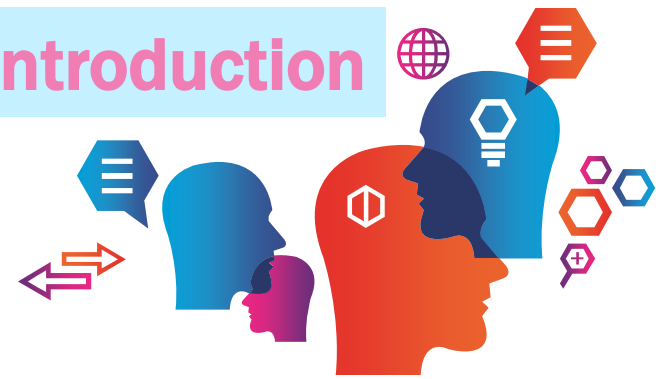
Sr ROZNITA BT OTHMAN



**UNIT ECKM**



# Introduction



# JKR Enterprise Content & Knowledge Management Program



## KM Tools and Techniques



## JKR KM VISION

To become a first-class knowledge centre that provides the optimum in performance support via optimization based on trust, partnerships and a mutual win-win mentality

## JKR KM MISSION

To improve our performance by getting the BEST knowledge to the right people at just the right time

Knowledge managers in HQ and JKR States

Quarterly Mesyuarat JKPPPI



## Knowledge Fairs

PERSADA MINDA

WACANA ILMU

WADAH ILMU

SEMARAK ILMU

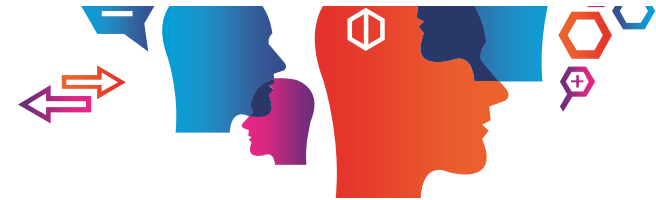
LIGA ILMU

KARNIVAL PEMBUDAYAAN ILMU

## KM Initiatives & Products



# What I will cover



Begin with the end in mind

Why ECKM matters to us

Our knowledge Assets

JKR KM Agenda and Journey

ECKM Products



# Why ECKM matters to us

- 1 Our most critical technical knowledge remains siloed in the organisation – or worse, is heading out the door



- 2 Our people work at different locations and are geographically dispersed. Knowledge sharing across the department becomes more challenging. People are not learning from each other and are reinventing the wheel



# **SILOS** result in

lack of trust, limited communication and isolation



## **Vertical**

Across levels and hierarchy



## **Horizontal**

Across functions and expertise



## **Stakeholder**

Beyond boundaries of the company with external partners



## **Demographic**

Across diverse groups (e.g., gender, ethnic, nationality)

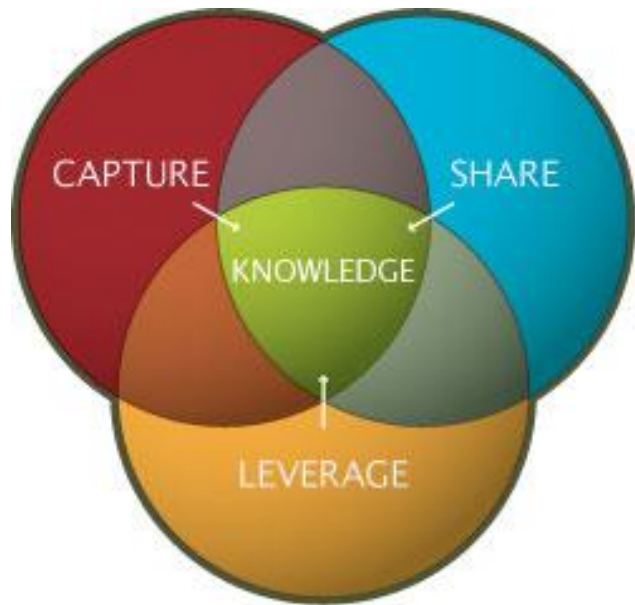
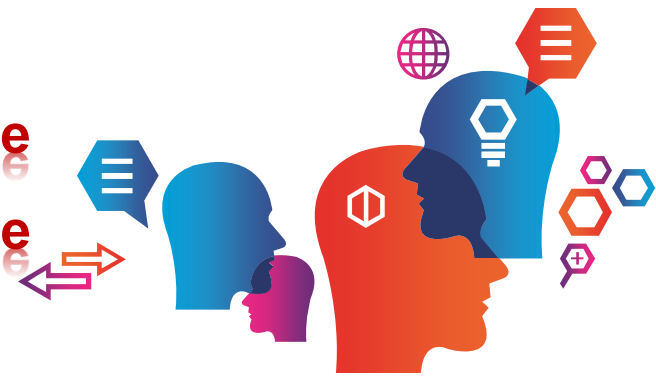


## **Geographic**

Across regions and locality

<http://www.chrisernst.org/why-boundary-spanning-networks/activate-the-network/>

# How KM can improve the organisational performance



Easy to find experienced individuals

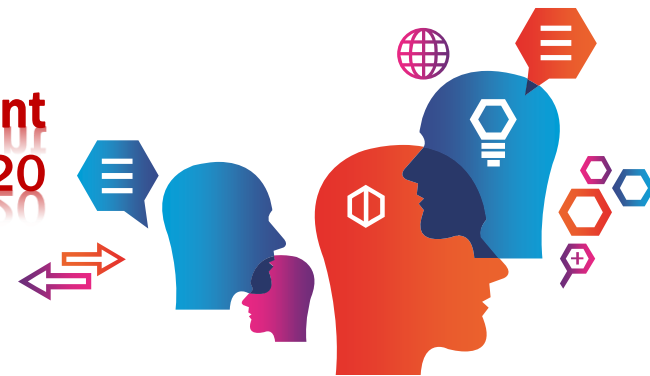
Enterprise wide knowledge at our finger tips

