

# CSIRO Participation in the Co-operative Research Centre Program

An Assessment  
May 2003



**Phoenix Group**  
Regeneration & Growth



**CSIRO**

# In 2003 Phoenix Group completed a stocktake of CSIRO's participation in the CRCs

## OBJECTIVES

The purpose of the stocktake is to assess and evaluate the value CSIRO has created from the CRCs and to report on the findings from that assessment and their potential implications for CSIRO

## PICTURE OF SUCCESS

1. Assessment and implications of how CSIRO has created value from the CRCs
  - Current CSIRO scope and role within existing CRCs understood
  - Feedback on CSIRO's involvement with CRCs gathered and assessed
  - Report on the current issues, factors and drivers concerning CRCs
2. New CSIRO assessment framework developed to increase discipline in evaluating participation in CRCs
  - Assessment of existing CRC investments against the criteria
  - Methodology for assessment of future involvement in CRCs
3. Updated fact base on CRCs available to assist in future management decisions

# Phoenix methodology was fact-based and forensic, but was not an audit

## METHODOLOGY SUMMARY

December 2002 - February 2003

- Review of documents back to 1990
- Interviews with CSIRO senior executives (20)
- Interviews with participants and customers of 11 selected CRCs (47 CEOs, Chairs, CRC Directors from industry, universities and CSIRO)
- Financial research (73 CRC annual report financials, CSIRO corporate finance)
- Extracts from CSIRO's central Access database on CRCs
- Surveys on value creation from CSIRO Division Chiefs and CRC representatives for 35 of 42 current CRCs (83%) and 33 of 53 ceased CRCs (62%)
- Comprehensive CRC Value Factbase incorporating the above information on the 95 CRCs that CSIRO has participated in from 1990 to 2002

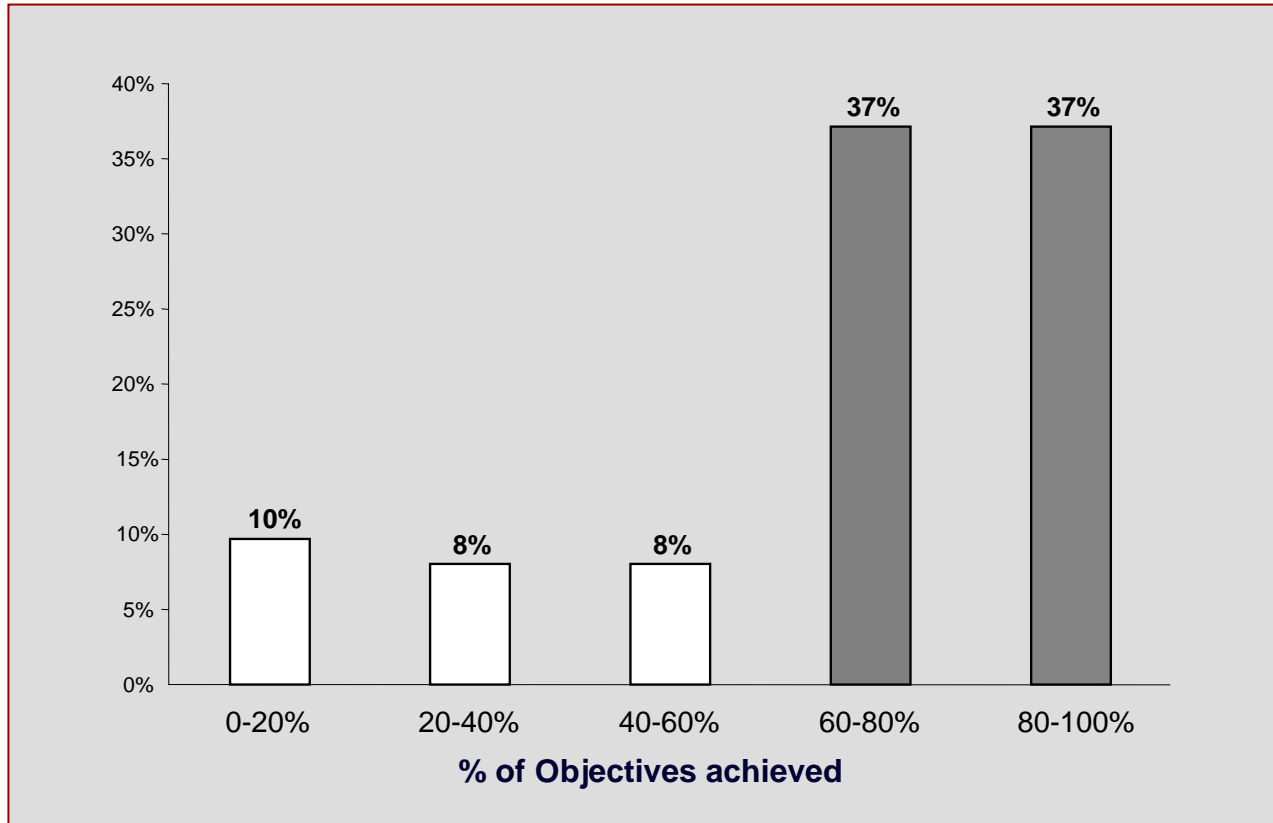
# CSIRO participants view the overall CRC programme as creating value for CSIRO and Australia, but identify issues

