



Competent Resources

Robert Lawson - GreyStar

# Presentation

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**Introduction**

**Education**

**Training and Skills Development**

**Mentoring and Assessment**

# Competent Resources

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☐ Does the sector have a shortage?

☐ Age profile

☐ Education and Training Provision

☐ School System

☐ Reward Culture

☐ A resounding yes!



# Introduction

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## ❑ Competent Engineering Resources:-

- ❑ Education,
- ❑ Training,
- ❑ Knowledge Management
- ❑ 'Mentoring'



# Competent Resources

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## ☐ Competent Technician Resources

- ☐ Education
- ☐ Training
- ☐ Skills Development
- ☐ Assessment





# Competence

- Our staff must be ‘competent’.
- A definition via UKOPA\* is:
  - ‘A Competent Person should have **practical** and **theoretical knowledge** as well as sufficient **experience** of the particular machinery, plant or procedure involved to enable them to identify defects or weaknesses, and to assess their importance in relation to strengths and functions of the machinery’



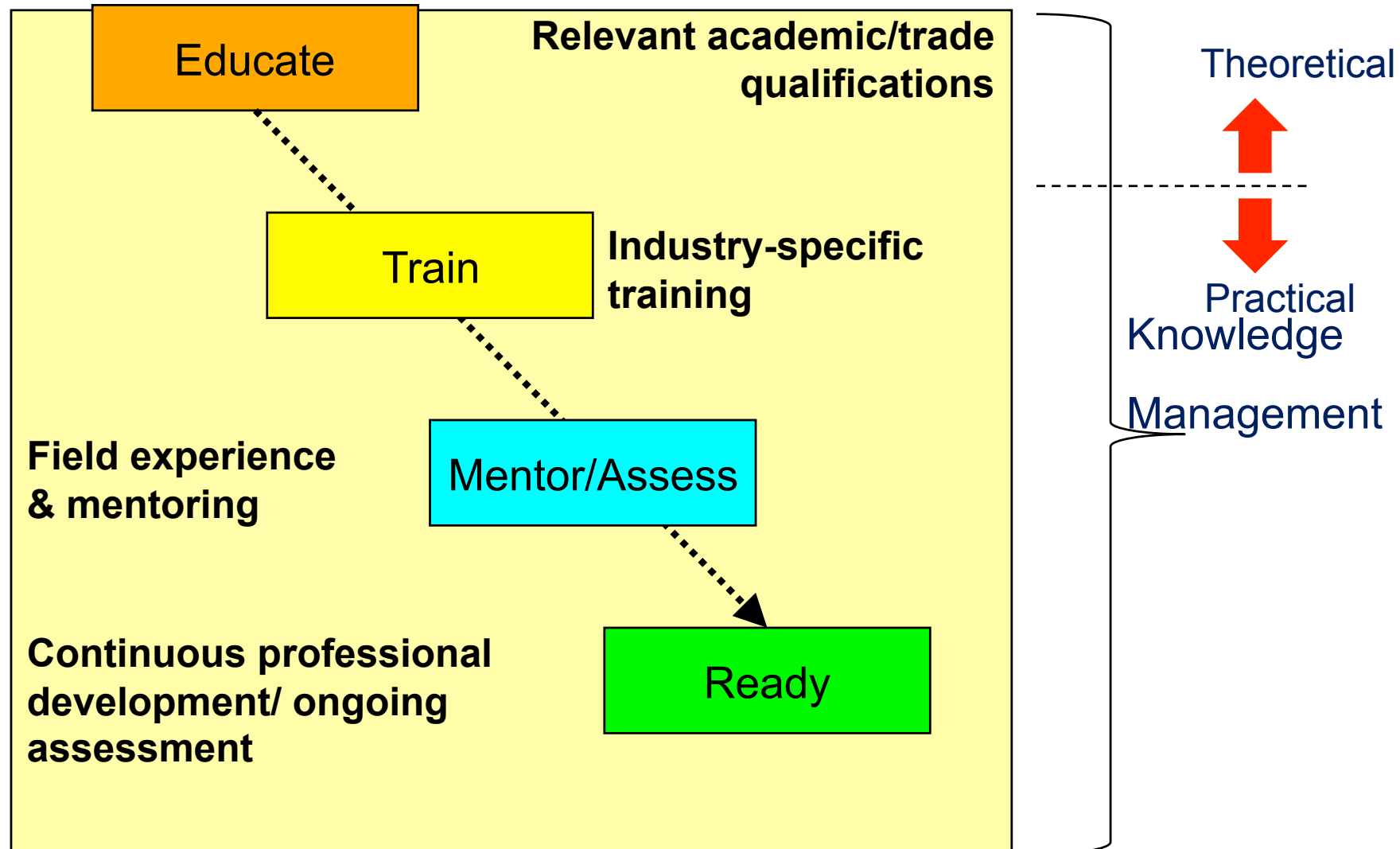
\*[www.ukopa.co.uk](http://www.ukopa.co.uk). Taken from Brazier v. Skipton Company (1962) His Lordship Winn J.

