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IAEA NKM SURVEY:
KM IMPLEMENTATION IN NUCLEAR ORGANIZATIONS

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INTRODUCTION

- Knowledge is the nuclear energy industry's most valuable asset and resource, without it the industry cannot operate safely and economically.

- Ability to take safe decisions in nuclear facilities is dependent on having the right information and knowledge available at the right time.

- Knowledge Management (KM) in nuclear organizations is the way in which knowledge processes and practices are organized and can be used to achieve improved nuclear safety and organizational performance.

KM REVIEW SURVEY

- Performed by the Agency before the 3-rd International Conference on KM with the purpose to provide information about **where** and **how** the **KM practices and tools** are being implemented and utilized in organizations related to nuclear industry.

- The online survey has **29 questions**, grouped under the two key headings:
  1) **Implementing organizational knowledge management**
  2) **Methods, practices and tools used in KM Programme**

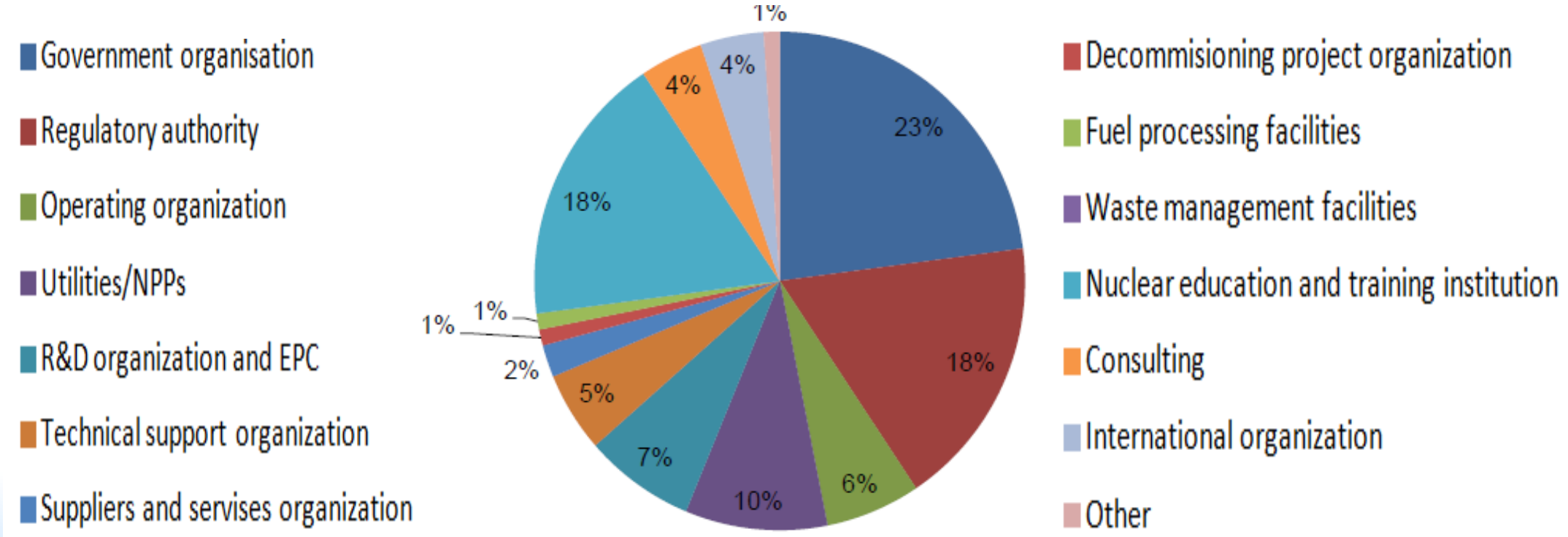
- These are **preliminary findings** (snapshot).
- Data collection will continue giving the chance to participants of the conference who have not managed to provide IAEA with their feedback.

- Final **NKM Review Survey Report** will be prepared and made available as part of the conference proceeding material, in 2017.

RESPONDERS TO THE SURVEY (1/2)

- 120 survey participants, experts from 46 Member States

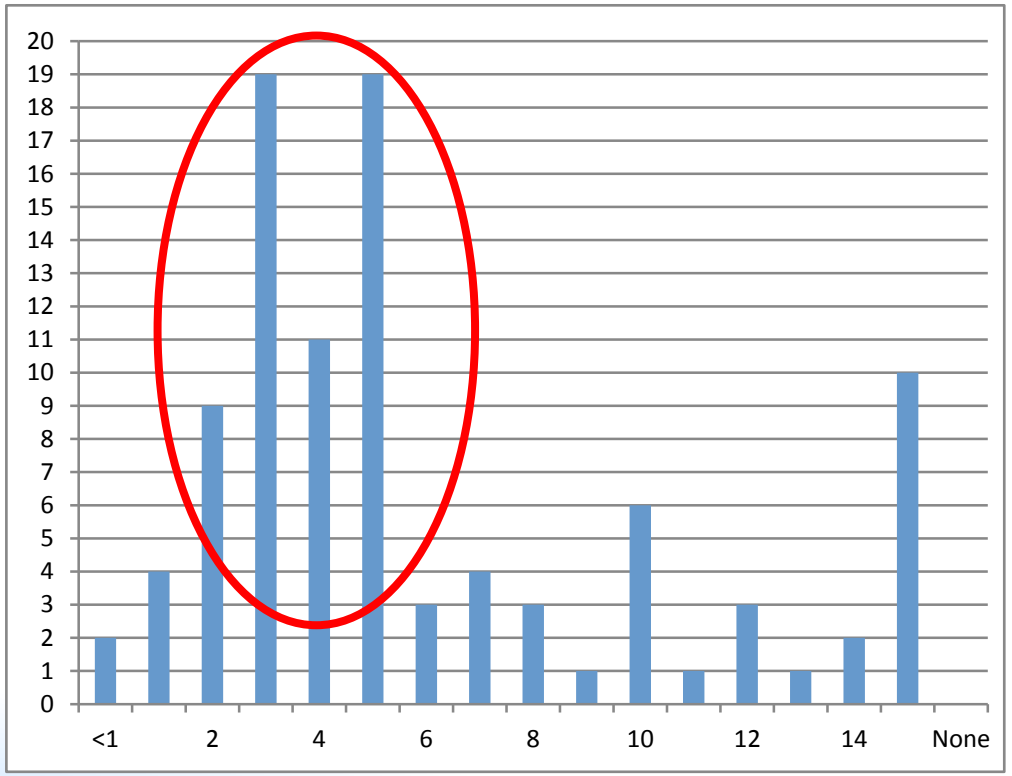
- **Company/Organization type:**



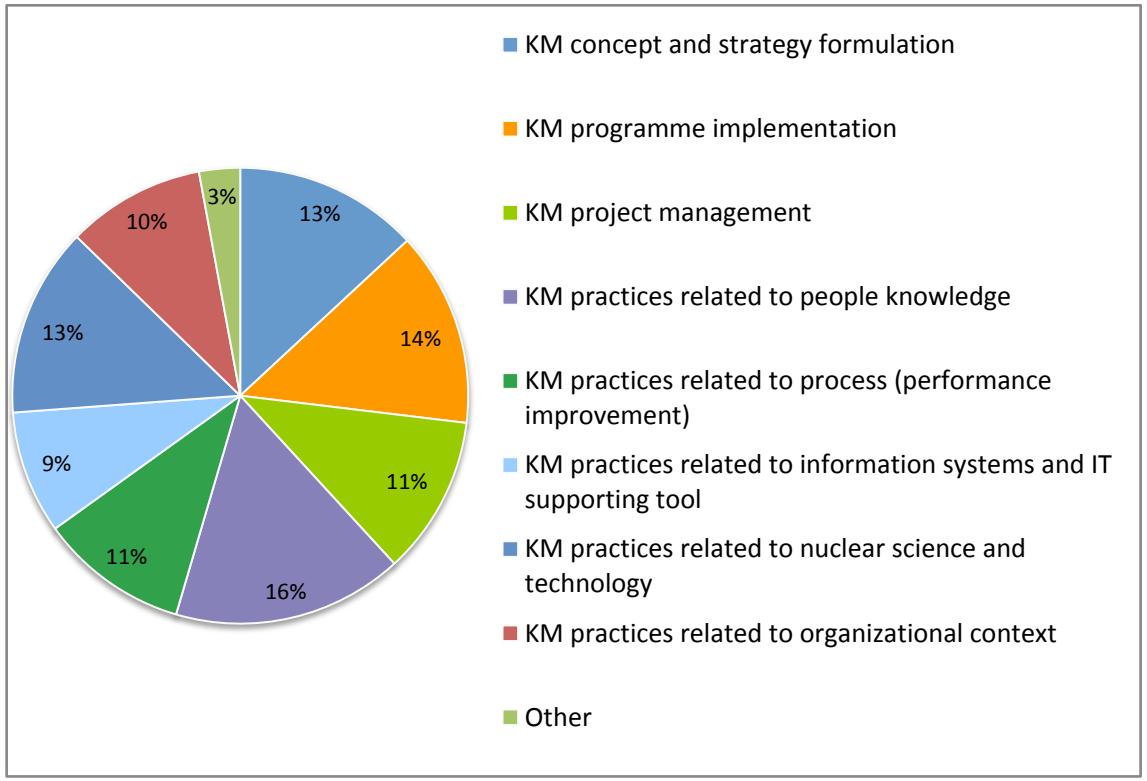
RESPONDERS TO THE SURVEY (2/2)

