Information Exploitation in the UK Defence Science and Technology Laboratory

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Dr. Dominic A. Davies

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Dr. Dominic A. Davies,
Group Leader,
Knowledge Management and Exploitation
UK Defence Science and Technology Laboratory

Ms. Vakare Valaitis
Technical Information Specialist, DTIC

Information Exploitation in the UK Defence Science and Technology Laboratory.

Dr Dominic Davies

Group Leader, Knowledge Management and Exploitation

UK Defence Science and Technology Laboratory

Definitions

- OED
  - Data – known facts or things used as a basis for inference or reckoning.
  - Information – something told, knowledge OR items of Knowledge news.
  - Knowledge – awareness or familiarity gained by experience OR a theoretical or practical understanding of a subject.

- This Talk
  - Data – are discrete raw facts (transactions, observations, measurements, events)
  - Information – is data given meaning and context by human processing
  - Knowledge – is an understanding of information about a subject which people have in their mind and which they can apply to the creation of new information or to take appropriate action.

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Summary

- Information management and exploitation
  - Why do we need it?
  - What is it?
  - What is the role of the information professional?
  - Examples from our work.
- Knowledge management and exploitation
  - Why is it different?
  - What is it?
  - Indicators, needs and examples of KME

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IM, why do we need it?

- 1.3 million scientific papers (2006)
- 400 thousand books published in the UK and USA (2006)
- 440 % increase in number of internet users (2000-2010)
- Google Index Increase 17- 35 billion web pages (Dec 2010 to March 2011)

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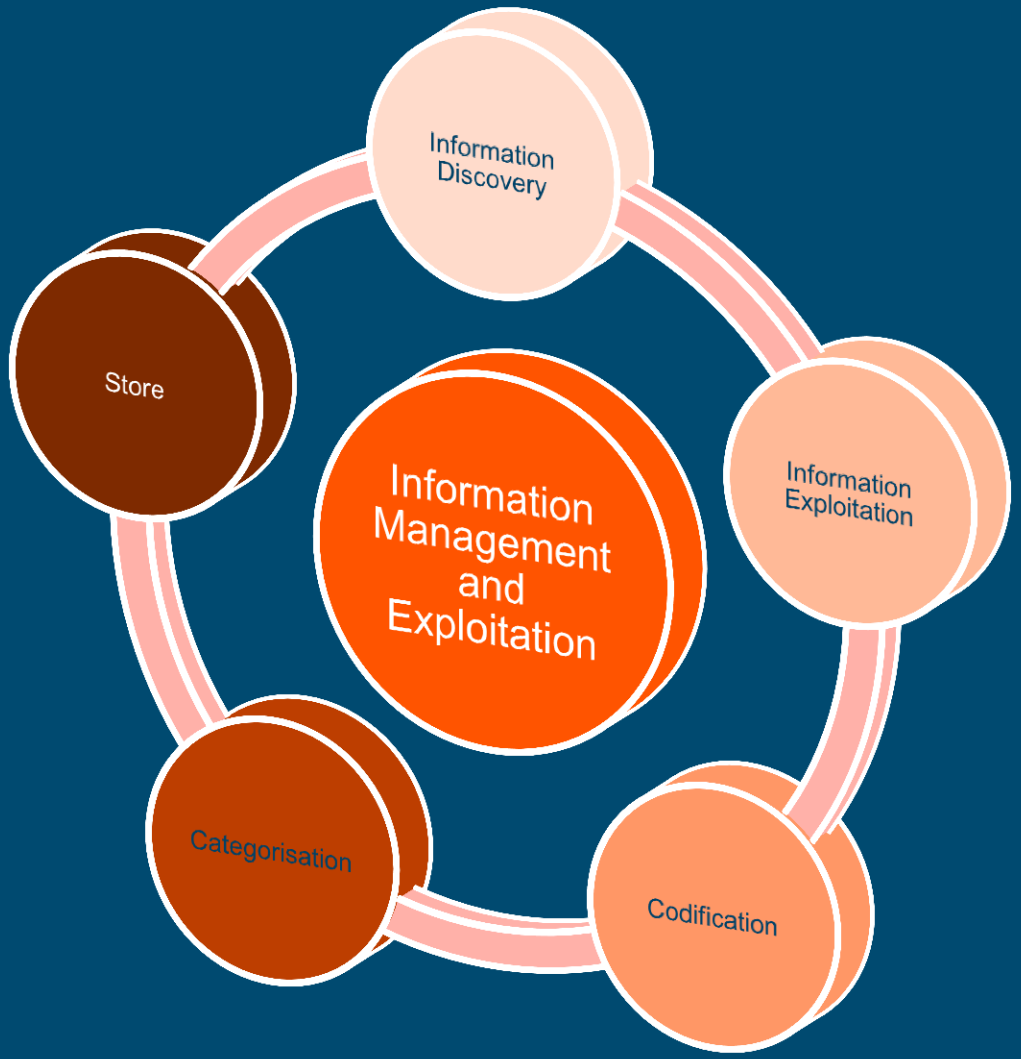
Information management and exploitation, a virtuous cycle



Miss any stage of this virtuous cycle and it rapidly becomes a vicious one.

