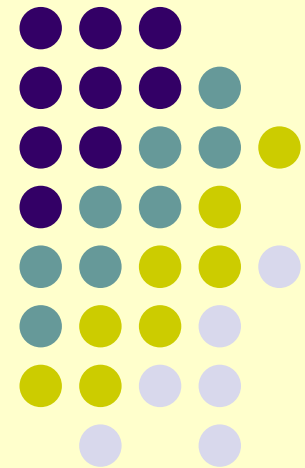


# Evaluation of Research Programmes

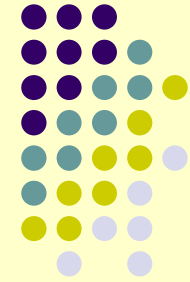
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DTI Approach and Experience

Derek Albone and Ray Lambert



# DTI Approach to Evaluation

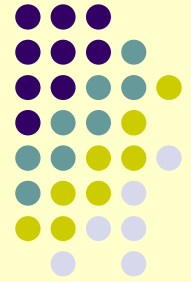


**Formal evaluation in DTI dates from mid '80s**

**From mid '80s – early '90s**

- Individual Programme Focus
  - Limited to (subjective?) judgements on:
  - Rationale
  - Objectives achievement (immediate – inputs/activities)
  - Programme management

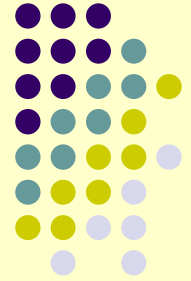
# DTI approach (cont)



## From early '90s – mid 90s

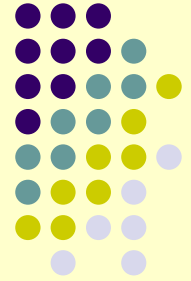
- Wider approach:
  - Whole areas of funding (Space, Biotechnology, LINK etc.)
  - Use of external specialists (academics, consultants) to provide complementary data e.g Industry mapping patents and publications studies etc

# DTI approach (cont)



## 1997 Comprehensive Spending Review

- Lack of comparable results on relative effectiveness of activities
- Evaluations not useful for resource allocation; lack of strategic focus
- Little or no evaluation of running cost intensive activities

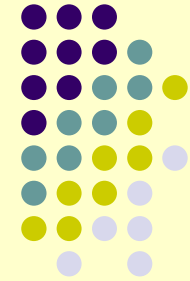


## **DTI approach (cont)**

**Therefore – new approach to:  
Business Support .....**

- New range of BS products
- Replace large number of 'one-off' schemes
- No longer sectorally focused (more 'technology' focus e.g Collab R&D, Knowledge Transfer Networks)

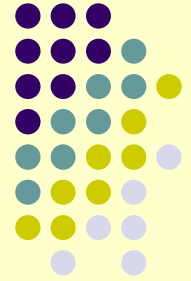
# DTI approach (cont)



## Business Support Products:

- Stronger underpinning at appraisal stage
  - Option Appraisal
  - Logic Model
  - Cost-benefit analysis
  - Scorecard

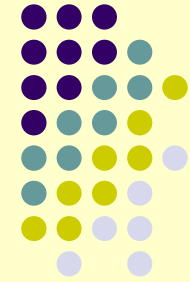
# DTI approach (cont)



## .....and new approach to: Monitoring .....

- Greater emphasis and visibility
  - Investment Committee, high level interest
  - Monitoring regime and evaluation plans part of business case
  - Balanced scorecard, Measures Library

# DTI approach (cont)



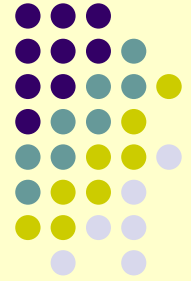
## ..... and Evaluation.

- More effective impact evaluations underpinned by:
  - Core business data – by product (scorecard) and
  - Across product – by cross-product monitoring surveys