# Competence

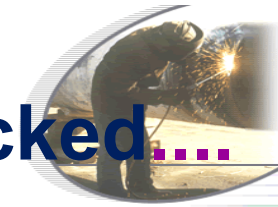
- **Requirements for Competence:**
  - **Knowledge & understanding**
  - **Application in practice**
  - **Leadership and management**
  - **Interpersonal skills**



# The Path to Competence



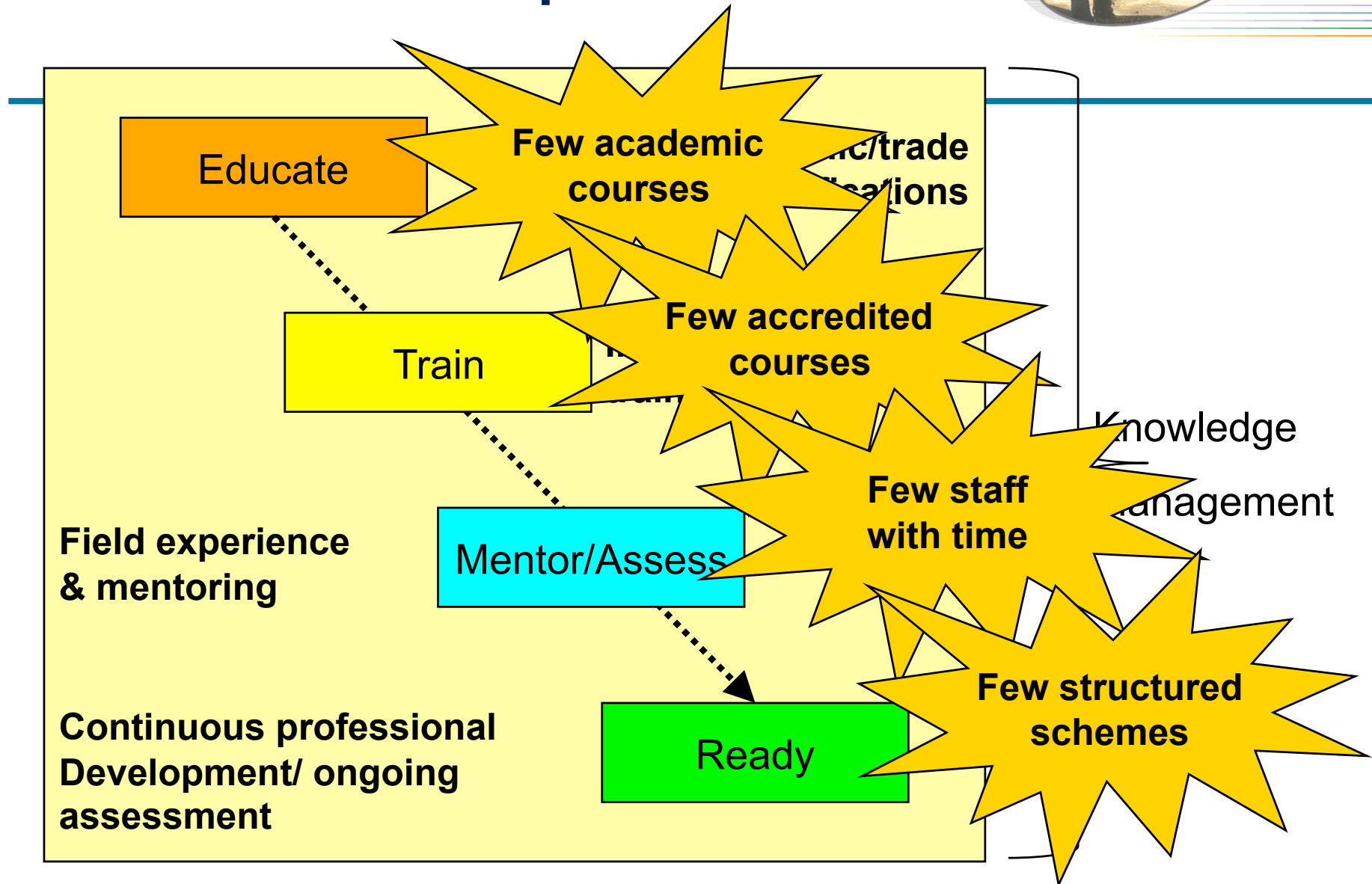




UKOPA

United Kingdom  
Onshore Pipeline Operators' Association

# The Path to Competence... is Blocked



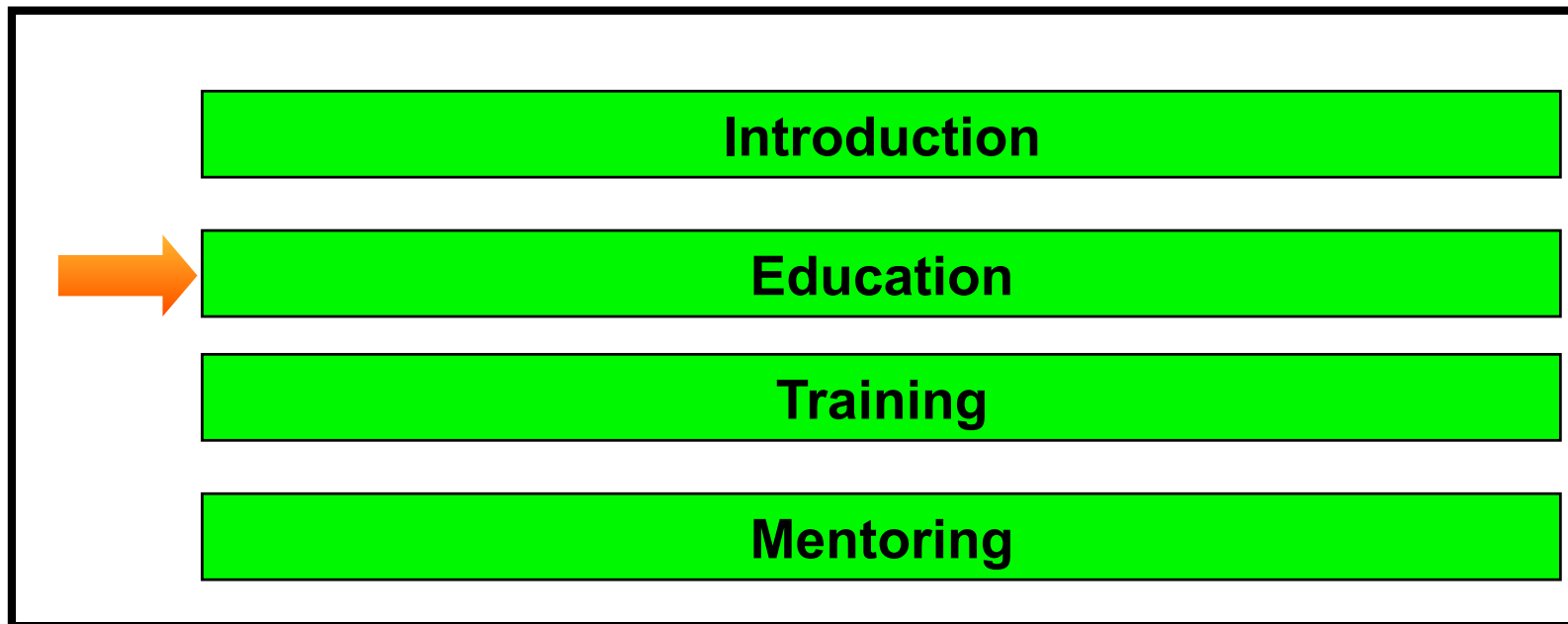
# The Solution in Penspen and GreyStar?