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Information Overload

Industrial Literature (Papers, patents technical spec etc)

Unstructured Information (Blogs, social media etc)

Academic Literature (Papers, proceedings etc)

Tacit Knowledge (Experience, tricks of the trade etc)

Classified Information (Reports etc)

Scientist or Technologist

Requirements or Problem

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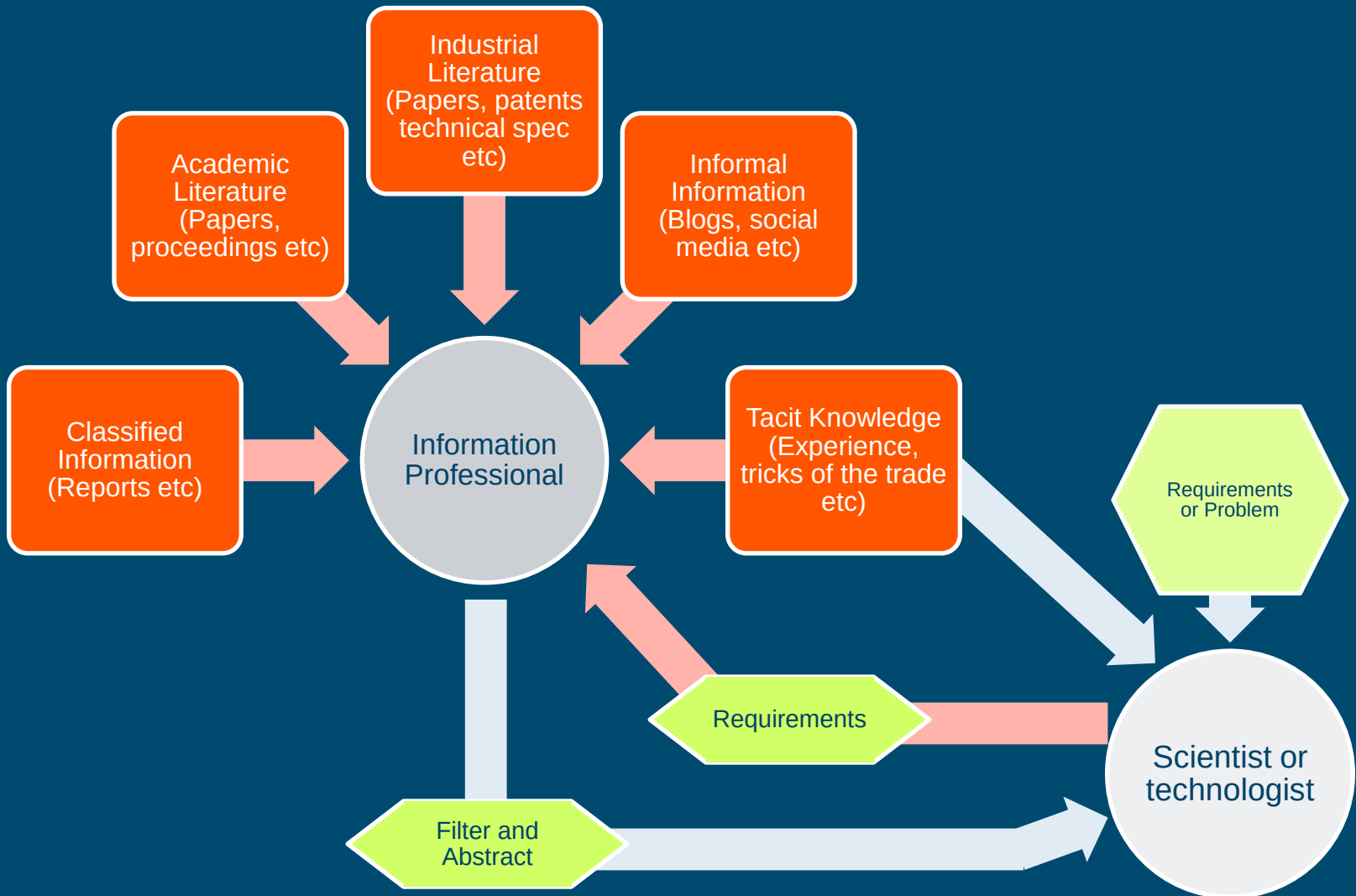
Role of the Information Professional



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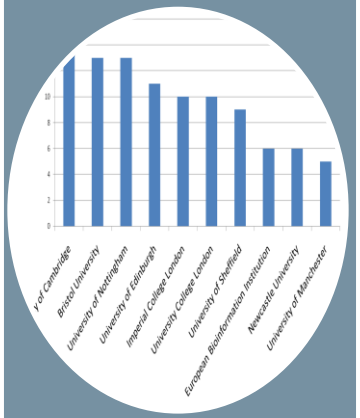
Literature Review.
Materials Science.

Academic + Classified Literature and abstraction.