Improve productivity by reusing “what we know

Improve communication and break down silos

Generate new ideas that can be incorporated into innovative products and processes

# KM is a KEY component in JKR Strategic Framework 2016-2020



JCoP postings  
Project Lessons Learned

Knowledge sharing

ECKM system

Jpedia

CoPs

STRATE  
Outs  
proj

Give you  
the earlier  
consisten  
- whatever

Co-crea

"A satisfied

Centre of T

Be a yardstick of  
Some people aren  
an environment w  
excellence is exp

Leadi

A shift is  
to enviro

## Innovative Organization

"Innovation distinguishes between a leader and a follower"

Steve Jobs

"Innovation is the ability to see change as opportunity - not threat"

Steve Jobs

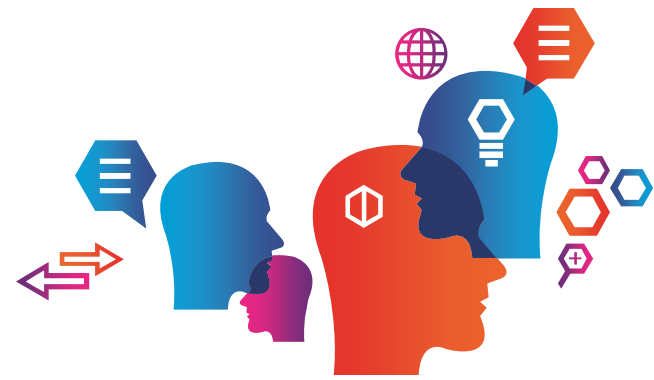
Steve Jobs





**9001:2015**

## ISO 9001:2015 - Clause 7.1.6



Organisations need to determine and manage its knowledge to ensure the operation of its processes and that it can achieve **conformity of products and services**



# Our Knowledge Assets



## Relationships

- know-who
- Social relationship
- *eg with experts, stakeholders*

## Methods

Procedures, processes, workflows

Not all are documented

*e.g best practices, checklists, templates*

## Natural Talent

- Inherent
- Cannot be constructed/replicated
- *e.g art, design*

## Experience

- Able to identify trends and make sense
- *e.g forecasting, negotiations, risk planning*

## Skills

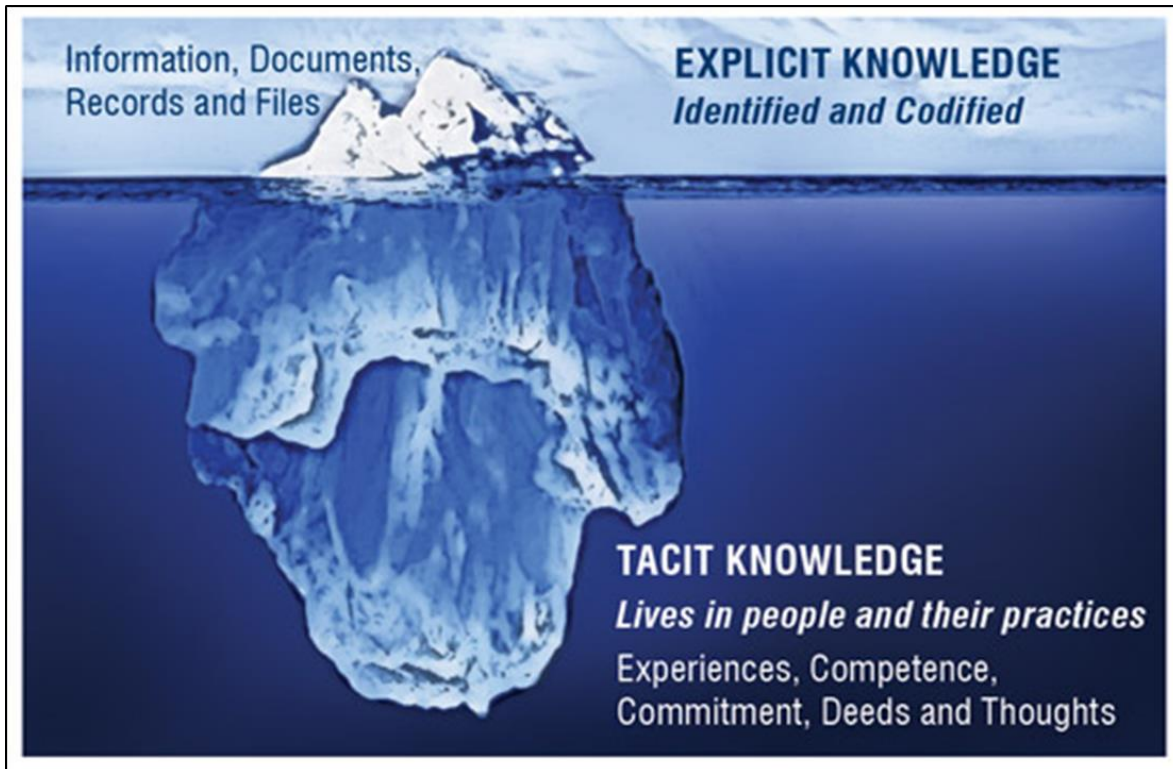
- Competent in performing tasks
- Acquired through learning and doing
- *e.g project scheduling,*

## Documents/Data

- Explicit knowledge
- *e.g Manuals, SOPs, databases, training kit*

Adapted from Dave Snowden,  
'The ASHEN model: an enabler  
of action' *Knowledge Management*  
vol3 issue 7 2000