- **Do it yourself!**
  - **Roll up your sleeves...**
- **Penspen and GreyStar have invested heavily in this DIY solution....**



# Presentation

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# MSc: Newcastle University



- We need competent pipeline engineers.
- We need to start with the 'theory'.
- In 2001 Penspen and other local companies in North East England collaborated with Newcastle University to produce a Masters program in pipeline engineering.

MSc in Pipeline Engineering



# MSc: Newcastle University



- MSc is highly successful.
- 30 to 40 full time students each year.
- Over 40% of lectures taught by external staff from local industry
- Accredited by IMechE, IChemE, IGEM, and RINA
- Huge support from service sector of pipeline industry.
  - Little interest from oil and gas majors.



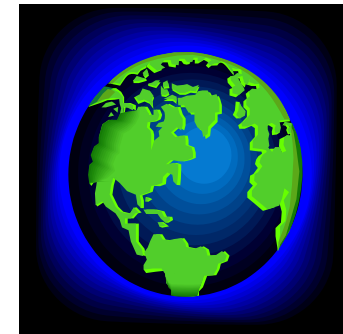
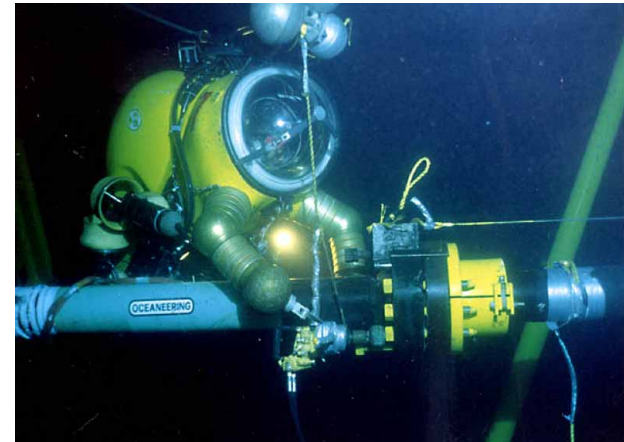


# Pipeline Engineering and Academia



## ■ New initiatives:

- New MSc in subsea engineering commenced in 2009 at Newcastle University – Penspen helping.
- Penspen is now embarking on a distance learning program with Northumbria University in 'pipeline integrity management'.



# Presentation

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# Training and Penspen



- Penspen are leaders in pipeline engineering training
- About 25 public/in-house courses per annum, almost all overseas
  - >4000 engineers trained
  - Huge interest in N and S America
  - Little interest in UK
- Purpose:
  - Company value – contribute to industry learning
  - Marketing/Business Development
  - Staff Professional Development

An Interactive Training Course

## ONSHORE PIPELINE ENGINEERING

4-7 September 2006, Sheraton Imperial, KUALA LUMPUR, MALAYSIA


**Course Highlights**

- Pipeline Design and Regulations
- Pipeline Materials Selection
- Pipeline Welding, Routeing, Construction and Testing
- Cathodic Protection and Coatings
- Internal Corrosion Mechanisms – Sweet Corrosion, Sour Corrosion, Microbiological Corrosion
- Corrosion Morphology and its Impact on Integrity
- External and Internal Pipeline Corrosion and its Prevention
- Repair and Rehabilitation Methods
- Inspection Using Smart Pigs
- Pipeline Integrity Management

**Able Led by Expert Course Directors:**

**Professor Phil Hopkins**  
Penspen Integrity, UK

**Dr Roger King**  
Corrosion Services, UK

Organized By:  
 IBC ASIA (S) PTE LTD  
Advancing Business with Knowledge

[www.ibc-asia.com/ope.htm](http://www.ibc-asia.com/ope.htm)

# Technician Recruitment

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☐ The obvious target recruitment pool is qualified and competent technicians currently employed within the energy transportation and storage sector. However this pool is small, has its own age profile issues and is known for having a “comfort” culture i.e.