❖ Type of KM experience of the participating experts:

1. Years of Experience with KM



2. Type of KM experience



RESULTS OF THE KM SURVEY

1. Implementing organizational knowledge management

Using an approach recommended by IAEA, the process for the **implementation of a KM programme** into an nuclear organization considers the following 5 stages:

- ✓ **Stage 1. Analysis and orientation**
- ✓ **Stage 2. Strategy development**
- ✓ **Stage 3. Programme planning**
- ✓ **Stage 4. Programme implementation**
- ✓ **Stage 5. Periodic reviews**

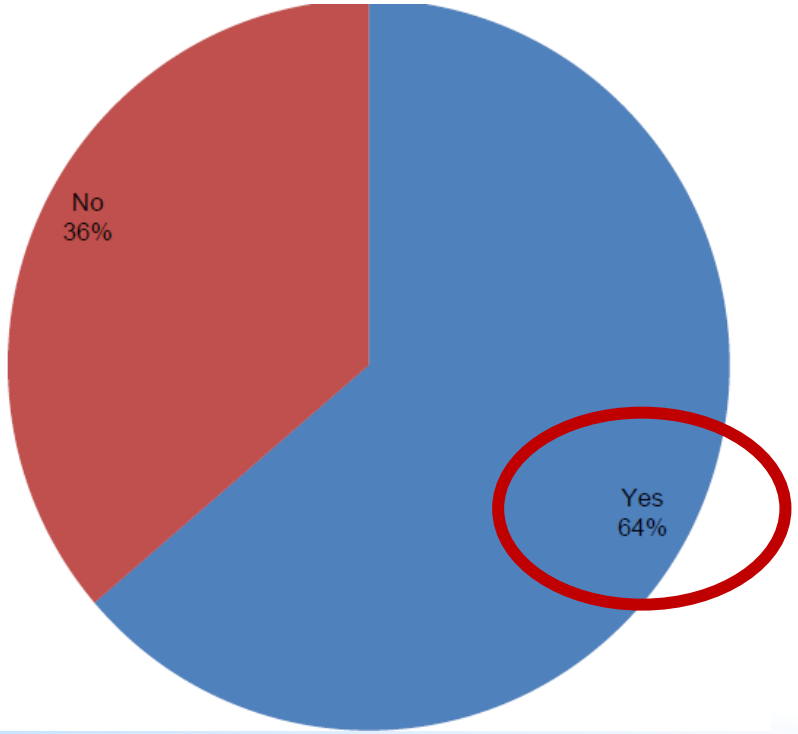
1. **Identify needs and gaps in the initial stage!**
2. **Create a KM vision and define knowledge goals in the strategy!**
3. **Develop a plan and specific KM programme!** (objectives, responsibilities, time plan, required resources etc.)
4. **Implement the KM programme!** (implementation team, graded approach)
5. **Periodically review the KM programme implementation!** (using metrics and KM Indicators)

RESULTS OF THE KM SURVEY

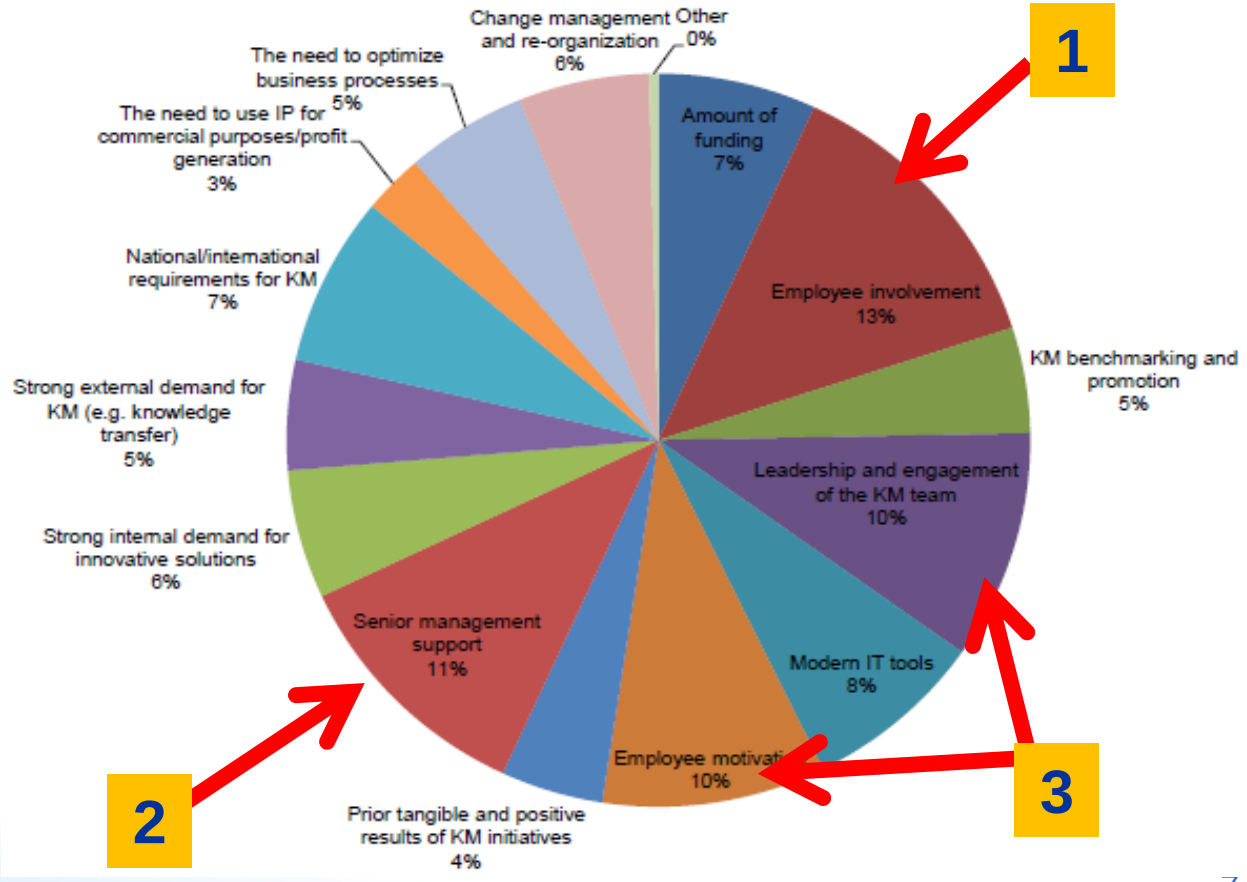
1. Implementing organizational knowledge management (cont.)