# Types of Knowledge



**20%**

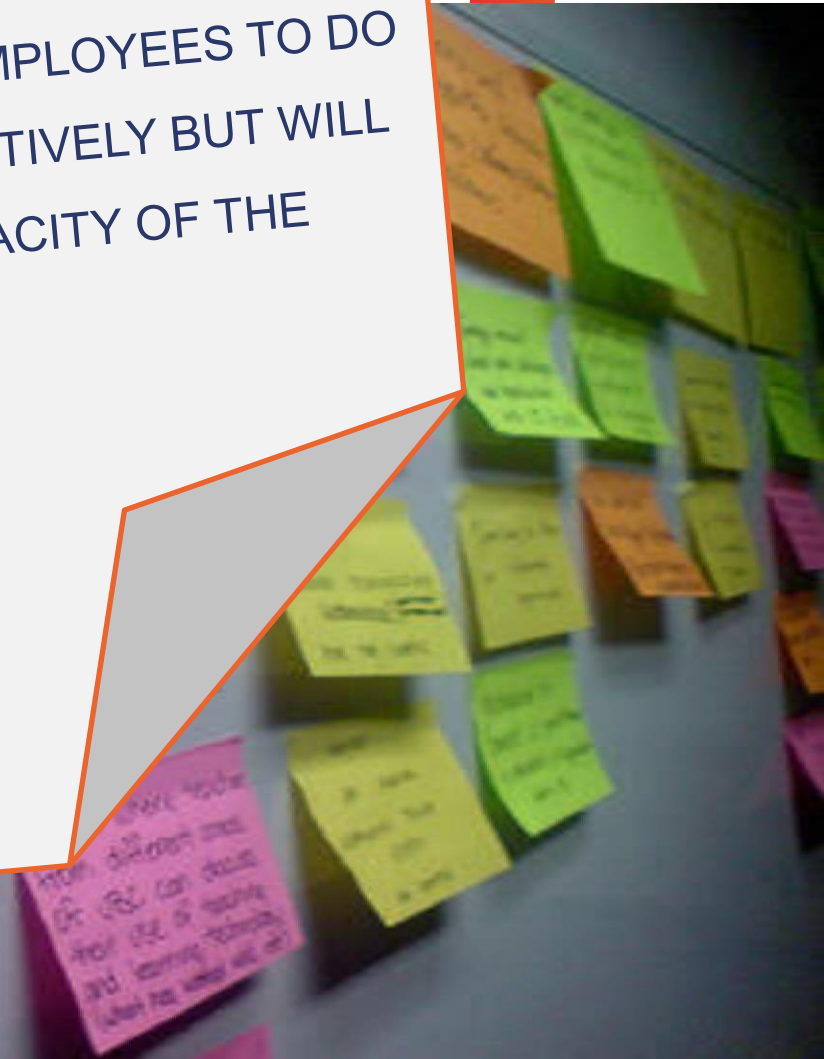
**USE IT OR  
LOSE IT**

**80%**

**GIVING THE BEST KNOWLEDGE TO THE RIGHT PEOPLE AT  
THE RIGHT TIME**

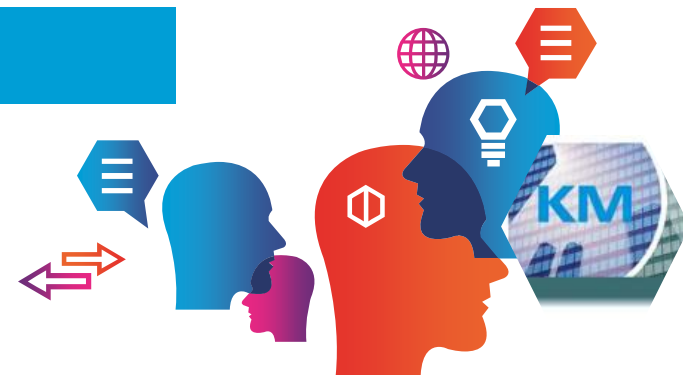
**WILL NOT ONLY**

**PROVIDE PERFORMANCE SUPPORT FOR EMPLOYEES TO DO  
THEIR JOB MORE EFFICIENTLY AND EFFECTIVELY BUT WILL  
ALSO ENHANCE THE INNOVATION CAPACITY OF THE  
DEPARTMENT**



# The KM Agenda

*To cultivate **knowledge sharing and learning culture** across department through the use of proven **effective knowledge sharing tools***



## MAJOR KM INITIATIVES (since 2008)

- JPedia**, an online repository to share knowledge-in-context)
- Communities of Practice** to share domains of knowledge
- JCoP**, an online platform to ask and discuss
- Project Lessons Learned System** to share key project learnings
- KM Toolbox**, set of tools and techniques to capture and share insights and ideas
- JKR Yellow Pages** to locate experts within the department
- E-Learning** to provide 24 x 7 learning environment



# KM JOURNEY IN JKR FROM 2008 - 2016

## Create The Buzz

- **June - Dec**  
ECKM Briefing to ECKM team; Introduction to KM course for ECKM team; ECKM Handbook

## Getting Others Involved

- **Jan - June**  
Set up J/K Pelaksanaan dan Pemantauan Pembudayaan Ilmu & Appoint Knowledge Managers; K-Visits; Knowledge Audit CKUB
- **Jul - Dec**  
Launched e-PSMG; Briefing at Mesyuarat Pengarah-pengarah and Mesyuarat Jurutera Daerah; Avillon Knowledge Café; Karnival Pembudayaan Ilmu

## More Initiatives

- **Jan - June**  
KM Seminar for top management; JPedia Lessons Learned Process; J-10 Requirements Specs for ECKM Initiatives, Sepang Knowledge Café
- **Jul - Dec**  
Content management governance; KM Training; KM Seminar for J48 and above; Semarak Ilmu

## Inculcating Knowledge Sharing Culture

- **Jan - June**  
JPedia & JCoP Roadshows; A'Famosa Knowledge Café K-Visits; K-Managers Meeting HKL Project Lessons Learned Workshop; SUKMA Project Lessons Learned Workshop; Exit interviews
- **Jul - Dec**  
Workshops on Sustaining CoPs; Wacana Ilmu; JCoP v.2; JCoP survey