- ☐ high base wage,
- ☐ gold standard pensions,
- ☐ limited travel,
- ☐ no staying away from home and
- ☐ limited standby commitments
- ☐ De-skilled by RCM

# Skills Training

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- ❑ **GreyStar provide a broad range of technical training courses with high hands on content in its training facility in South Wales, clients include:-**
  - ❑ **UK Power Sector**
  - ❑ **HSE**
  - ❑ **UK Gas Transporters**
  - ❑ **Overseas Asset Owner/Operators**





# GreyStar Courses

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- ☐ High Pressure Gas Transmission
- ☐ Purge and Venting
- ☐ Metering
- ☐ Pressure Regulation in Gas Distribution
- ☐ Pigging
- ☐ Full range of bespoke courses



CONCEPT • FEASIBILITY • FEED • DETAIL DESIGN • PROJECT MANAGEMENT • EPC • OPERATIONAL READINESS • OPERATIONS AND MAINTENANCE • INTEGRITY

# Technician Qualifications

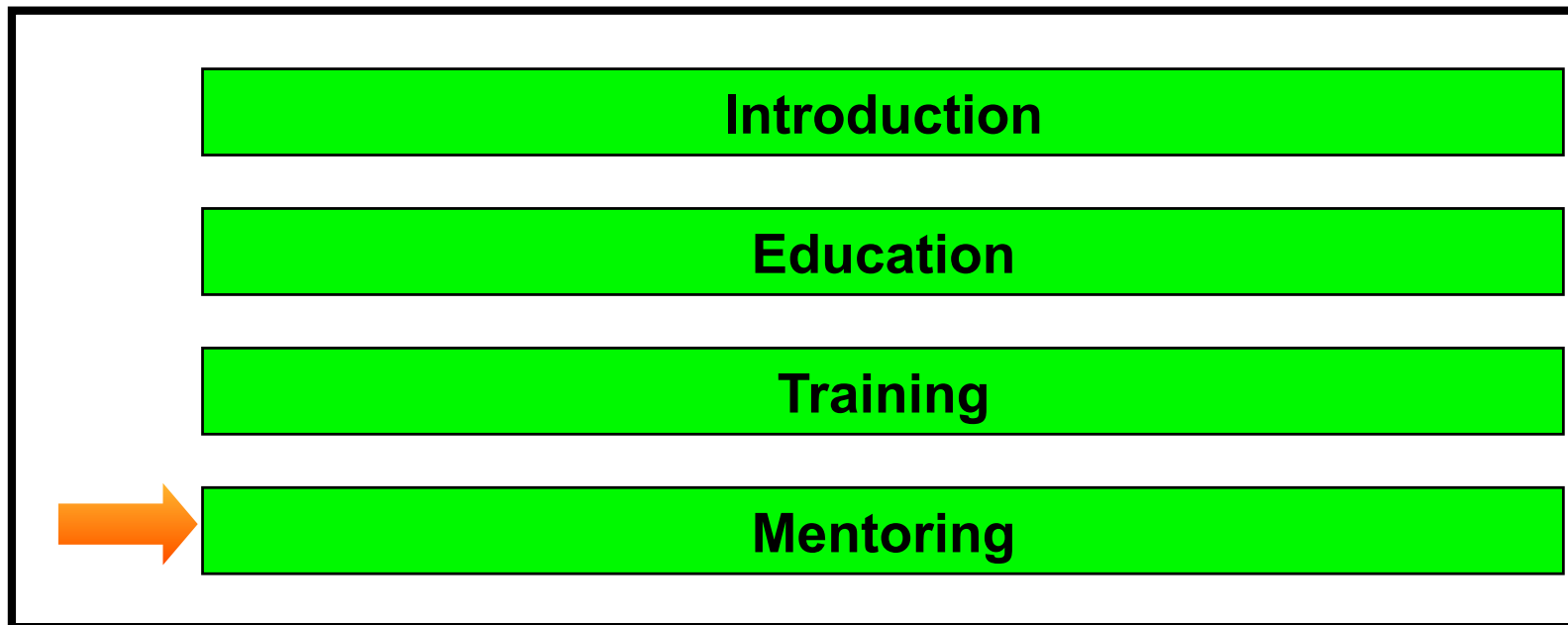
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- ❑ No industry specific NVQ
- ❑ Little interest from the Sector Skills Council (SSC) – Energy Utility Skills (EUS)
- ❑ Generic NVQ's difficult to map to job profiles
- ❑ NVQ Level 3 in Operations and Maintenance
- ❑ Do it yourself solution with local training provider together with WWU