Stage 1. Analysis and orientation

Formal definition of KM process in the organization



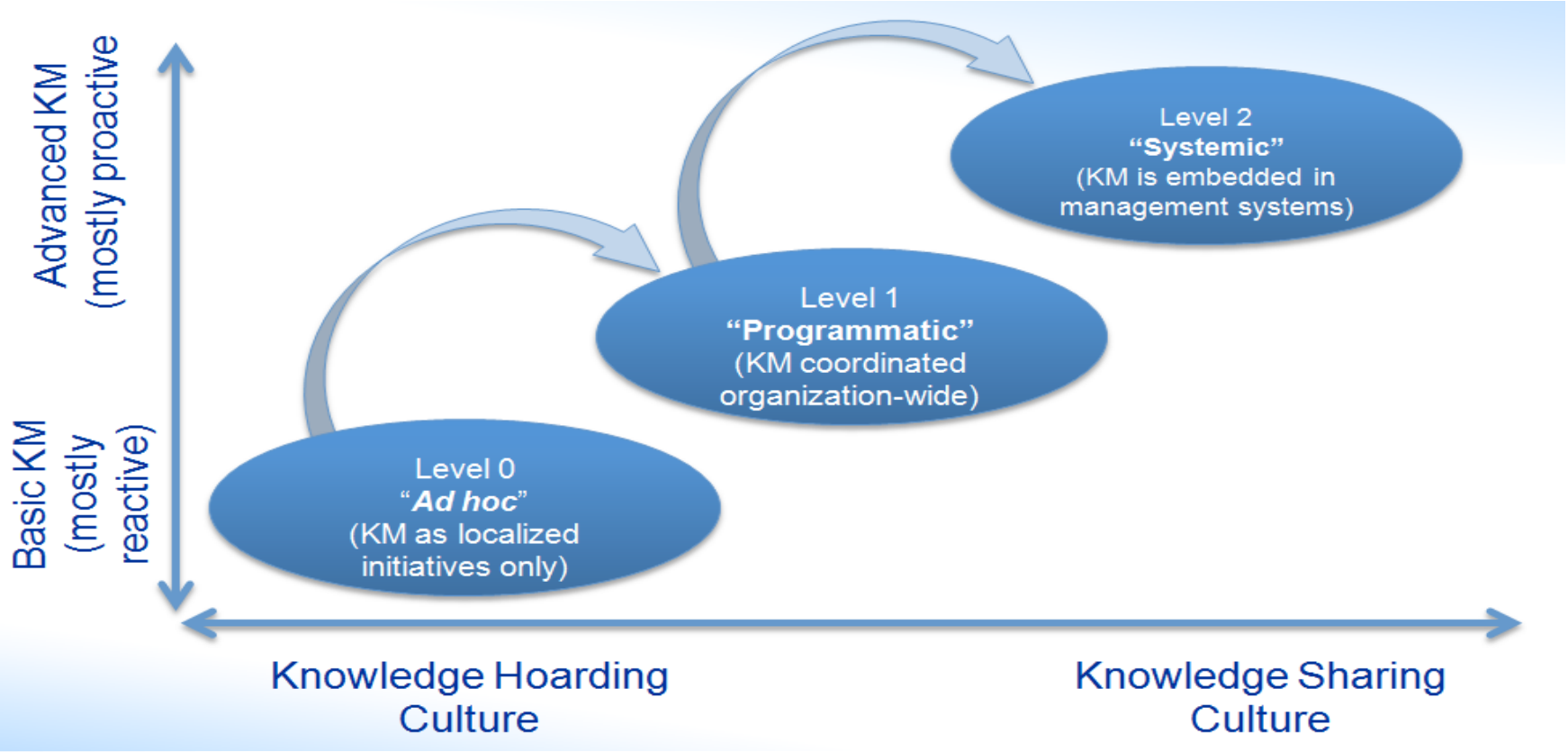
Drivers influencing KM initiatives in the organization



RESULTS OF THE KM SURVEY

1. Implementing organizational knowledge management (cont.)

KM programme maturity



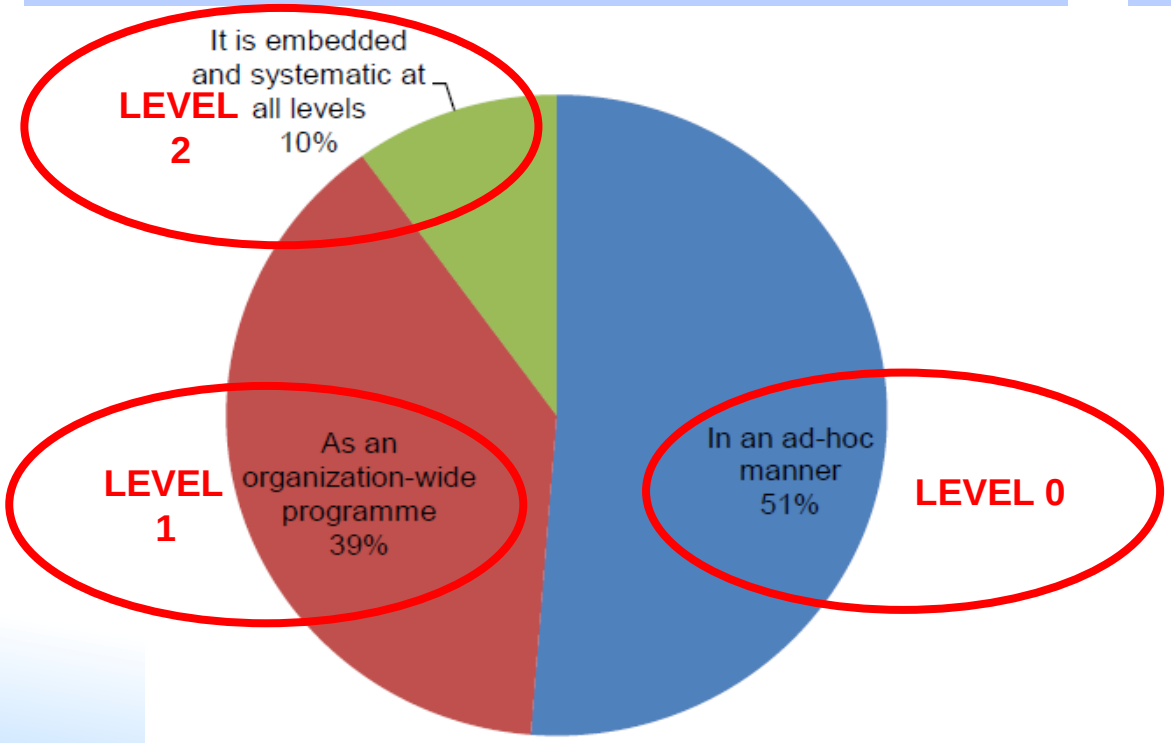
KM Maturity Model

RESULTS OF THE KM SURVEY

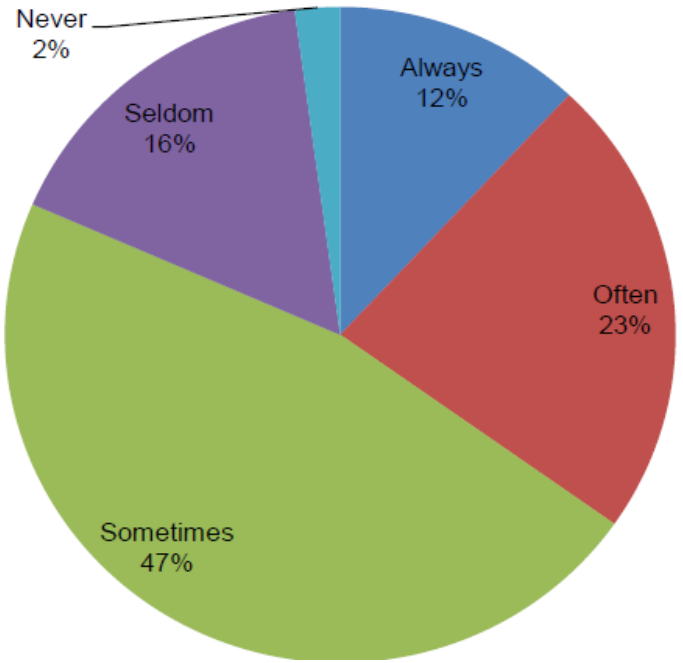
1. Implementing organizational knowledge management (cont.)

KM programme maturity (cont.)

