

RETHINKING CONSTRUCTION



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Chairman

RETHINKING CONSTRUCTION

www.rethinkingconstruction.org.uk



Why Rethink Construction ?

- **A\$165 billion turnover - 10% of GDP**
- **Employs 1.7 million**
- **Low profitability**
- **Low levels of investment**
- **High client dissatisfaction**
- **Substantial under-achievement**



Why Change?

- Central Government spends A\$27 billion capital per annum
- a 10% saving equates to A\$2.7 billion
- Which is 12 hospitals, or
- 50 secondary schools
- **REAL VALUE INCREASES**

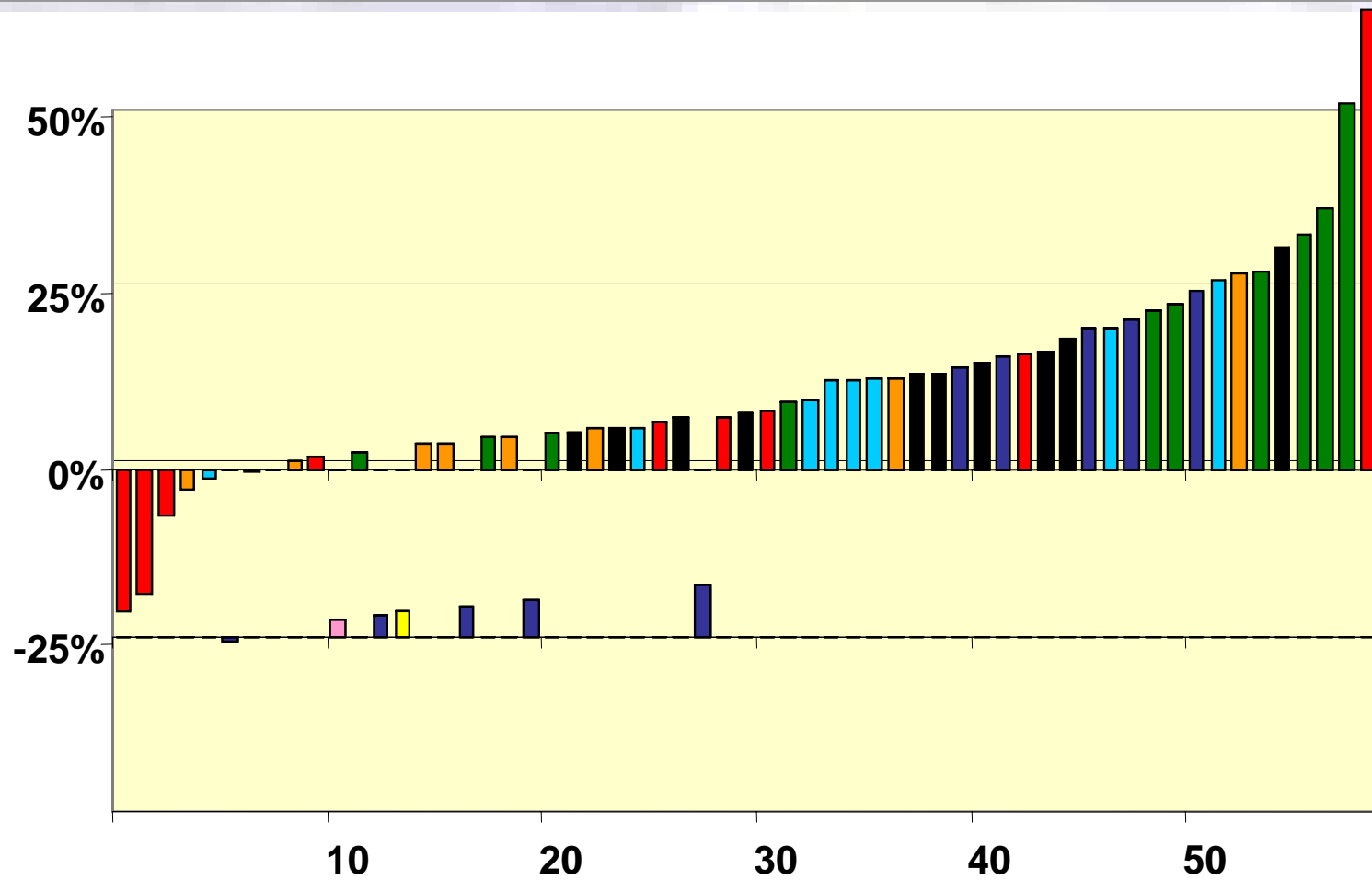


Why Change?