## Shared Learnings

- **Jan - June**  
PLL Workshops; PLL Guide; K-Connect Seminar; CoP Health Check
- **Jul - Dec**  
JCoP / JPEDIA Roadshow; KM Audit; Persada Minda Seminar CoP JKR

2008

2009

2010

2011

2012

2013

2014

2015

2016

## Quick Wins to Get Buy In

- **Jan - June**  
Talks; KM workshops
- **Jul - Dec**  
Pilot online knowledge repository (e-PSMG); Developed ECKM Framework; ECKM Roadmap and Taxonomy

## Sell, Sell, Sell

- **Jan - June**  
Workshops to enhance e-PSMG content; ECKM Roadshows; Present Papers at International Conferences; K-Visits; K managers meeting
- **Jul - Dec**  
KM Readiness Assessment; Genting Knowledge Café

## Retaining & Transferring Tacit Knowledge

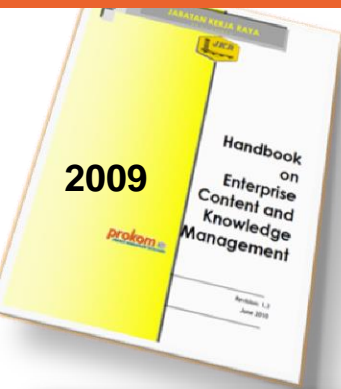
- **Feb - June**  
Cultivate CoPs; JPedia Roadshows; UPMN Lessons Learned Workshop; Story telling Workshop; K-Visits; K managers meeting; Gambang knowledge Café
- **Jul - Dec**  
JCoP portal; Wadah Ilmu; CoP Launching and Seminar; Exit interview

## Communicate and Collaborate

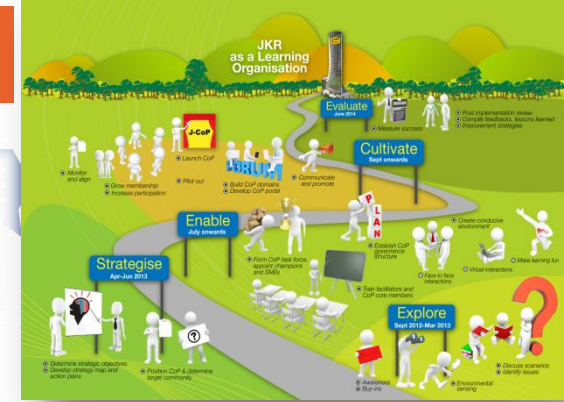
- **Jan - June**  
JCoP Newsletter; Seminar CoP for Top Management; Publish CoP guides; K-Visit; Penang K-Café; K managers meeting; JCoP Roadshows; Exit Interviews; JCoP Moderators Workshop; KM Prog. for cadre officers; JCoP day
- **Jul - Dec**  
Persada Minda; JPedia workshop



# ECKM products



2011 – KM readiness assessment

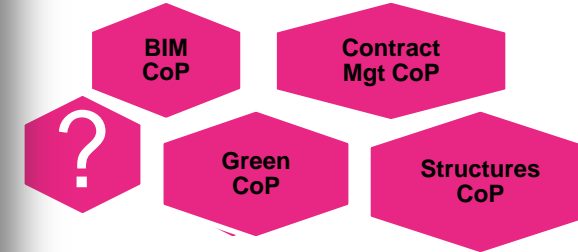


JKR CoP Domains

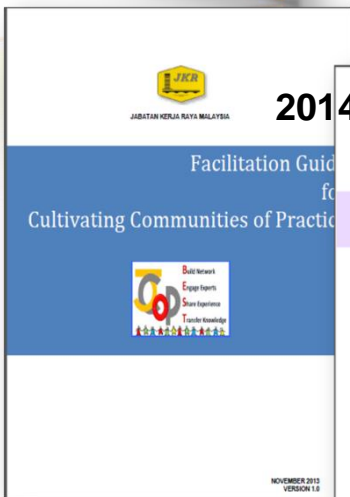
2013



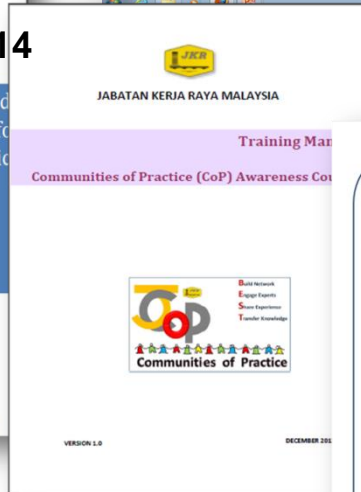
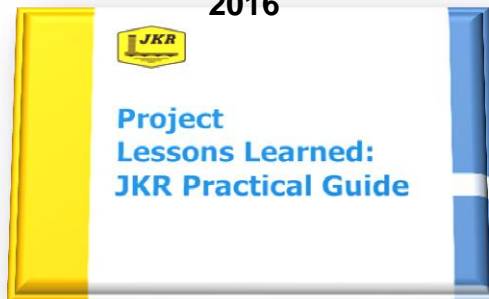
2016



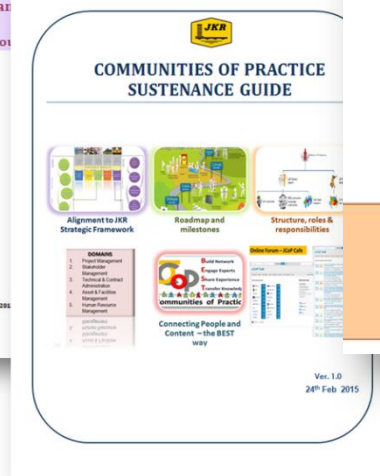
2014



2016



2015



2013



2016



# THE COMMUNITIES OF PRACTICE ACROSS THE WORLD

## NETHERLANDS



CoPs with the Dutch police were established to determine how knowledge was shared, created and appropriated around problems and issues that matter in their work.