Degree to which KM programme is implemented in organizations



KM responsibilities embedded in the job duties of the staff members

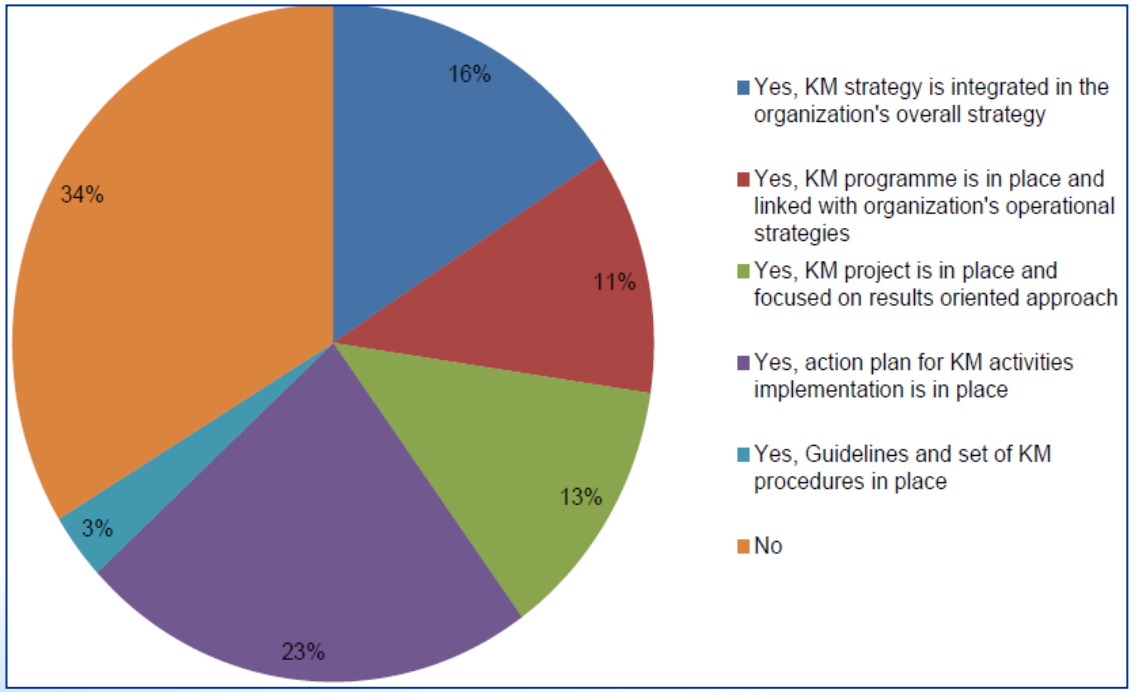


RESULTS OF THE KM SURVEY

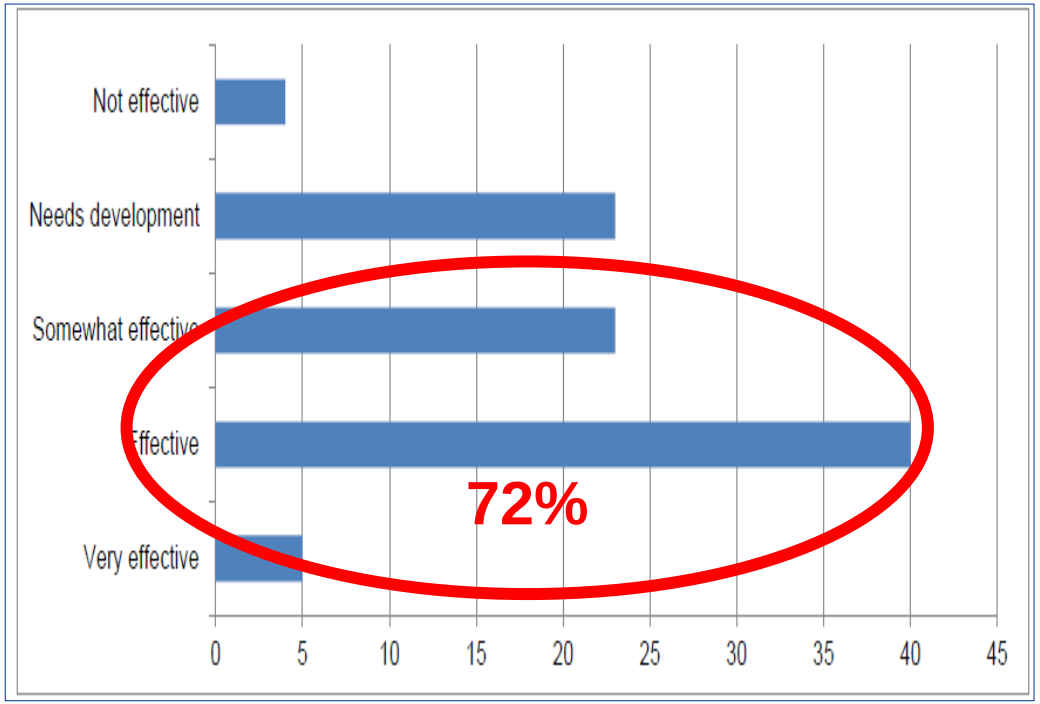
1. Implementing organizational knowledge management (cont.)

Stage 2. Strategy development

Stand-alone KM strategy or integrated with the overall strategy of organization



Utilization of knowledge to support decisions-making process

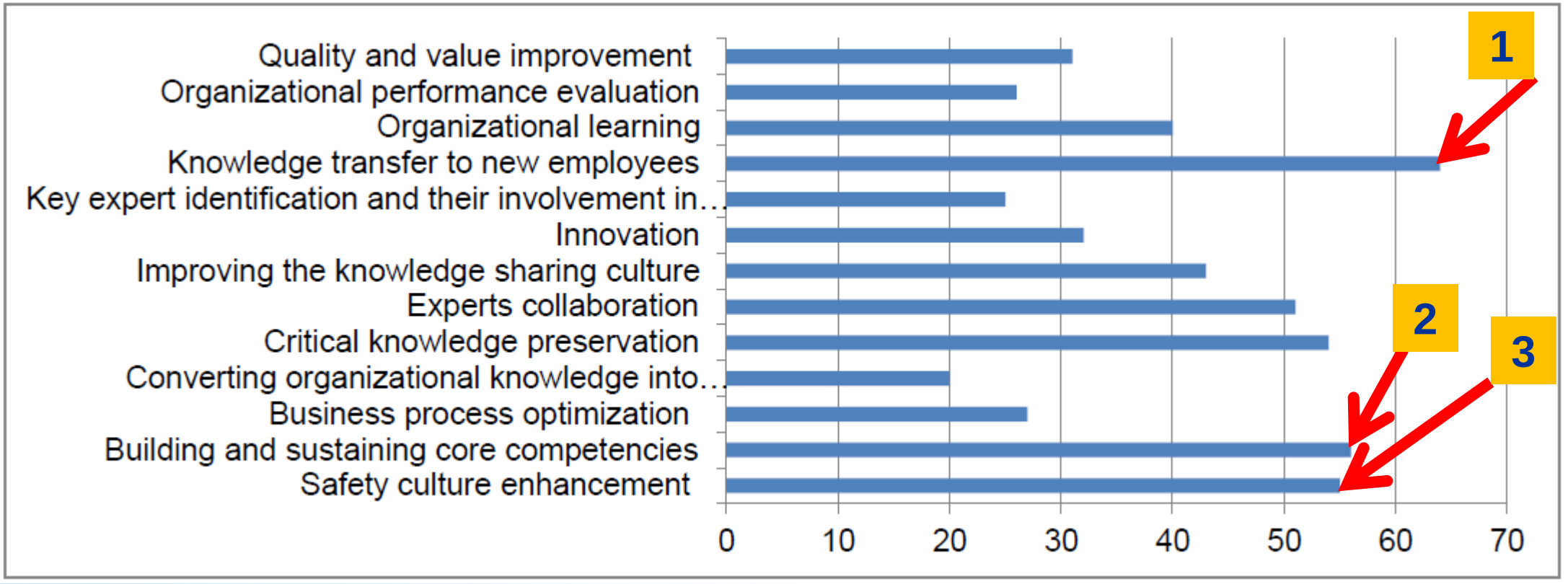


RESULTS OF THE KM SURVEY

1. Implementing organizational knowledge management (cont.)

Stage 2. Strategy development (cont.)