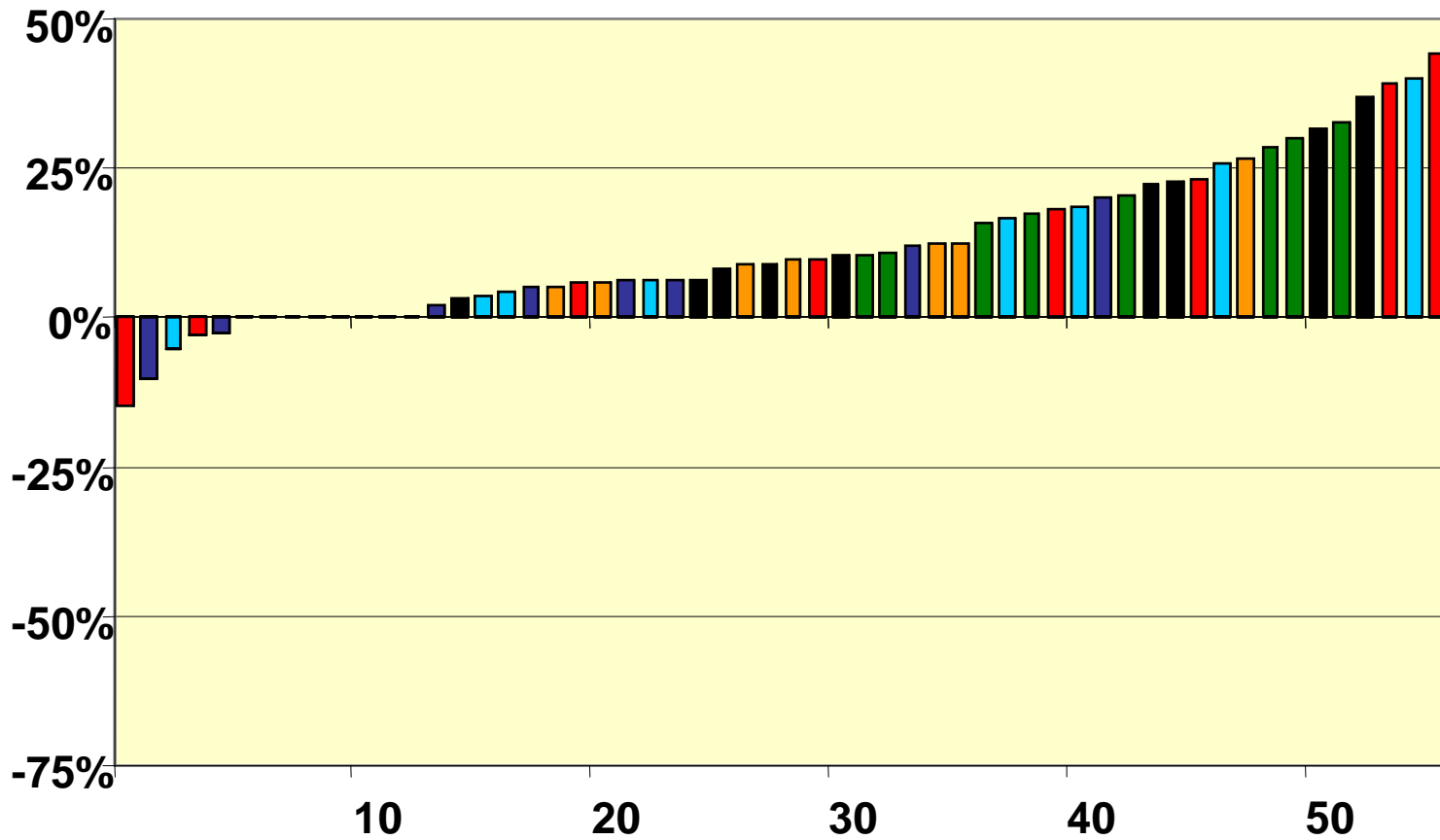
- Local authorities spend A\$38 billion capital per annum
- a 5% saving equates to A\$1.9 billion
- An average Authority spends A\$62 million per annum
- A 5% saving equates to A\$3.1 million
- **REAL VALUE INCREASES**