### POLICE

It was determined that supporting extended expertise *strengthened the culture of operational and professional knowledge.*

## UNITED KINGDOM



The 'CoP' value was measured as the number of new profiles, meeting frequency, number of new products and new provisions and new procedures adopted and the number of authorized license issued.

### AUTOMOTIVE

CoPs increased their members' knowledge about who knows what and *improved performance*. However CoPs will take time to evolve and be beneficial to the members.

## SWEDEN



Investigate CoPs and organizational performance.

### CONSTRUCTION

CoP exhibited *improved performance* amongst engineers, managers, operators, supervisors and subcontractors.

## MALAYSIA



The CoPs were created to share and learn knowledge in the Public Works Department.

### CONSTRUCTION

Members used the CoP to *learn new ways of addressing issues and engage better* with practitioners from all over the country.

## UNITED KINGDOM



Role of CoPs in organizations.

### CONSTRUCTION

CoPs play the role of generating and delivery value to the organization and contribute towards *collective organizational intelligence.*

## SWITZERLAND



Management support element and benefits in building the CoPs.

### AUTOMOTIVE

Perceived benefits were *learning effects, participation in decision making process and building of relationships network.*

## NORWAY



CoPs were recognized as a strategic potential to regional collective learning.

### ELECTRONICS

It was found that network reflection on practice provides of facilitating several interactions: combining theories, reflections and interactions, *enables to have a capacity to increase regional co-operation and regional collective learning.*

## THAILAND



The CoP domains were created to enhance knowledge that is designed to improve performance.

### MANUFACTURING

The CoPs were structured to ensure all domains of knowledge were covered in all areas of the value chain. Policy was for each member to *apply new practices in their plant and create space for members to contribute new ideas and practices.*

## SCOTLAND



CoPs potential application in nursing was as a gateway to enhance professional and educational networking.

### NURSING

The CoPs were utilized to encourage practitioners and academics to integrate incrementally the dimensions of research, education, *clinical practice and user experience* in response to the increasing demand for wider institutional and professional assessments.

## UNITED KINGDOM



CoPs were defined as their enhance organizational performance.

### CONSTRUCTION

CoPs in Construction Industry play a role in generating and delivery value to the organization and their contribution towards *collective organizational intelligence.*

## MALAYSIA



The CoP were created in the library industry.

### CONSTRUCTION

Members used the CoP to *share new knowledge, learn how to interact and apply to operations.*

## GERMANY

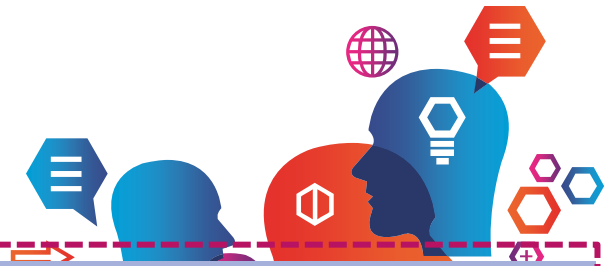


Critical role of management support to CoPs.

### CHEMICAL

With management support to actively guide and provide high autonomy to employees, the CoPs *addressed critical problems and improve cultural practices.*

# JKR KM Online Tools



## JPedia

### *Online Knowledge Repository*

- Best Practices
- PM Competency Framework
- Project Lessons Learned
- Technical References and Guides
- Presentations
- Conference Papers



Connect People to Content

## JCoP

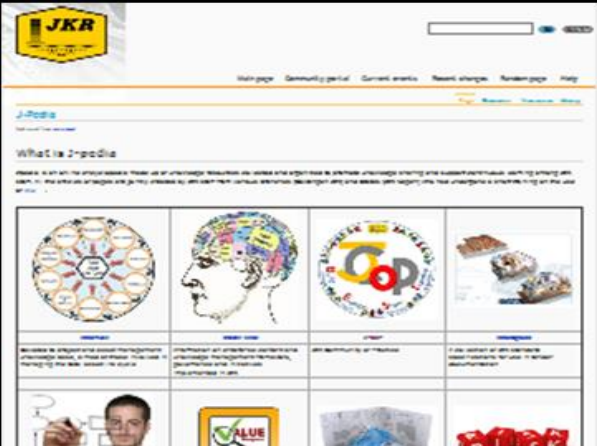
### *Virtual Communities of Practice*

- CoP Domains
- Subject Matter Experts Profile
- Ask and Discuss Online Platform



Connect People to People





JPedia

JCoP

Connecting People – The **BEST** Way

**B**uild Network  
**E**ngage Experts



Keretakan tembok

asked Mar 25, 2014 in Structure by Mastura (170 points)

+5 votes

Bangunan asal sekolah ini empat tingkat dan hanya satu tangga disediakan. Kemudian, tangga tambahan dibuat pada bangunan tersebut. Sekarang, ada keretakan diantara bangunan asal dengan tangga tambahan tersebut.

Bagaimana?

commented Apr 1, 2014 by Rosli (4,750 points)

Dinding untuk koridor perlukan stiffener dan dowel bar. Begitu juga dinding tangga baru dengan blok sekolah. Jika tidak disediakan stiffener + dowel bar, bermaksud dinding tersebut bergantung hanya kepada dinding lama. Dinding lama ini mempunyai (self weight) dan berisiko untuk runtuh. I.e. pelajar / murid sekolah bertolak-tolakan dengan dinding tersebut. Untuk keselamatan loading ini boleh dirujuk dalam Table



Struktur tangga baru dengan dinding lama yang tidak menyambung (structural independent) Encik Harjit.

Sebabnya dibuat kepada semua sambungan antara slab tangga dengan lantai koridor pada setiap tingkat. Kemungkinan ada yang retak banyak dan ada juga sedikit pada sambungan antara tangga baru dan blok sekolah. Dikhuatiri pecahan mortar yang jatuh boleh mencederakan kepala pelajar / murid yang melalui di kawasan tangga baru tersebut.