Organizational goals supported by the KM programme

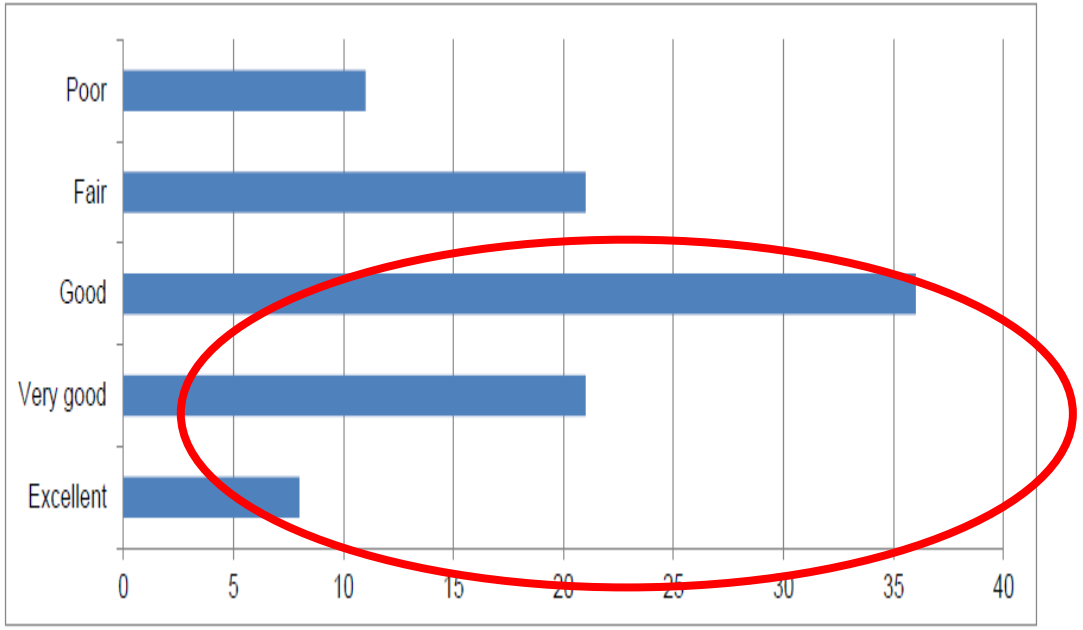


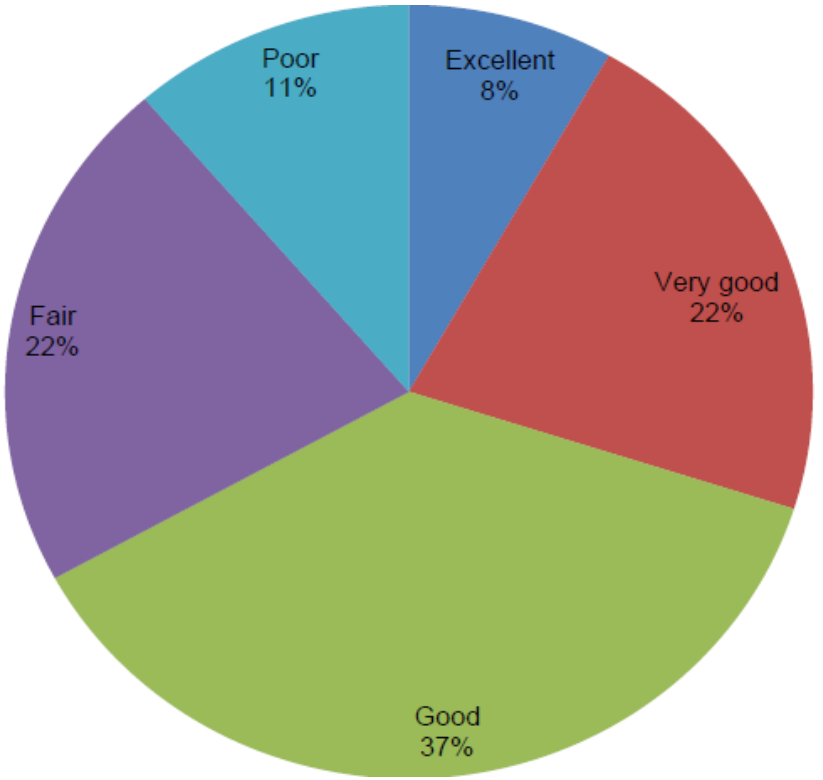
RESULTS OF THE KM SURVEY

1. Implementing organizational knowledge management (cont.)

Stage 2. Strategy development (cont.)

Extent of support provided by middle and senior management in connection to KM projects and activities.



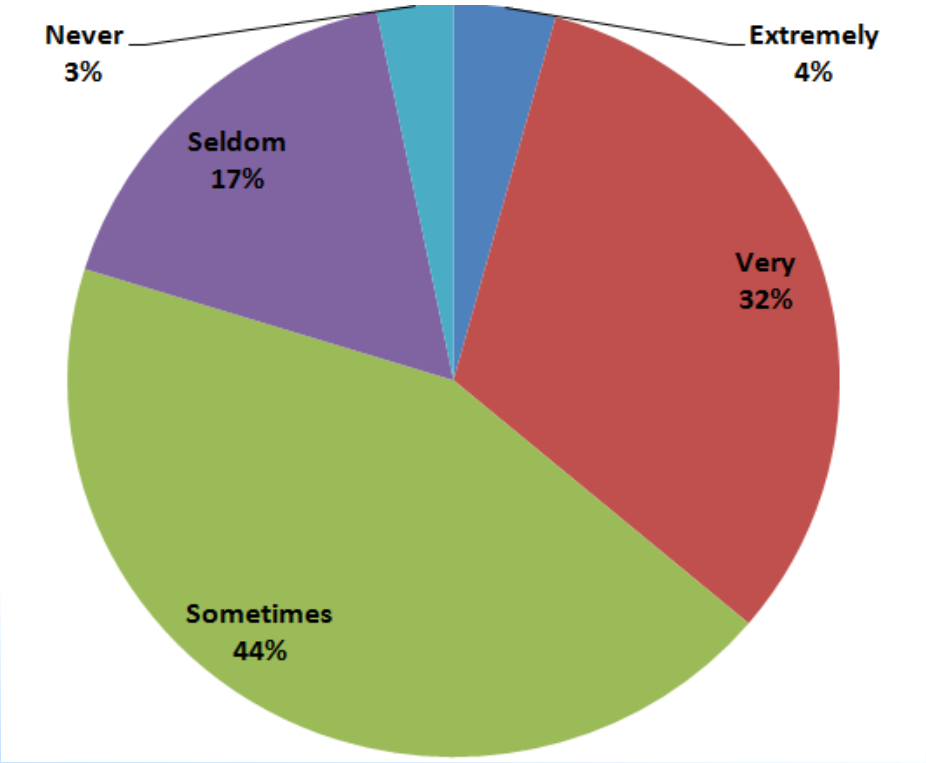


RESULTS OF THE KM SURVEY

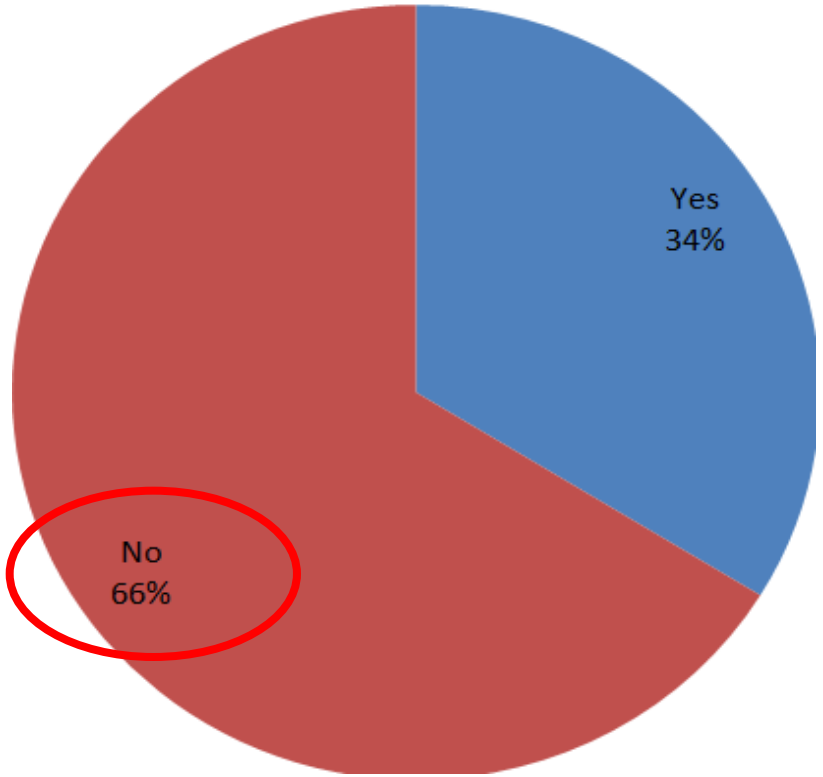
1. Implementing organizational knowledge management (cont.)