Cost compared with tender figure



Programme compared with contract figure



'Rethinking Construction'



- The Report:
 - Commissioned by the Government
- The Scope:
 - For improving the quality and efficiency of UK construction
- The Task Force:
 - Led by Sir John Egan included **only people from other industries**



'Rethinking Construction'



- Based its recommendations on tried and tested methods from other industries
- Set out a model for change and improvement

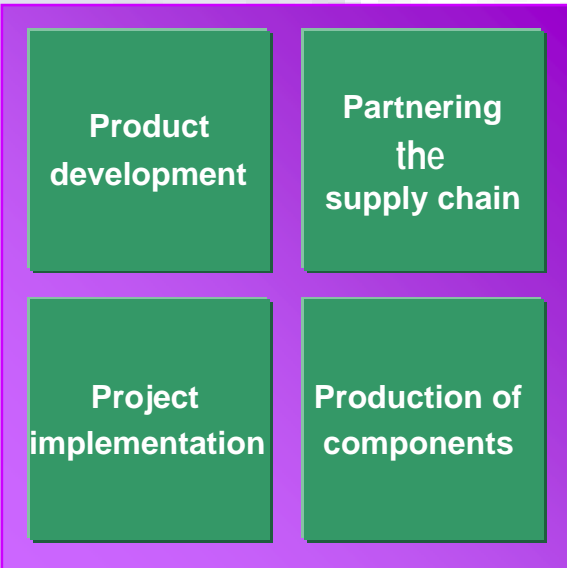


'Rethinking Construction' – a summary!

Drivers for Change

- Committed leadership
- Focus on the customer
- Product team integration
- Quality driven agenda
- Commitment to people

Improving the Project Process

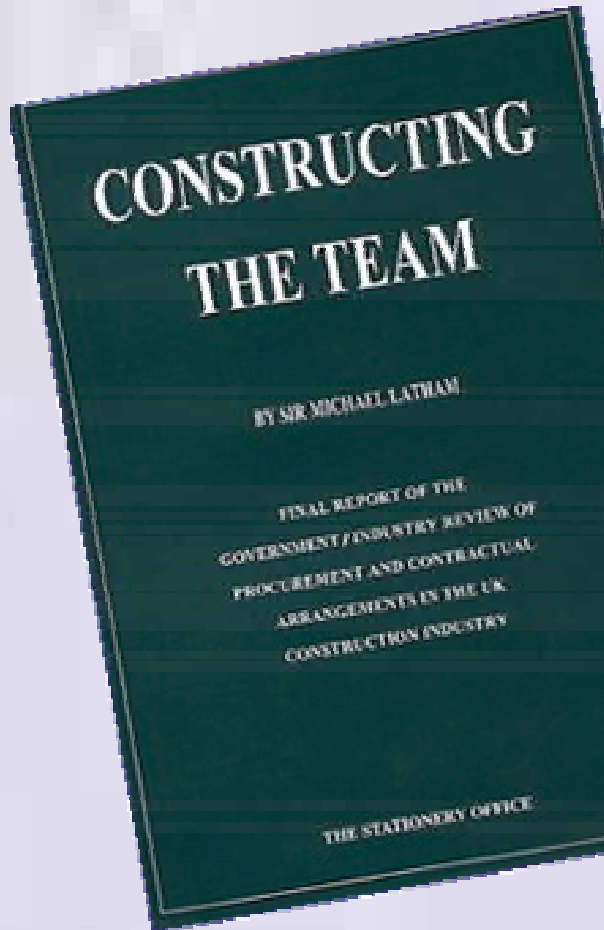


Targets for Improvement

- Capital cost -10%
- Construction time -10%
- Predictability +20%
- Defects -20%
- Accidents -20%
- Productivity +10%
- Turnover & profits +10%



Why a Movement was created



Why a Movement?