- The CRCs that CSIRO has participated in have been successful overall and CSIRO's involvement has created value for Australia, for research clients and for itself
- CSIRO has made significant contributions to its CRCs, though its interactions with other CRC participants have frequently been tense due to disparate agendas and overt competition
- CSIRO's value creation from CRCs is related to the nature of the CRC and the quality of CSIRO's interactions with other participants
- There are significant issues for CSIRO to address in CRC selection strategy and managing CRC participation to maximise future value

# CSIRO's CRCs have been successful overall, with 3/4 meeting most of their agreed objectives...

## SUCCESS IN ACHIEVING OBJECTIVES

% of CRCs with objectives achieved\* (100% = 62)



“Very ambitious goals - and  
the CRC took a step towards  
achieving them”  
- *CRC CSIRO representative*

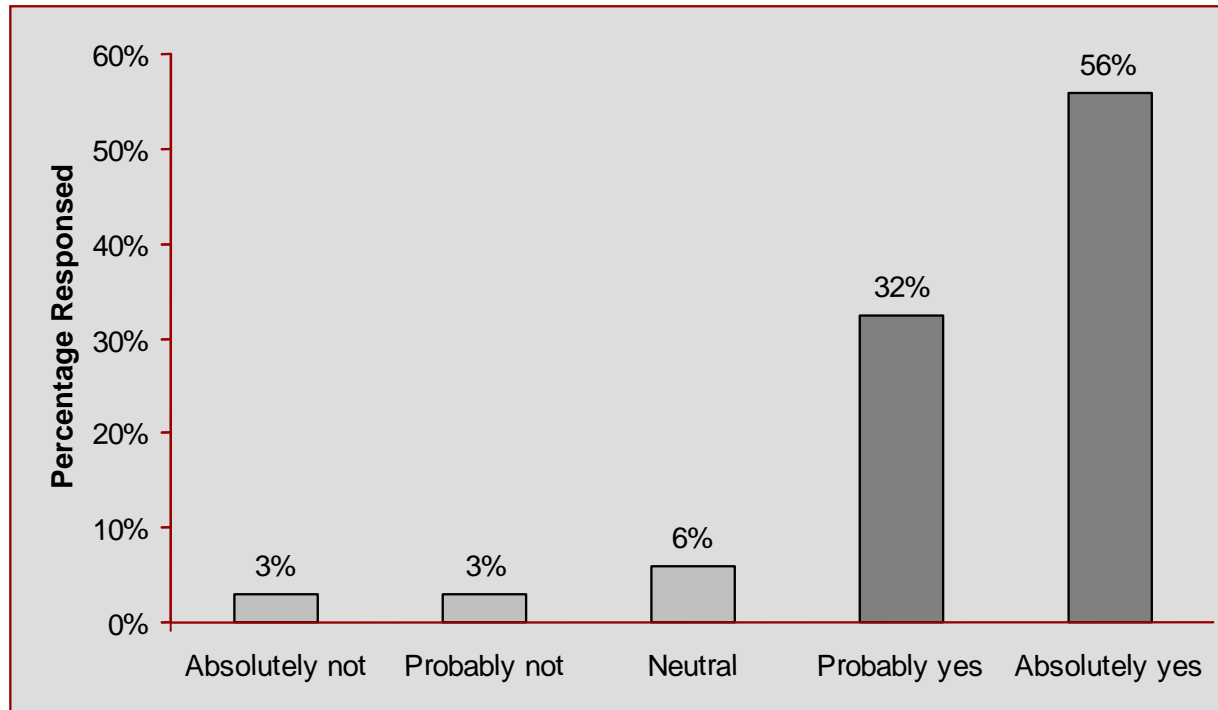
“The CRC program is a  
stroke of genius. Our CRC  
has been independently  
valued at \$910M for a total  
investment by the  
government of \$30M. There  
is a 7 to 1 return to all  
participants”  
- *CRC CEO*