Punca kenapa berlaku "gap" tersebut perlulah diketahui supaya pembaikan dibuat tidak berulang. Sekiranya atas desakan PPD / Pengetua / Guru Besar supaya ambil tindakan segera bagi elak persepsi kurang baik dari ibu bapa / masyarakat setempat, dinding dipecahkan sebahagian kecil sahaja yang berhampiran blok sekolah. Drill rasuk dan masukkan rebar sebagai stiffener dan sediakan dowel bar. Perbetulkan kembali construction joint.

Sekadar pandangan saya. Terima kasih.

**Table 4 – Minimum Horizontal Imposed Loads For Parapets, Barriers and Balustrades, etc**

TYPE OF ACTIVITY/OCCUPANCY FOR PART OF THE BUILDING OR STRUCTURE	EXAMPLES OF SPECIFIC USE	HORIZONTAL UNIFORMLY DISTRIBUTED LINE LOAD (kN/m)	A UNIFORMLY DISTRIBUTED LOAD APPLIED TO THE INFILL (kN/m)	A POINT LOAD APPLIED TO PART OF THE INFILL (kN)
A. Domestic and residential activities	(i) All areas within or serving exclusively one dwelling including stairs, landings etc. But excluding external balconies and edges of roofs (see C3.1a)	0.36	0.50	0.25
B and E. Offices and work areas not included elsewhere including storage areas	(i) Light access stairs and gangways not more than 600mm wide (iv) Light pedestrian traffic routes in industrial and storage buildings except designated escape routes (v) Areas not susceptible to overcrowding in office and institutional buildings also industrial and storage buildings except as given above (vi) Areas having fixed seating within 500mm of the barrier, balustrade or parapet	0.22 0.36 0.74	N/A 0.5 1.0	N/A 0.25 0.5
C. Areas where people may congregate	(vii) Restaurants and Bars	1.5	1.5	1.5
C1/C2. Areas with tables or fixed seating		1.5	1.5	1.5
C3. Areas without obstacles for moving people & not susceptible to overcrowding	(viii) Stairs, Landings, Corridors, Ramps (ix) External balconies and edges of roofs, footways and pavements within building carliage adjacent to basements/under areas	0.74 0.74	1.0 1.0	0.5 0.5
C5. Areas susceptible to overcrowding	(x) Theatres, cinemas, discotheques, bars, auditoria, shopping malls, assembly areas, studio, footways or pavements greater than 3m wide adjacent to public areas	3.0	1.5	1.5
D. Retail areas	(xii) All retail areas including public areas of banks/building societies or betting shops. For areas where overcrowding may occur, see C5	1.5	1.5	1.5
F/G. Vehicular	(xiv) Pedestrian areas in car parks including stairs, landings, ramps, edges or internal floors, footways, edges of roofs (vi) Horizontal loads imposed by vehicles	1.5 See clause 11	1.5 1.5	1.5 1.5



Structurally independent

in sememangnya tidak bersambung dan dijelaskan oleh Encik Harjit.



Road Work WBS



**Share Explicit Knowledge**

The hand auger is very simple hand tool used for drilling into soft soils down to a max depth of 10m. Different steel augers (drill bits) can be attached at the bottom end of the drill rods. The auger can be emptied. A different auger can be used for each formation (soil) type. Hand augering

Above the water table, the borehole generally stays open without the need for support. The permanent well casing is then installed in the borehole as the permanent casing (direct installation), although in the silt and soft clay

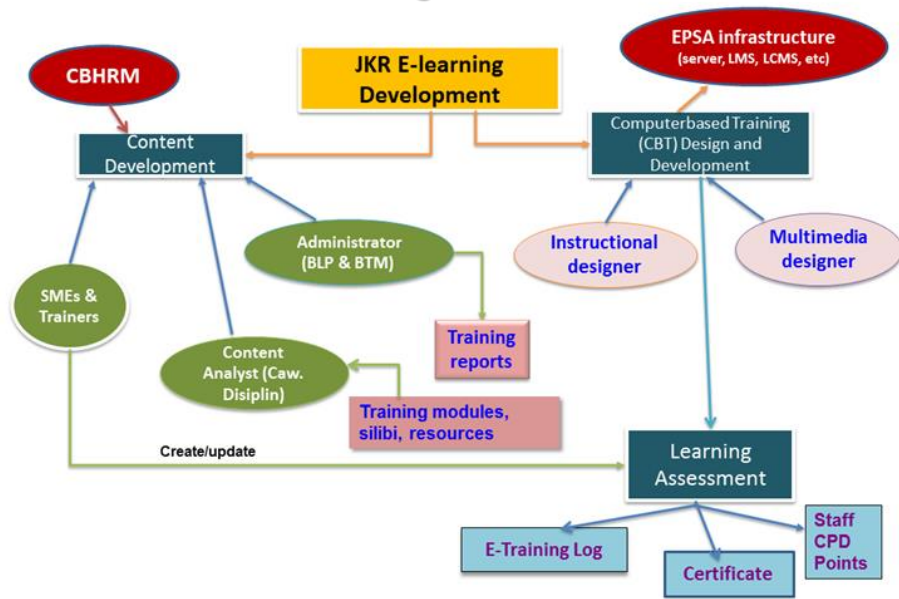


- 1) SURVEY
- 2) SOIL INVESTIGATION
- 3) In-situ Test
  - Borehole
  - JKR Prc
  - Hand Auger
  - Trial Pit
  - Cone Penetration Test
  - Vane Shear Test
  - Plate Load Test
- 4) Site Labor
  - Sieve Analysis
  - Moisture Content
  - Modified Proctor