The 'Rethinking Construction' report recommended:

- Clients committed to improvement should undertake *demonstration projects* to develop and illustrate the ideas set out.
- This core of projects to become the basis of a *movement for change & innovation*



Mission Statement



“The Movement for Innovation aims to lead *radical improvement* in construction in value for money, profitability, reliability and respect for people, through demonstration and dissemination of best practice and innovation.”



Rethinking Construction objectives

Promote innovation

- Prove business case for change
- Engage clients in driving change
- Involve all aspects of the industry
- Create self-sustaining framework
- **CHANGE THE CULTURE!**



What is innovation?



Dictionary's definition

Innovation (n): a new idea, method, etc, a change.

A new method of working which is not currently known to you through yours or your peers experience



How to promote innovation



- Review, revitalise and develop the procurement processes
- Remove the barriers to integrated working
- Recruit and Retain the best people- by **Respect**
- Measure performance and benchmark- **to secure improvement and to sustain it**

AND LOOK AT THE WHOLE LIFE VALUE



Value, not Cost-

“It is not cheaper things that we want to possess but expensive things that cost a lot less”

Measurement –

If you do not know where you are, how will you get there!



Rethinking Construction today

- **The Rethinking Construction streams:**
- **M4i**
- **The Housing Forum**
- **The Local Government Construction Task Force**
- **The Respect for People Project**

All linking closely with the Construction Best Practice Programme

- **Links to DTI, OGC and ODPM**
- **Ministerial Steering group**
- **And shortly to become CONSTRUCTING EXCELLENCE!**



Rethink Procurement

REVIEW & REVISE CURRENT PRACTICE

- Remove reliance on lowest cost- go for value
- Reduce costly competitive tendering
- Replace “contracts” with performance measurement
- Involve all members of the industry
- Establish integrated teams
- **ADOPT A WHOLE LIFE APPROACH**



Whole Life Cost



1 : 5 : 200

1 = Capital cost

5 = Maintenance and Operation

200 = Business & Occupation

Source- British Academy of Engineers-1999



Rethink Procurement

- **A Whole Life Approach**
 - **Design for construction and use**
 - **Specify by output & outcomes performance**
 - **Client users must get involved; don't leave it to technical/procurement staff**
 - **Integrate design/construct/maintenance and the teams**
 - **Establish a review process based on feedback**
 - **Keep teams going, partner**



Background Drivers



- National Audit Office Report (Modernising Construction) strongly endorsed the application of Rethinking Construction principles to Government procurement- *it is unlikely that the lowest price will represent best value!*
- NEW Legislation requires local Government to obtain Best Value (and achieve continuous improvement) in procurement and service delivery.
- Support for Rethinking Construction from major Clients through the application of the Clients Charter.



- **Achieving Excellence**
 - PFI/PPP
 - Design and Construct
 - Prime Contracting
 - Partnering
- **Common threads-** Integrated Teams, value not cost, look at the whole life, measure performance.



NHS Estates – Procure 21



- **Partnering arrangements/long term relationships across the whole supply chain**
- **Continuous improvement processes**
- **Specialist maintenance advisers**
- **Appropriate standardisation based on ease of and common maintenance systems**



Incentives

Harnessing the power of self
interest



If

Whole life costs lowered

and

Target capital costs bettered

then

**Reductions in capital and revenue costs shared
with supply chain**



Local Government - Best Value



- **Audit Commission accountability**
- **Local pressures on revenue account**
- **Pressures on DLO's to show value**
- **Integrating design, construction and maintenance**
- **Using partnering and shared benefits**
- **Set up long term arrangements - strategic**



What about the Private Sector



Are they leading or following?

- Framework Agreements
- Supply Chain Relationships
- Partnering- whatever that means!
- But Whole Life- **NOT YET Really**



What have we achieved in procurement change?