Stage 3. Programme planning

Pro-activeness of the organization in identifying knowledge gaps



Enough financial resources are provided to KM needs

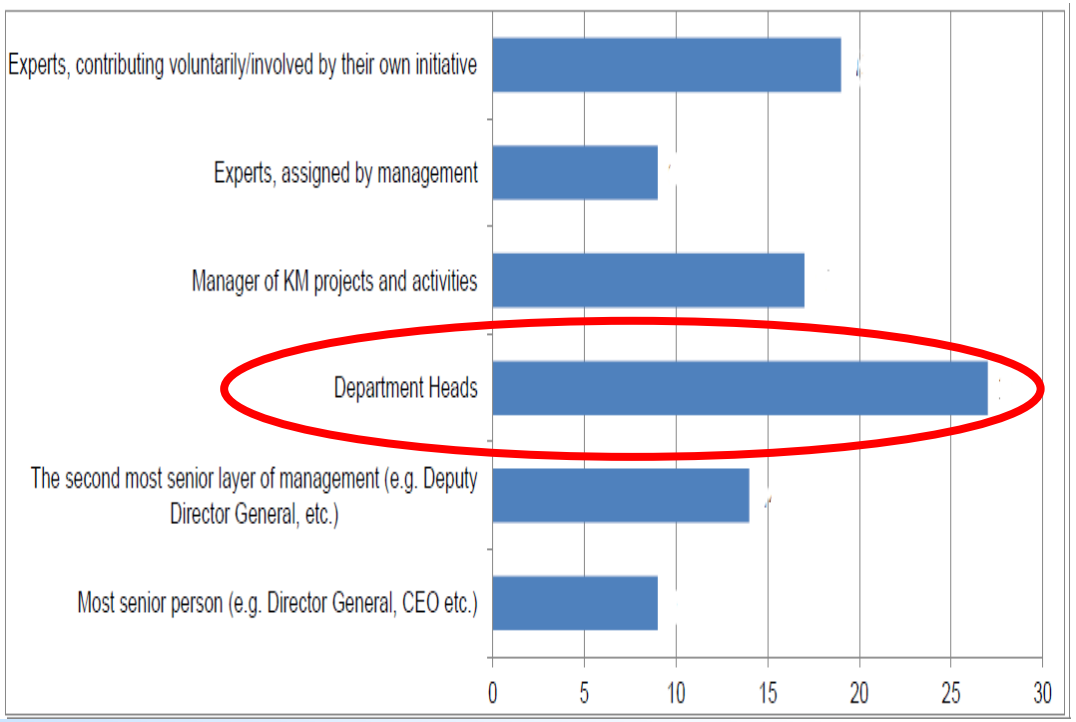


RESULTS OF THE KM SURVEY

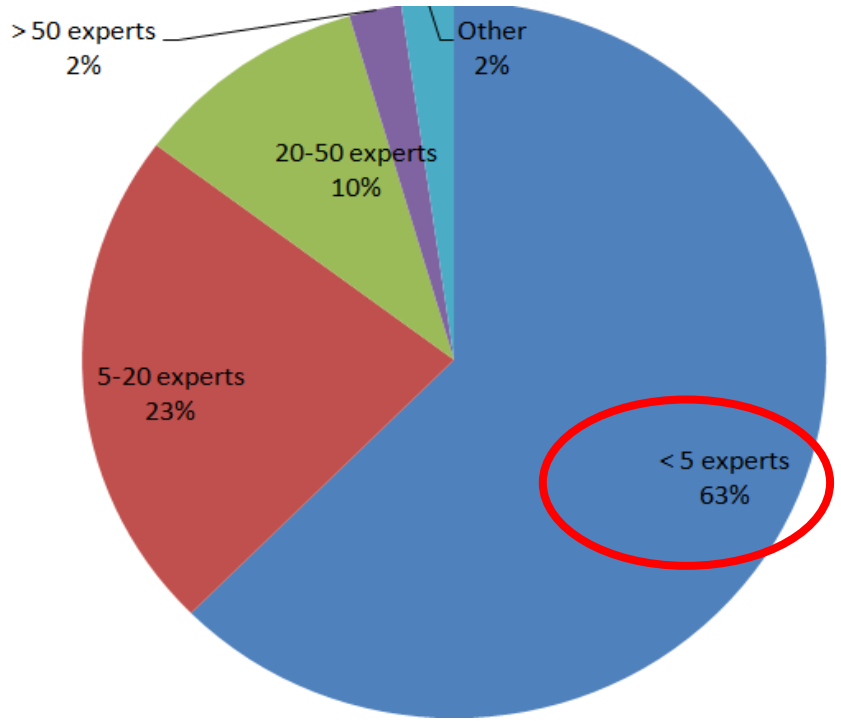
1. Implementing organizational knowledge management (cont.)