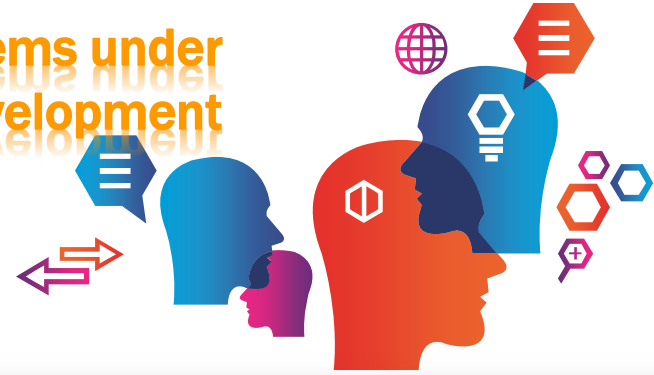


- navigation
- Main Page
  - Community portal
  - Current events
  - Recent changes
  - Random page
  - Help
- search
- Go Search
- toolbox
- What links here
  - Related changes
  - Special pages
  - Printable version
  - Permanent link

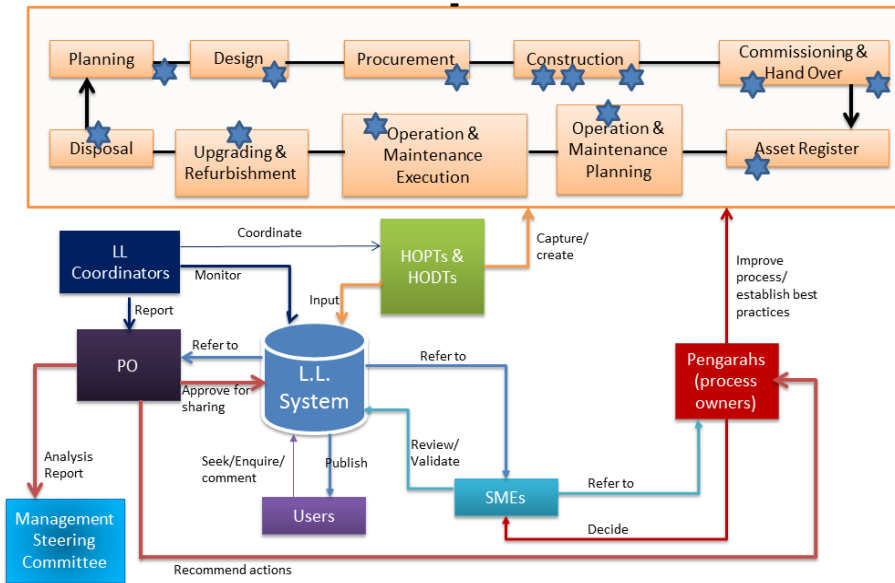
## E-Learning



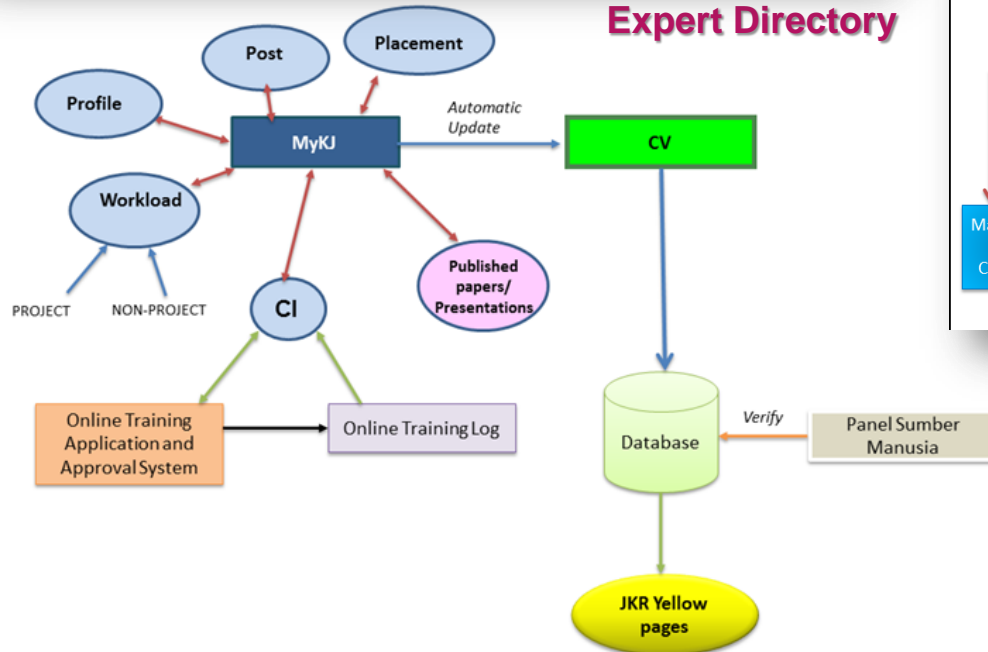