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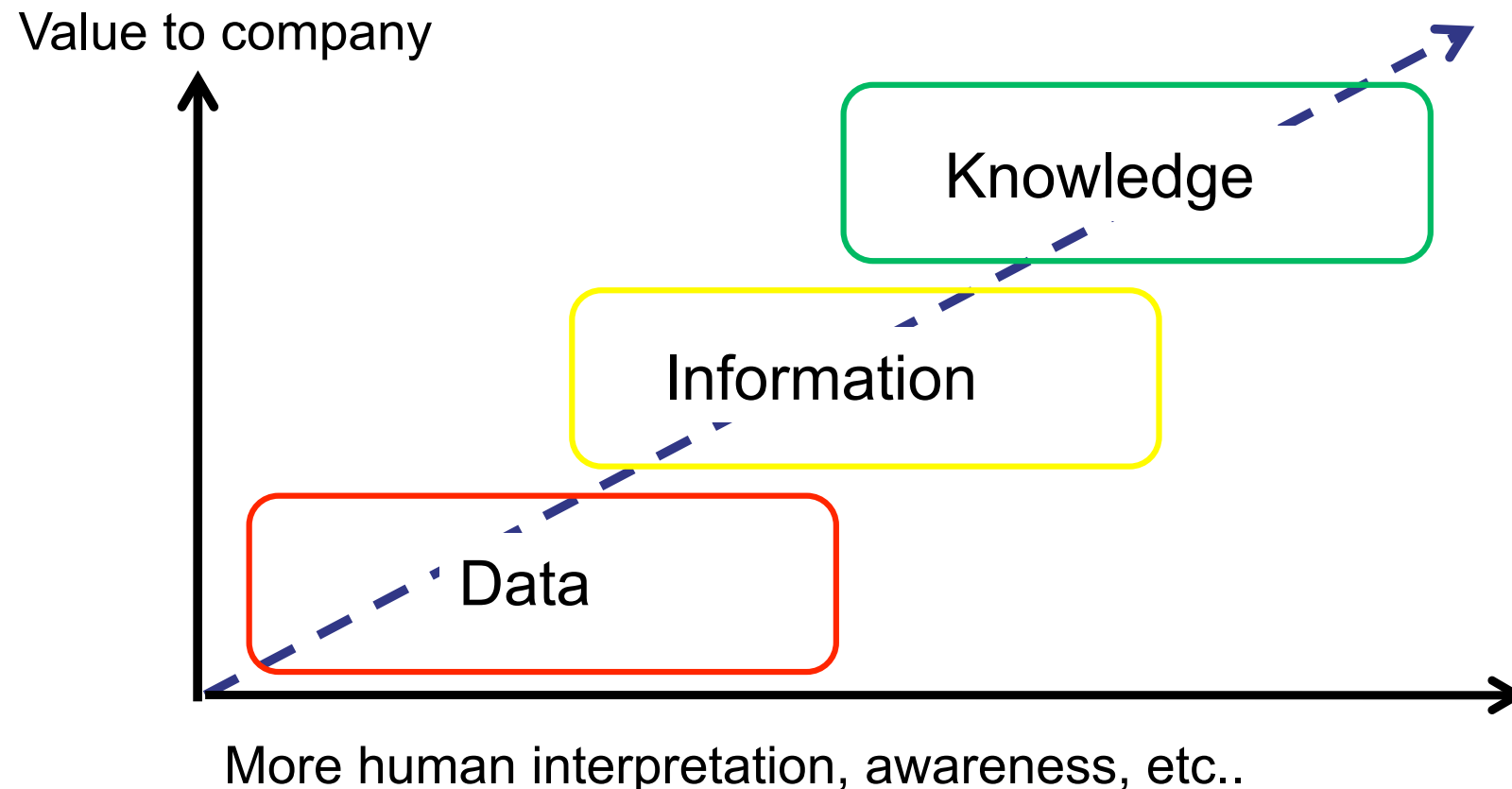


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# Knowledge: from Data & Information