\*Question 3: “To what degree (percentage) has the CRC been successful in meeting its objectives?”

Source: Survey of CSIRO CRC representatives (February 2003), Phoenix Group analysis

# ... the overwhelming view of CSIRO's CRC representatives is that, even in hindsight, CSIRO should nearly always have become involved in the CRCs

## ADVISABILITY OF CSIRO INVOLVEMENT IN SPECIFIC CRCs\* % of CRCs\* (100%=68)



“I believe the CRC is the best current approach”  
- CRC Representative, CSIRO

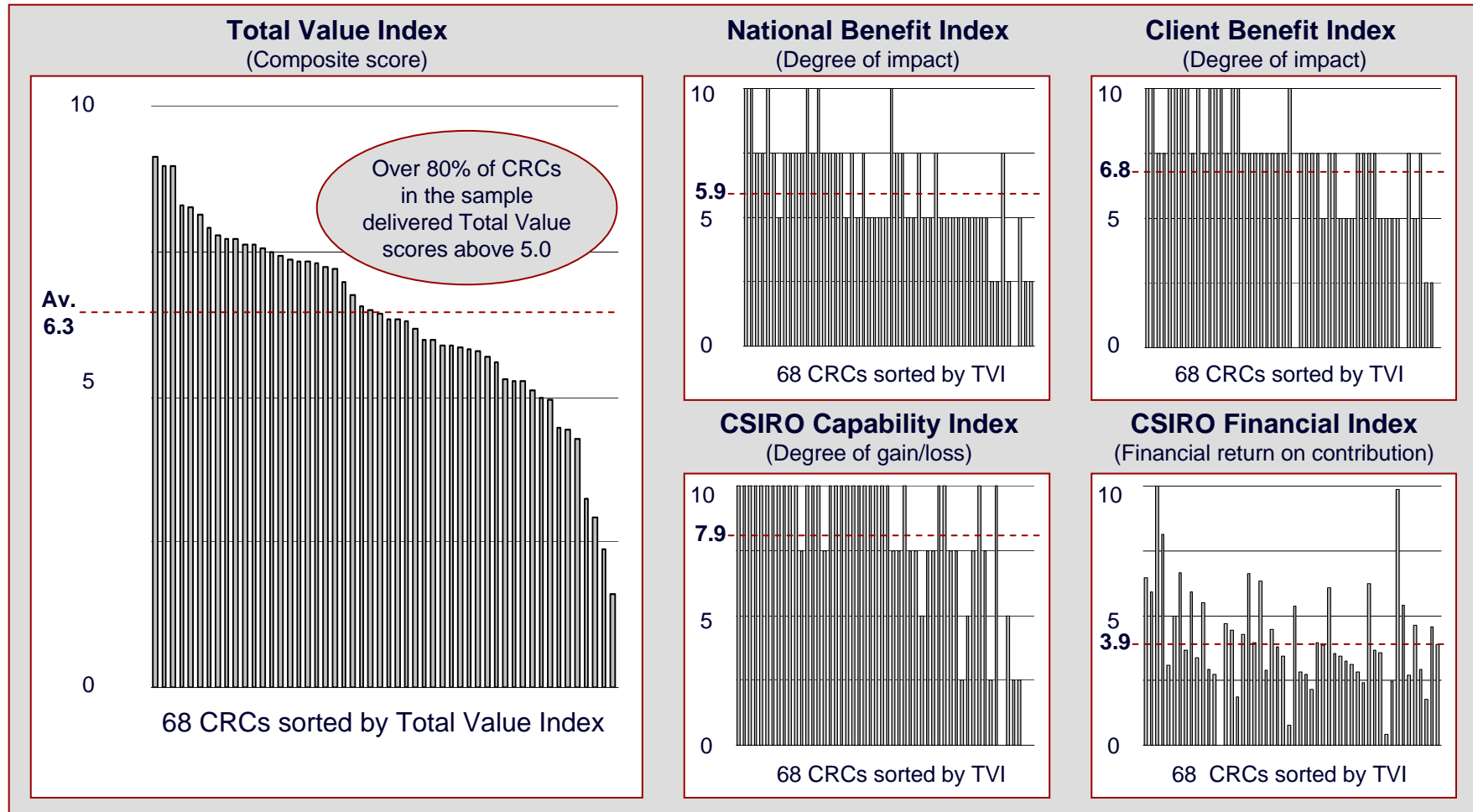
“The CRC model was probably the most appropriate one for this fledgling research area. [Participants] required the funds leverage provided by the CRC to become involved”  
- CRC Representative, CSIRO