## Systems under development



## PROJECT LESSONS LEARNED MANAGEMENT SYSTEM

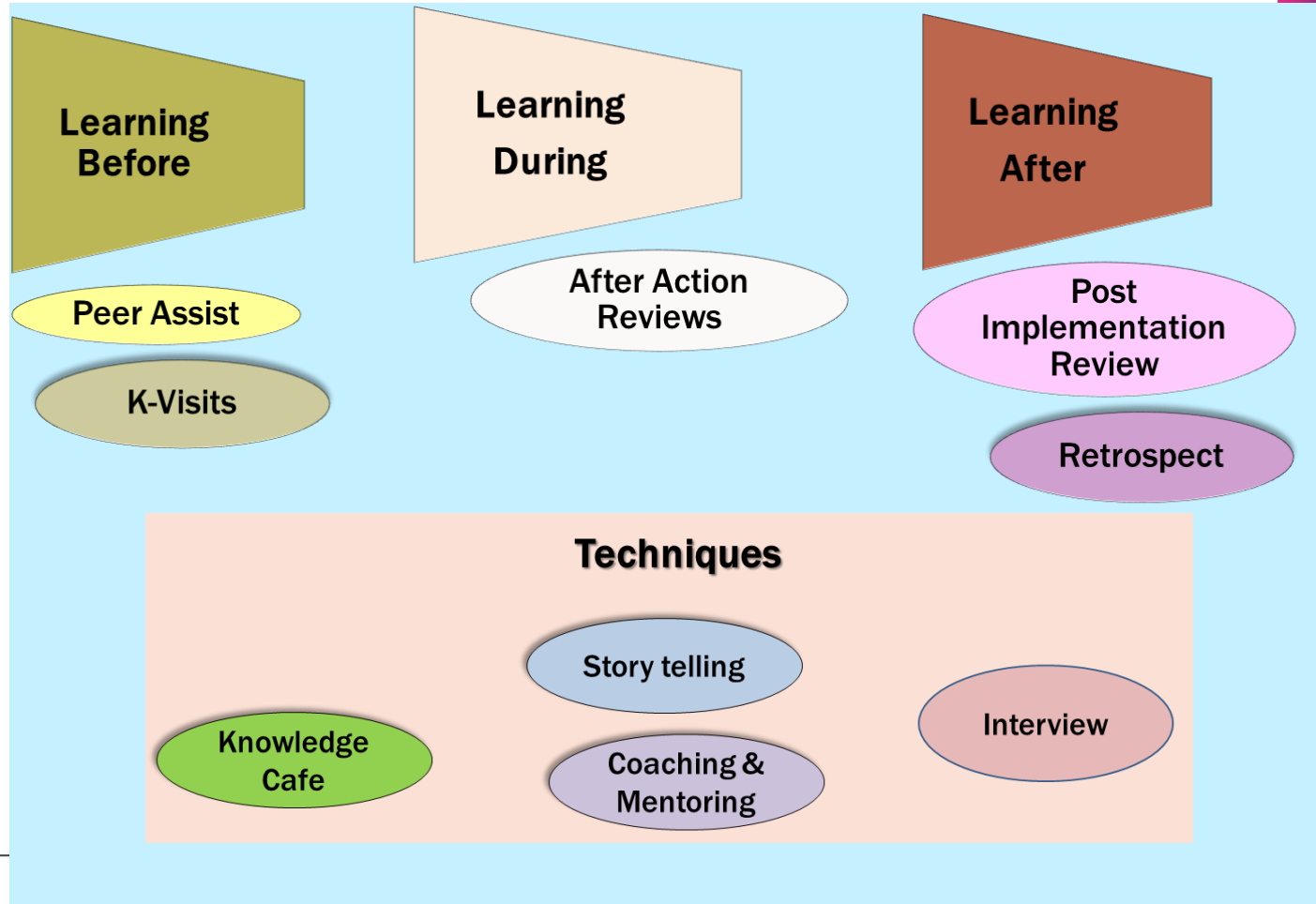
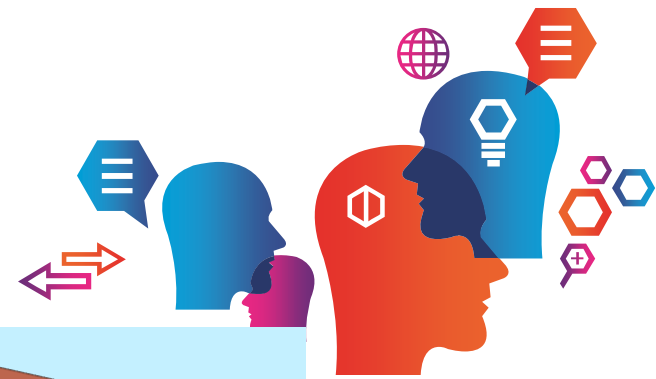


## Expert Directory



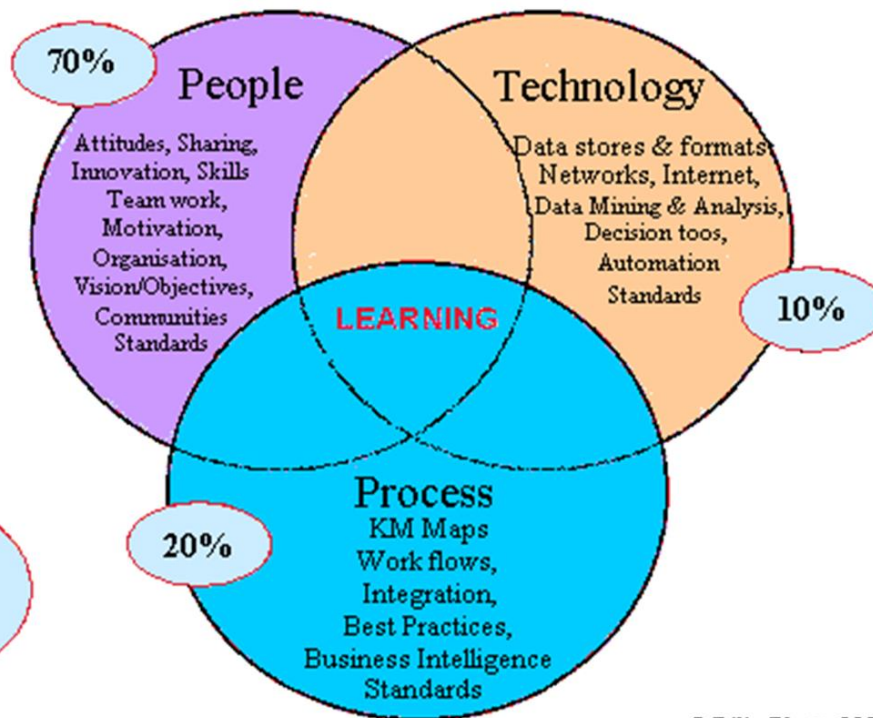


# Tools to capture/harvest Knowledge





## Knowledge Components



n% =  
effort  
required

© Dilip Bhatt, 2000

© Dilip Bhatt, 2000

# Thank you for your attention



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