Literature Analysis.
Standards for evidence.

Formal open source lit. and structured analysis.



Bibliometric analysis.
Expertise Identification for consultancy and EMR.
Technology Watching.

Academic Lit and formal analysis.

Sentiment Analysis.
Public perception of an organisation.

Informal open source lit and formal analysis technique.

Domains Pages.
Present new ideas relevant to a capability domain.

Collation of summarised information from all sources

Examples of KME's products and services

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Why is KME different from IME?

- Information
  - is explicit
  - can be qualified and quantified
  - exploitation leads to knowledge (which can be turned into information)

- Knowledge
  - is tacit
  - is very hard to measure
  - exploitation solves problems, generates new ideas

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What is KME?

If you try and manage knowledge you will fail.

If you try and create an organisational culture which values information and which promote collaboration and sharing of knowledge between staff you might just end up managing and exploiting their knowledge.

It helps to provide suitable tooling though this is not only CIS infrastructure and software.

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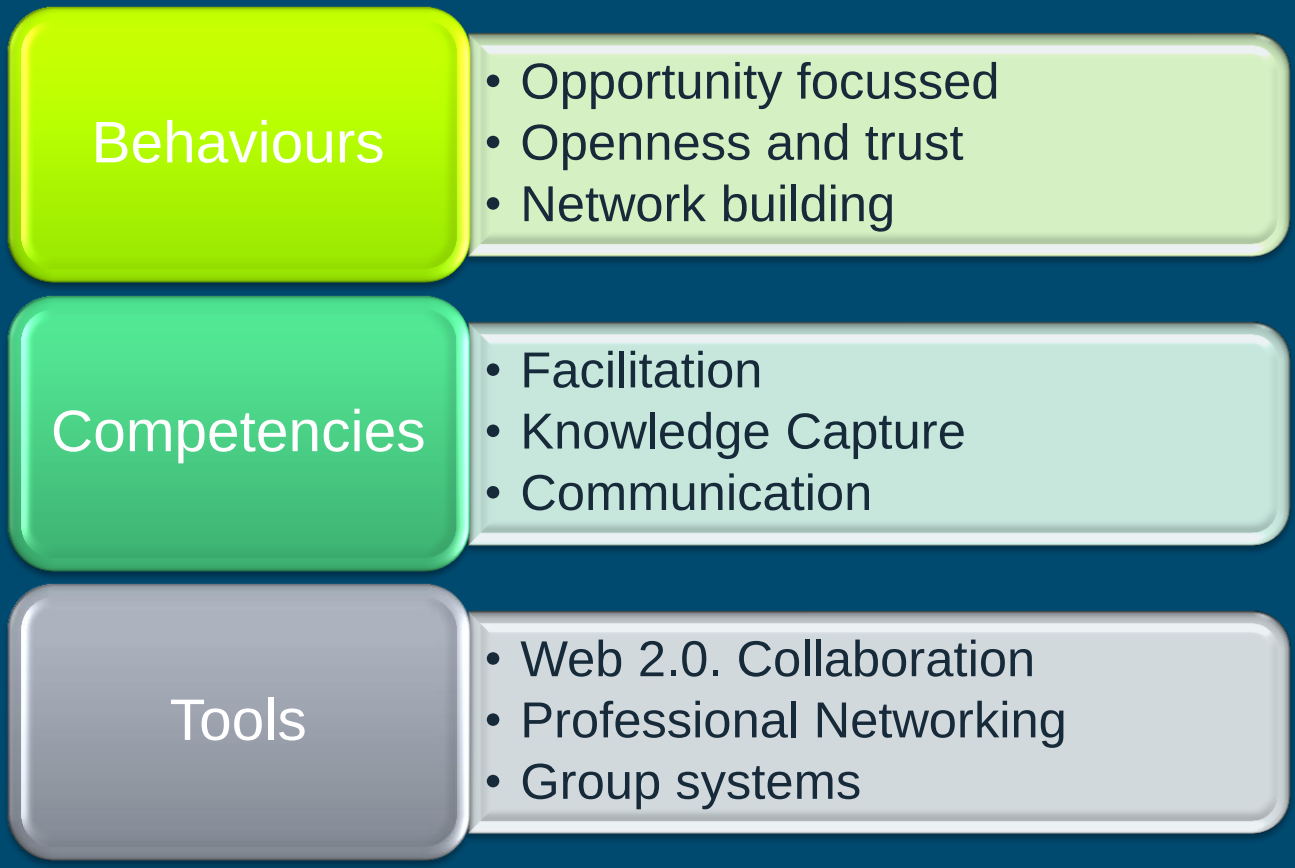
Indicators, needs and examples of KME



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Questions

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Contact Information

Dr. Dominic A. Davies,
Defence Science and Technology Laboratory (Dstl)
Ministry of Defence (MoD)
United Kingdom
http://www.dstl.gov.uk/

Ms. Vakare Valaitis, DTIC
703-767-9159, DSN 427-9159
vvalaiti@dtic.mil

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