And

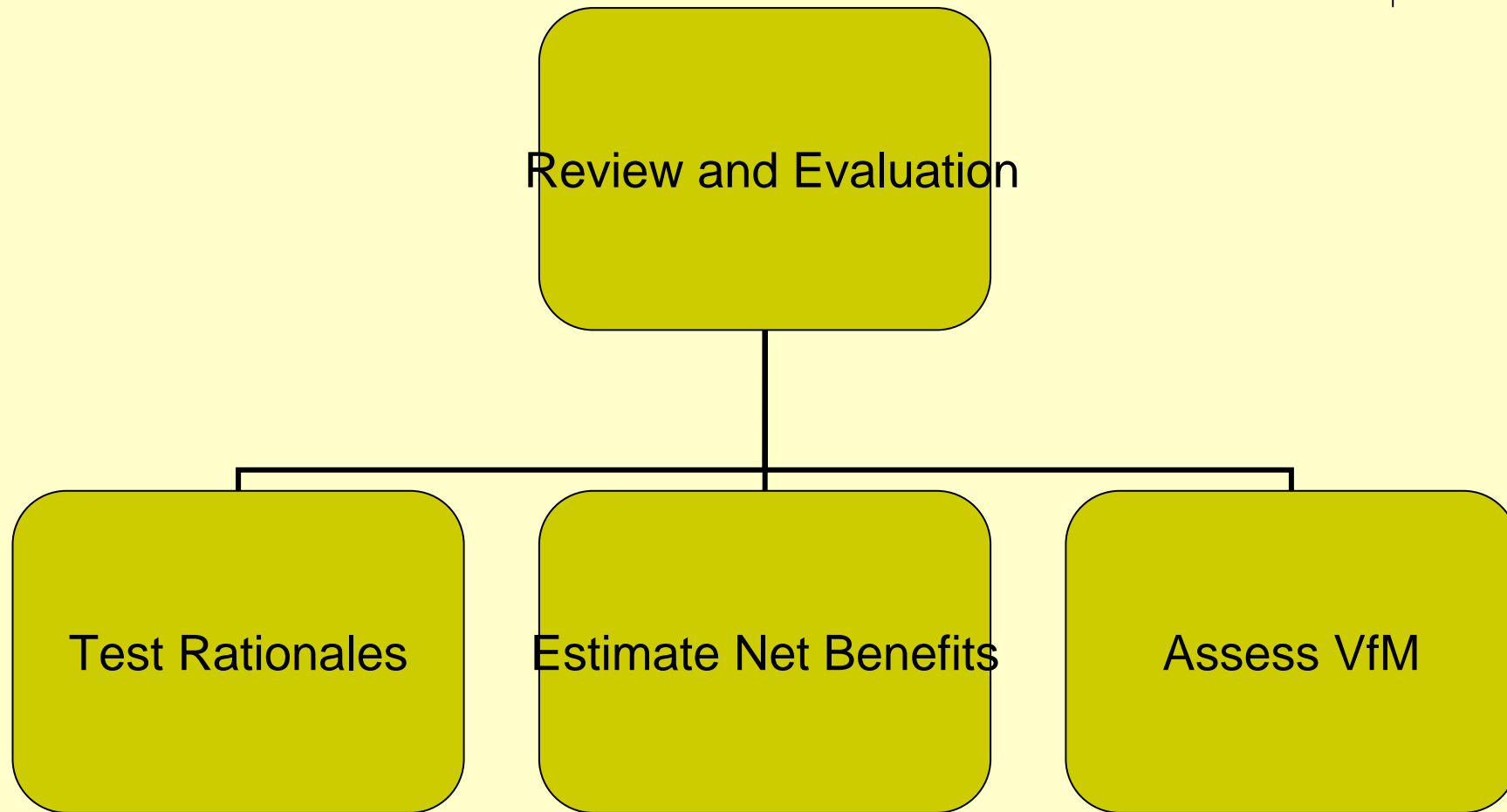
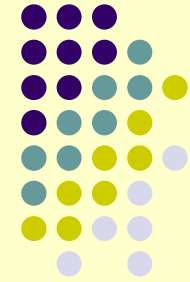
- Use of cpms to develop scorecard measures

# An Example

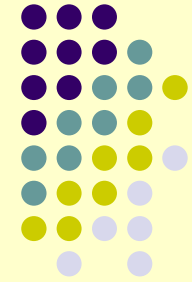


- LINK
- Cross Departmental and RC scheme
- Collaboration between HEIs and Business in Research