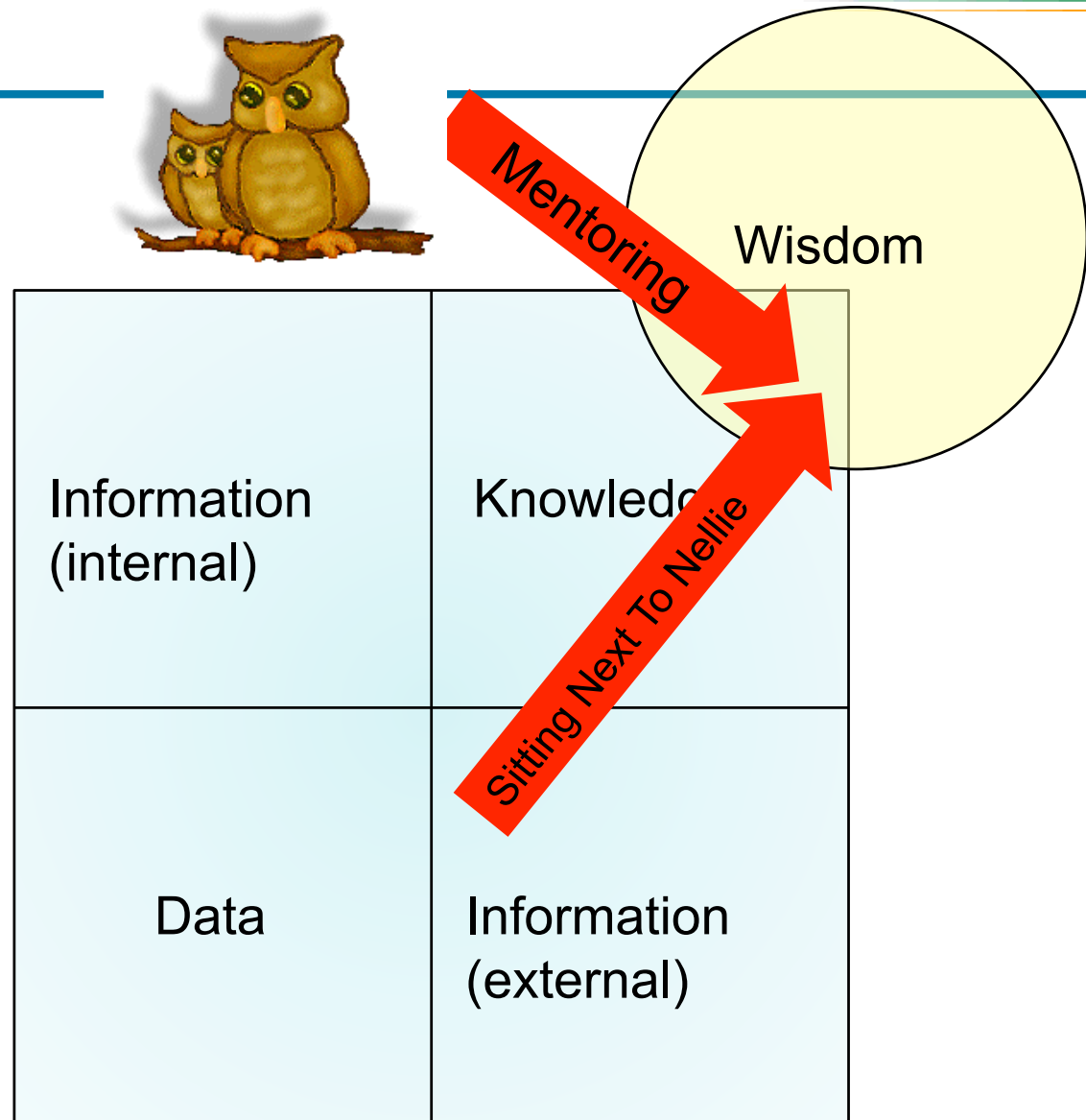
- Knowledge is *'information in action'*
  - It includes data, information, skills, experience, lesson learnt, etc.



# Knowledge Management: Capturing 'Wisdom'



- Mentoring is a crucial part of knowledge management;
- it is the transfer of 'wisdom'.





# Competent Resources

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- ❑ There are no easy solutions or externally funded “supply chains”
- ❑ Requires long term commitment and substantial investment in both time and money
- ❑ Adversely impacted by commercial environment
- ❑ Requires substantial confidence in your business capability