Stage 4. Programme implementation

Individuals with specific KM related responsibilities in an organization



Number of full time specialist involved in KM programme/projects

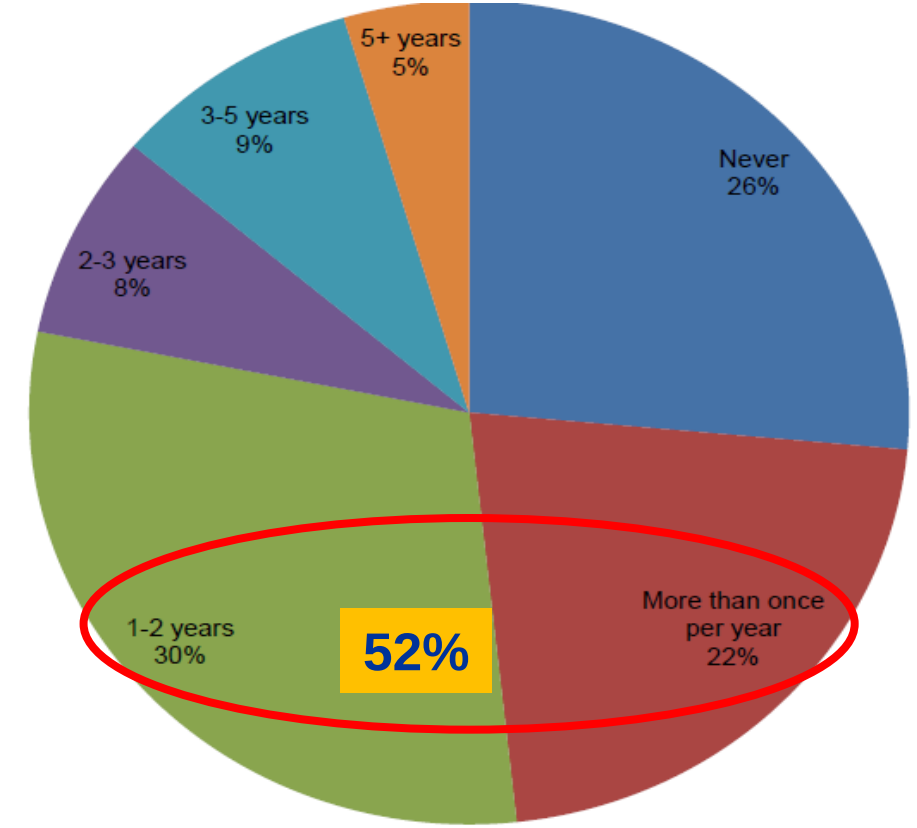


RESULTS OF THE KM SURVEY

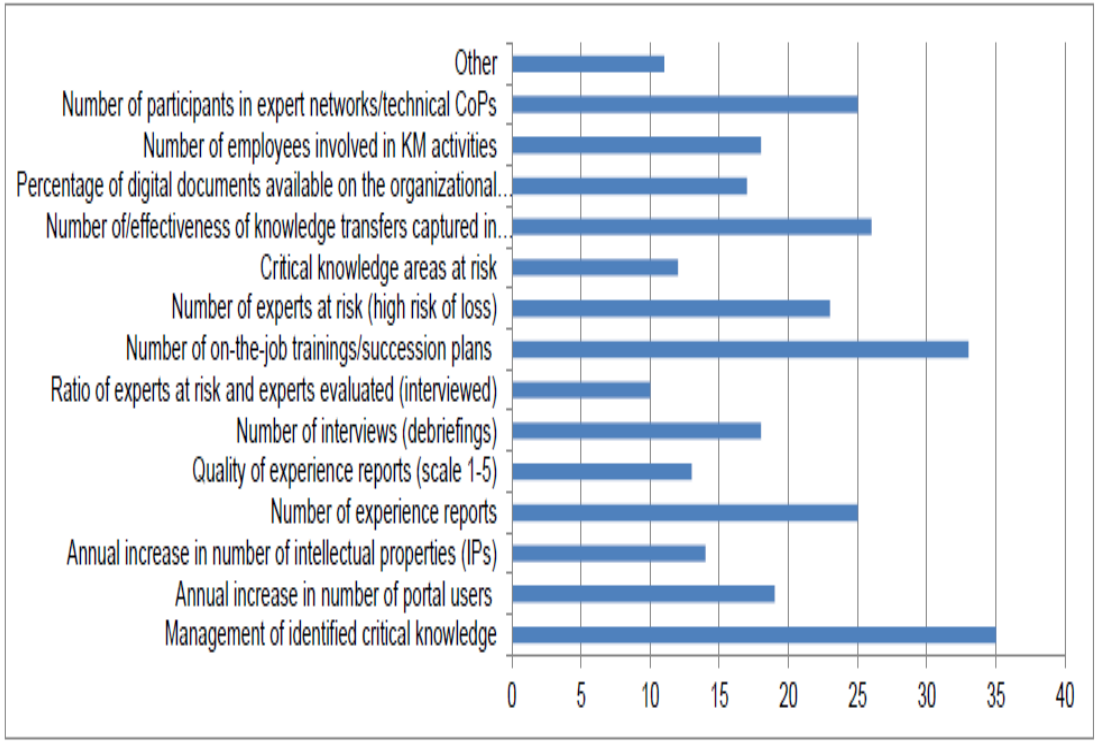
1. Implementing organizational knowledge management (cont.)

Stage 5. Periodic review

Frequency of monitoring, reviewing and/or assessing KM programme



KM performance indicators for evaluation of KM project and processes

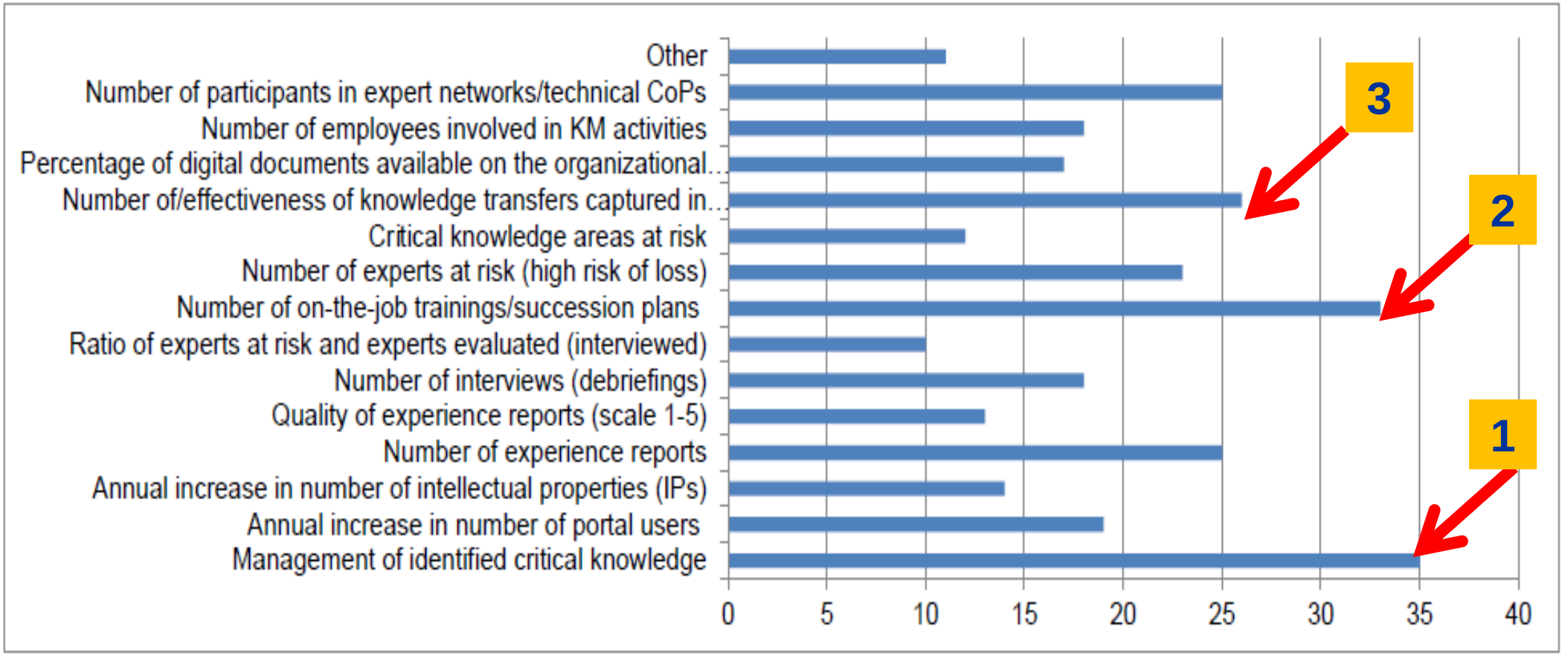


RESULTS OF THE KM SURVEY

1. Implementing organizational knowledge management (cont.)

Stage 5. Periodic review (cont.)

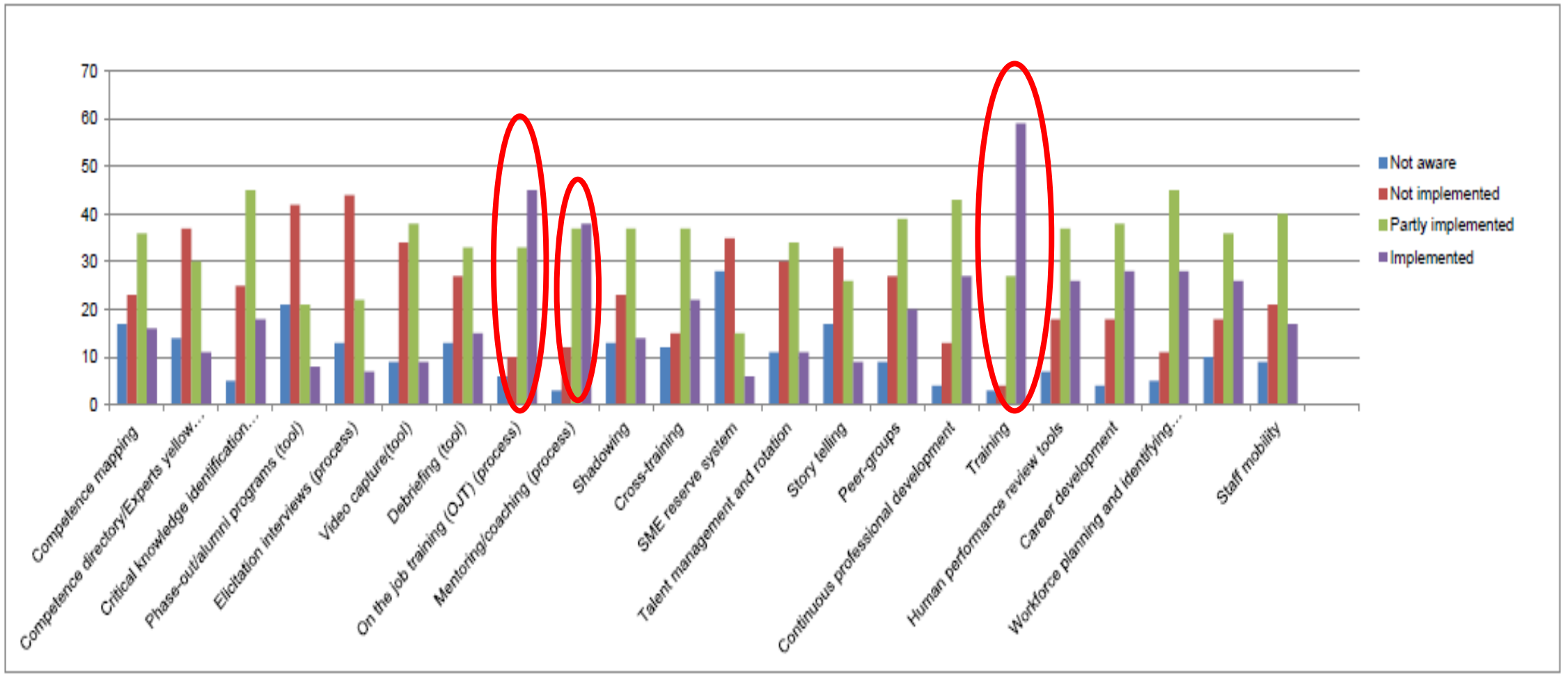
KM performance indicators used to evaluate KM projects and processes.