“The range of scientific and technical expertise to achieve the objectives of this CRC simply did not exist within CSIRO”  
- CRC Representative, CSIRO

\*Question 48: “With the benefit of hindsight, should CSIRO have gotten involved with this CRC?”

Source: Survey of CSIRO CRC representatives (February 2003), Phoenix Group interviews with CSIRO executives and CRC participants (January-February 2003), Phoenix Group analysis

# CSIRO's CRCs generated a high average Total Value Index, reflecting strong scores on all four value indicators\*

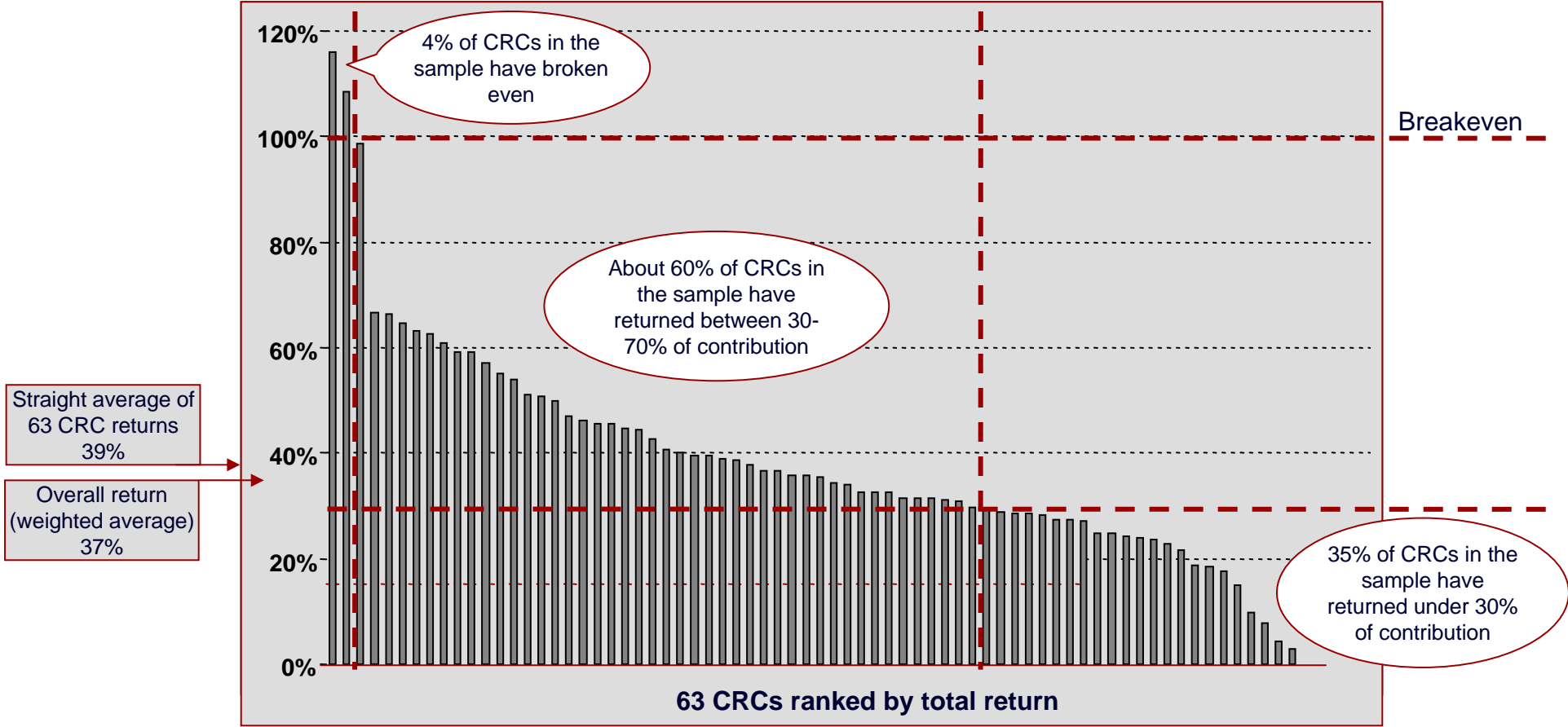


\*See Appendix for Total Value Index and detailed value index scores by CRC, average represents straight mean of CRCs.

Source: Survey of CSIRO CRC representatives (February 2003), CSIRO Corporate Finance, CRC Annual reports, Phoenix Group analysis