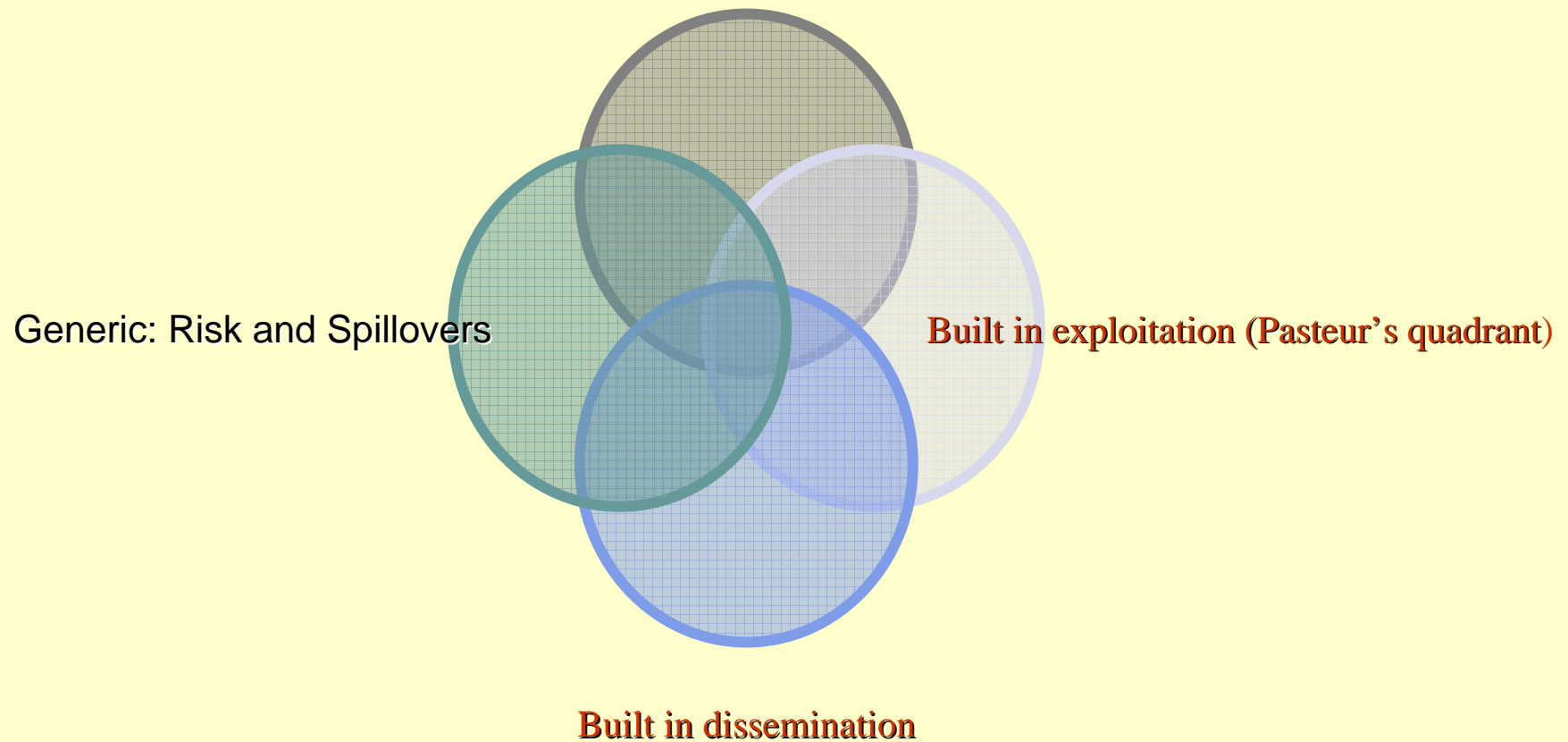
# The LINK Strategic Review



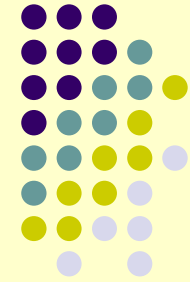
# Rationales for LINK



Longer term industrial R&D

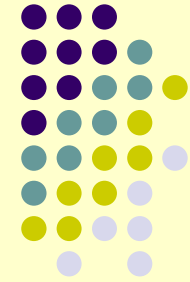


# Methodology



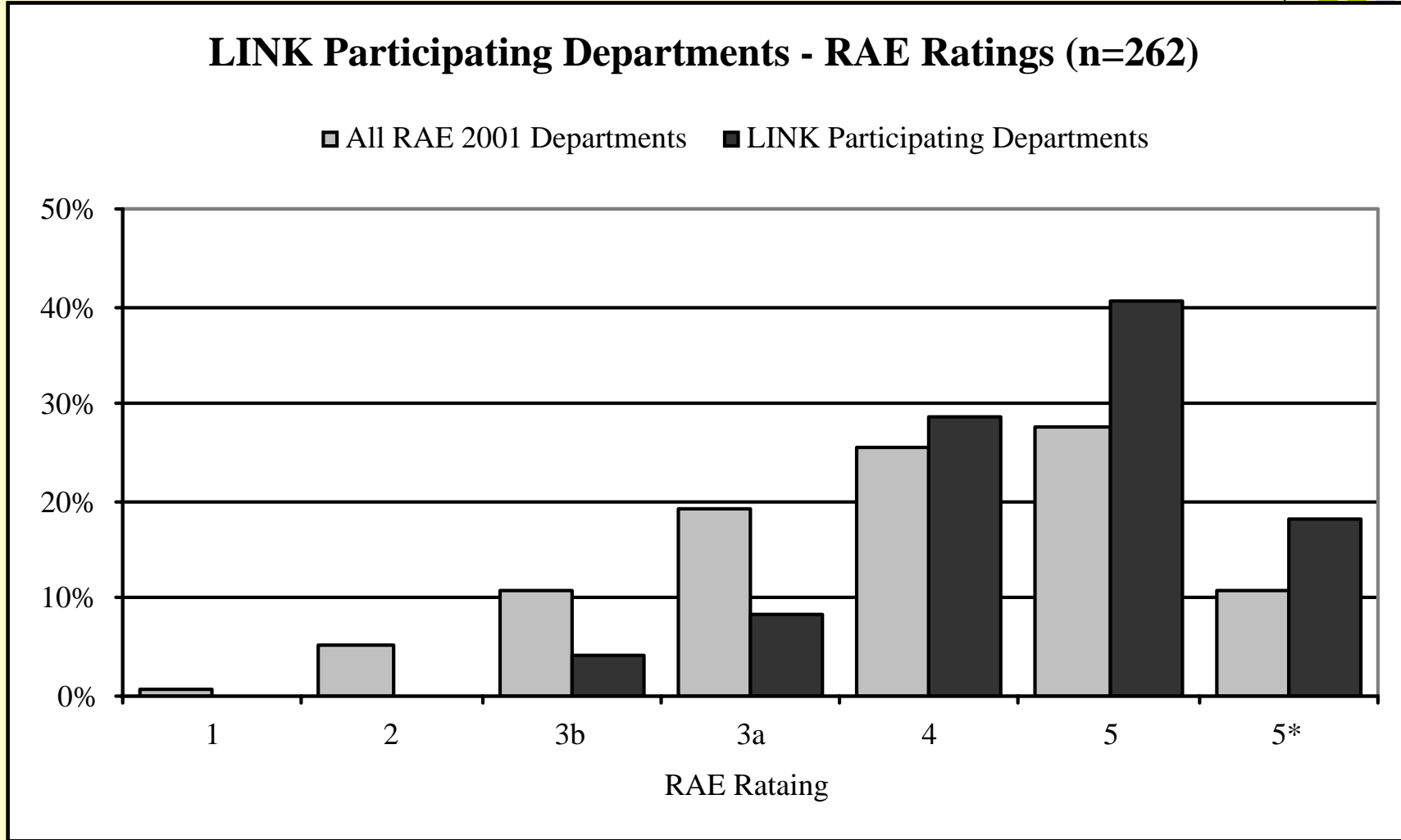
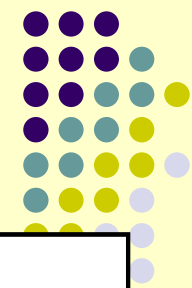
- Surveys and Interviews – Science base
- Expected project outcomes- academic and other
- Achieved outcomes eg publications
- Relative to regular RC funding
- Surveys and Interviews - Business partners
- Expected project outcomes
- Achieved project outcomes including commercialisation
- Attempt to quantify turnover effects.

# Direct Business Benefits



- Minority of projects reported immediate commercialisation. On the basis of their results it was estimated that:
- Increased turnover, between £700m and £2400m and benefits to cost ratios of between 1.1 and 3.8.
- Increased profit between £250m and £500m
- Increased employment between 15,000 and 25,000 posts.

# Exploitation of top science



# LINK Projects – Knowledge and other outputs



Type of output	Average no. produced per LINK project	Comparison with output from Research Council project		
		Less	Same	More
Publications in refereed journals and books	3.4	36%	40%	24%
Other scientific and technical publications	2.0	28%	49%	23%
Other publications (e.g. trade press)	1.3	14%	45%	41%
PhD theses	0.8	22%	62%	16%
Patent applications	0.5	12%	62%	26%
Patents granted	0.3	17%	64%	19%
New services	0.2	15%	62%	23%
<b>New products</b>	<b>0.4</b>	<b>14%</b>	<b>46%</b>	<b>39%</b>
<b>Pilots or prototypes</b>	<b>0.6</b>	<b>10%</b>	<b>54%</b>	<b>36%</b>
New processes	0.3	14%	63%	23%
New methods or tests	0.6	13%	68%	19%
New codes or standards	0.0	12%	81%	7%
New software tools	0.3	13%	60%	27%