RESULTS OF THE KM SURVEY

2) Methods, practices and tools used in KM Programme

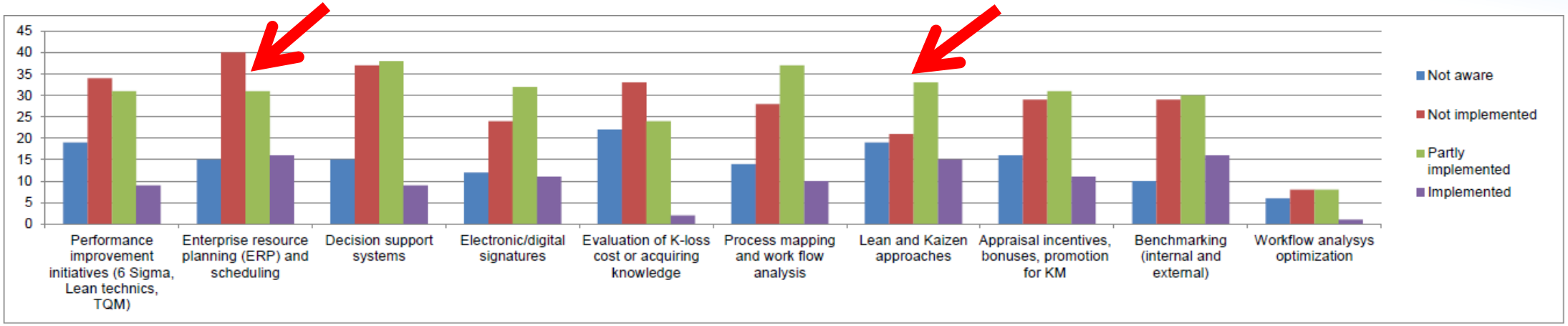
KM practices and tools used inside organizations in the area of people knowledge



RESULTS OF THE KM SURVEY

2) Methods, practices and tools used in KM Programme (cont.)

KM practices and tools used inside organizations related to process optimization

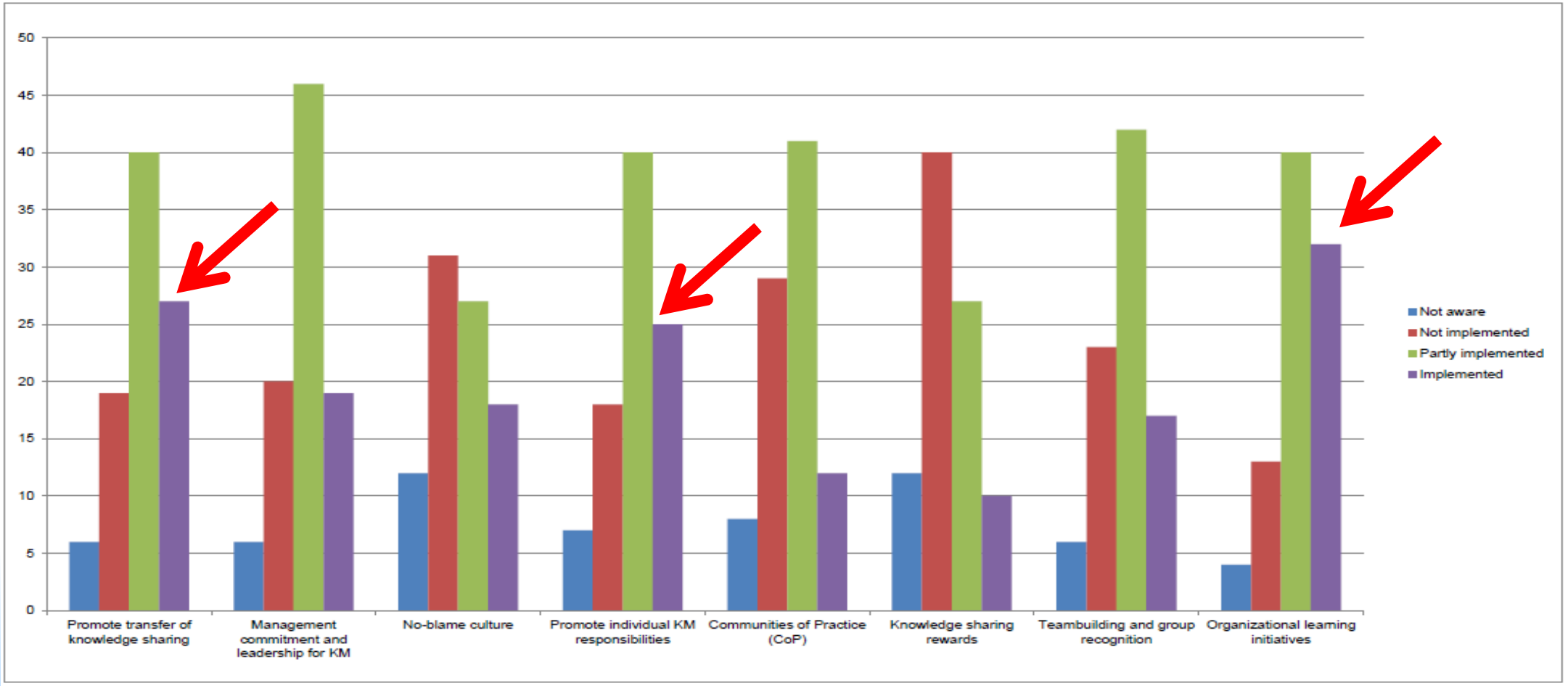


Practices used inside organizations related to information systems and IT tools

RESULTS OF THE KM SURVEY

2) Methods, practices and tools used in KM Programme (cont.)

Practices used inside organizations related to organizational context



CONCLUSIONS

Majority of nuclear organizations formally defined or described KM and innovation is considered very important.

Drivers/factors influencing the development of the KM initiatives where identified:

- ✓ **Senior management support**
- ✓ **Employee involvement and motivation**
- ✓ **KM team leadership and engagement**

Majority of the responders indicated that KM programme is implemented in an "ad-hoc manner".

KM responsibilities are sometimes embedded in the job duties of the staff members.

Organizational goals are supported by the KM programme, focusing on the safety culture enhancement and capacity building.

CONCLUSIONS (cont.)

KM programme is not appropriately funded during all its stages of development.

KM Programs are monitored and reviewed with a frequency of 1-2 years.

A diversity of KM indicators for evaluation of KM projects and processes were identified of which the most important are:

- ✓ **Management of identified critical knowledge**
- ✓ **Number of on the job training/succession plan**
- ✓ **Number of participants in expert networks**

Methods, Practices and Tools used in the KM programme in the area of:

- ❖ **Knowledge exchange**
- ❖ **Process optimization**
- ❖ **Information systems and IT tools**
- ❖ **Organizational context**

where identified and presented in the NKM Review Survey 2016 preliminary report.

CONCLUSIONS/RECOMMENDATIONS

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Responders to NKM Review Survey 2016 considered that the survey was very beneficial for their nuclear organisation.

Responders underlined that the NKM Review Survey 2016 represents an occasion to analyse their KM programs and outputs.

Majority of the participants to NKM Review Survey 2016 requested to become a member of the Technical CoP on KM (KM-CoP) organized by NKM Section of the IAEA.

Recommendation: Detailed analyses of the NKM Review Survey 2016 will offer input for future IAEA's activities in KM area, in support to Member States. The most urgent identified issues in NKM programmes of Member States nuclear organisations, should be address by IAEA in the future technical assistance.

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Thank you!