- **The birth of a new culture**
- **Procurement methods reflecting the common threads- Integrated Teams, value not cost, whole life, performance measurement.**
- **New Forms of Agreement- PPC 2000/SPC 2000; NEC Option X12; JCT Partnering being written.**



Progress so far

- More than **5000** organisations engaged
- **>A\$2.5m** annual industry contribution
- Annual national conferences & regional events
- Pan industry Key Performance Indicators
- Web based knowledge exchange



Progress so far

- **Over 30** Research Programmes
- **90+** Published case histories with a further 20 being written
- **30+** “How To” reports and publications
- Regional “RC” centres- 5 established, 6 in progress
- Demonstration Project Programme



Where else?

- Hong Kong
- South Africa
- Singapore
- Denmark
- Sweden
- Chile
- Ireland
- And visitors from many other countries incl

Queensland Dept of Public Works



Demonstration Projects

- More than **430** Demonstration Projects
- Plus 110 Respect for People demonstrators
- **12** Regional Clusters

- Total value **cA\$10bn – 3% of output**

- Across all industry sectors

- Projects outperform industry average

- **Proven performance improvement from adopting “Rethinking Construction” recommendations**



Sustainable construction – The Triple Bottom Line



KEY PERFORMANCE INDICATOR Working Group

- **Social –
Respect for People Working Group**
- **Environmental –
Sustainability Working Group and Forum**
- **Economic –
Pan Industry KPI's, headline & diagnostic**



Social – Respect for People Working Group

**Interim Report - “A Commitment to People
Our Biggest Asset”**

**Final Report – “Respect for People- Framework
for Action”**

Associated Toolkits –

- Checklist for Site Workers**
- Diversity in the Workplace**
- Welfare & working environment**
- Health and Safety in Procurement
and Design**
- Site Safety**
- Career Dev and Lifelong Learning**



Social Performance measures

- **Employee satisfaction**
1-10 rating
- **Staff turnover**
Annual 'churn' rate
- **Absence from work**
% of working hours
- **Safety**
Working hours since last lost-time accident
Reportable accidents per 100,000 employed
- **Diversity**
% Women, and visual ethnic minorities to be developed



- **Launch of Environmental Performance Indicators (EPIs) Summer 2001**

- **6 EPIs –**

Operational Energy – CO₂ (or KWh per year) per m² of building

Embodied Energy – CO₂ (or Gj) per m² of construction

Transport Energy – CO₂ per m² of construction

Waste – m³ per m² of construction

Water – m³ per person or m² of construction

Biodiversity - Species index per hectare



The 10 (Headline) KPIs

Project performance

- **Client satisfaction:**
(Product and Service)
- **Defects**
- **Predictability:**
(Cost and Time)
- **Construction Cost**
- **Construction Time**

Company performance

- **Profitability**
- **Productivity**
- **Safety**
- **Plus this year - Environmental**



Demonstration Projects' KPIs



Basic Facts about the data:

- All of the data are from live and completed projects
- All the verified figures submitted have been included
- All the data was collected by the team members and peer reviewed and audited
- All the data represents projects' performance