# Most CSIRO CRCs have generated over 30% in external contribution for CSIRO

## TOTAL RETURN TO DATE BY CRC (% CSIRO external revenue/total contribution\*)

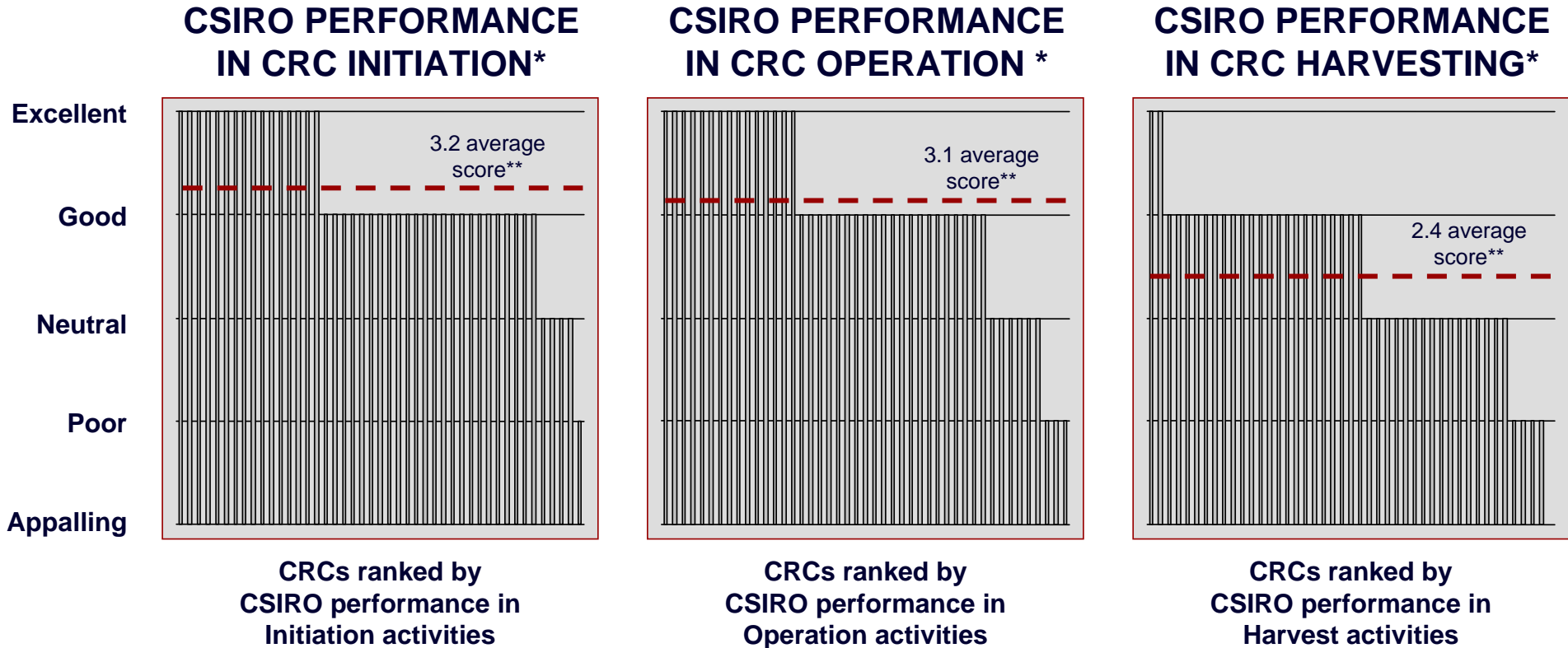


\*CSIRO Financial Return =  $\frac{\text{Contract revenue} + \text{Commercialisation revenue} + \text{Market value of CSIRO equity in spinoffs \& subsidiaries}}{\text{CSIRO cash \& Contribution-in-kind at cost}}$

Source: CSIRO Corporate Finance data; Data request to CSIRO Divisional Finance Managers (75 CRCs); CSIRO Equity Report; Phoenix Group analysis



# CSIRO's performance has been solid in initiation and operation activities, though weaker in harvesting the results of each CRC



\*Questions 13, 15, 17: "What is your assessment of CSIRO's overall effectiveness in the CRC [initiation, operation, harvesting] phase?"

\*\*Average of all CRC scores where 0 = Appalling, 1 = Poor, 2 = Neutral, 3 = Good, 4 = Excellent

Source: Survey of CSIRO CRC representatives (February 2003), Phoenix Group analysis

# There is a strong correlation between CSIRO's performance on CRC activities and degree of value creation, especially in the harvesting phase

## CORRELATION OF CSIRO PERFORMANCE BY ACTIVITY WITH VALUE CREATION

INITIATION		OPERATION		HARVESTING	
Engaging with participants & stakeholders		Achieving agreement on projects		Identifying technology	+
Developing the proposal		Conducting research	+	Documenting technology	+++
Agreeing relative contributions	+	Conducting commercialisation	+	Evaluating technology	++
Developing the CRC structure	+	Conducting educational program	+	Protecting technology	++
Finalising the participant agreement		Managing stakeholder relationships	++	Marketing technology	++
Achieving C'th approval	++	Undertaking centre governance		Licensing technology	++
				Adopting technology	+

Degree of correlation (R <sup>2</sup> )	below -45%	-30% to -45%	-15% to -29%	-14% to +14%	+15% to +29%	+30% to +44%	over +45%
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Source: Survey of CSIRO CRC representatives (February 2003), Phoenix Group analysis

# The stocktake process surfaced a number of process and relationship issues

- CSIRO is perceived as a difficult, but necessary partner by many CRCs
- Overlap between CRC objectives and CSIRO's areas of research has led to friction – each side seeing the other as a threat
- Apart from research overlap, CSIRO is perceived as too tough on legal, commercial and governance issues, and most of this concern is aimed at CSIRO's corporate and legal staff

# And many other participants are increasingly wary, and carefully considering the cost/benefits of involvement...

## UNIVERSITIES

“CRCs have been hijacked by industry, but they do not put in enough horsepower to make the CRC work. Universities increasingly have a negative view of CRCs, and I am trying to extricate my department out of 3 of them. My time allocation to CRCs is less productive than time allocated to my 3 other major collaborative mechanisms”

– *University professor*

“There are other alternatives to a CRC; START grants are smaller but there is less bureaucracy and overheads. If you use the CRC for stand alone projects bolted together it will be inefficient since the relationship management is intensive, and conflicts over IP and equity”

– *CRC CEO*

“A couple of the universities are currently doing a review of their involvement in CRCs”

– *CRC Chair*

## INDUSTRY

“Industry is becoming wary of CRCs. There is value overall but they are too cumbersome”

– *CRC Director, Industry*

“Industry wants to engage with a CRC but then it looks at all the parties involved, hears about how slow and complex the contractual arrangements are, and the diffuse nature of IP control and confidentiality, and backs away.”

– *CRC Director, CSIRO*

“Sometimes I think it’s not worth the effort and I would not go into another CRC. The workload for submissions of proposals is horrendous. The contractual arrangements are so complex for IP, the financial commitment is big and the rate of commercialisation outputs is low. A direct relationship with CSIRO would be a better option”.

– *CRC Director, Industry*

# Disputes reduced achievement of CRC objectives

## DISPUTES AND CRC SUCCESS IN MEETING OBJECTIVES

(100% = 68 CRCs)

Significance of level of disputation	None & N/A	Minor	Moderate	High & Very high	Total
Number of CRCs	41	17	6	4	68
Percentage of CRCs	60%	25%	9%	6%	100%
Average CRC success in meeting objectives	71%	74%	46%	26%	65%
Proportion of CRCs that had significant disputes involving CSIRO	0%	24%	67%	75%	16%

\* Question 3: "In your opinion, to what degree (%) has the CRC been successful in meeting its objectives?"

Question 42: "How many (if any) of these disputes has CSIRO been involved with?"

Question 43: "How significant has the overall level of disputation been with this CRC?"

Source: Survey of CSIRO CRC representatives (February 2003), Phoenix Group analysis

# There are significant issues for CSIRO to address in CRC selection strategy and managing CRC participation to maximise future value

## CSIRO ISSUES ON CRC PARTICIPATION STRATEGY

1. Balancing financial and non-financial objectives
2. Determining CRC roles in CSIRO's research portfolio
3. Building proactive versus "accidental" CRC portfolio
4. Managing competing research capacity
5. Enhancing (not losing) CSIRO research capability
6. Selecting alternative collaboration vehicles

## CSIRO ISSUES ON MANAGING CRC PARTICIPATION

1. Providing leadership guidance on CRCs
2. Repairing and enhancing partner relationships
3. Creating "oneCSIRO" coherence on CRCs
4. Enhancing CSIRO capability in CRC governance
5. Measuring and managing CRC performance
6. Providing trans-divisional CRC participation support

# Recommendations to improve CSIRO's engagement with the CRC Program

1. Set and share objectives for CSIRO involvement in CRCs at program and individual CRC level
2. Ensure approval to negotiate and enter is sought before committing to new CRCs (i.e. approval process before round 9)
3. Introduce formal performance evaluation for CSIRO involvement in CRCs
4. Improve CSIRO process and skills for involvement in CRCs
5. Increase communication with DEST and CRCs
6. Implement a CSIRO CRC secretariat (2-3 person) with a broad charter