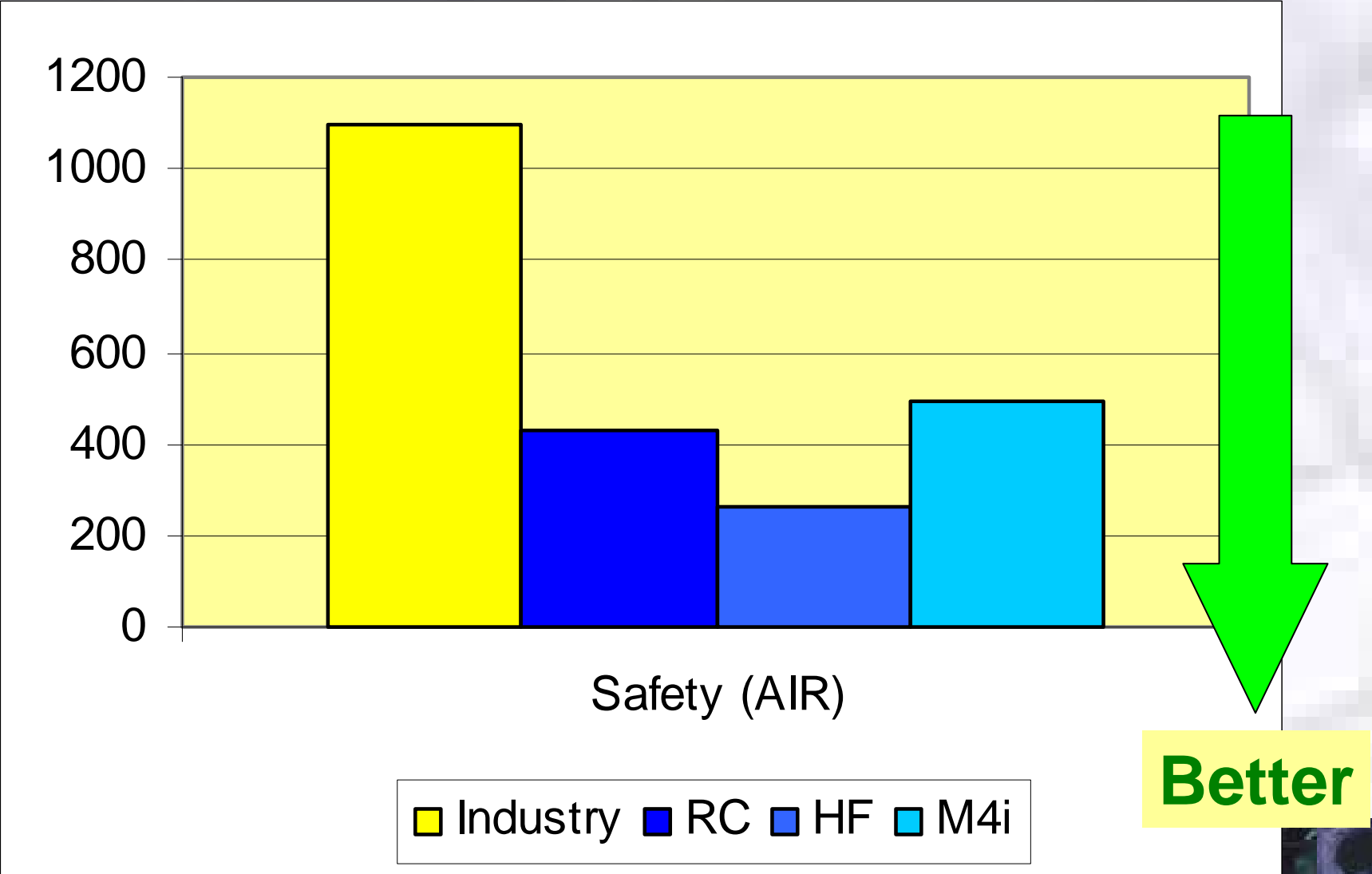
Year on Year Comparisons - 2000 v 2003



	2000	2003	2000	2003
	Industry		RC	
Client Sat. - Product	73%	78%	81%	90%
Client Sat. - Service	63%	71%	76%	86%
Defects*	65%	68%	89%	87%
Safety	1271	1097	716	428



RC v Industry – 2003 Comparison



Year on Year Comparisons - 2000 v 2003



	2000	2003	2000	2003
	Industry		RC	
Pred. Cost - Design	64%	65%	61%	71%
Pred. Cost - Constr.	45%	52%	59%	64%
Pred. Time - Design	37%	53%	55%	66%
Pred. Time - Constr.	62%	59%	69%	69%



Year on Year Comparisons – 2000 v 2003



	2000	2003	2000	2003
	Industry		RC	
Profitability	4.7%	5.6%	7%	7%
Productivity- £	27	31	36	36
Construction Cost	-2%	+5%	-6%	-3%
Construction Time	+3%	+1%	-8%	-2%



Year on Year Comparisons – 2000 v 2003



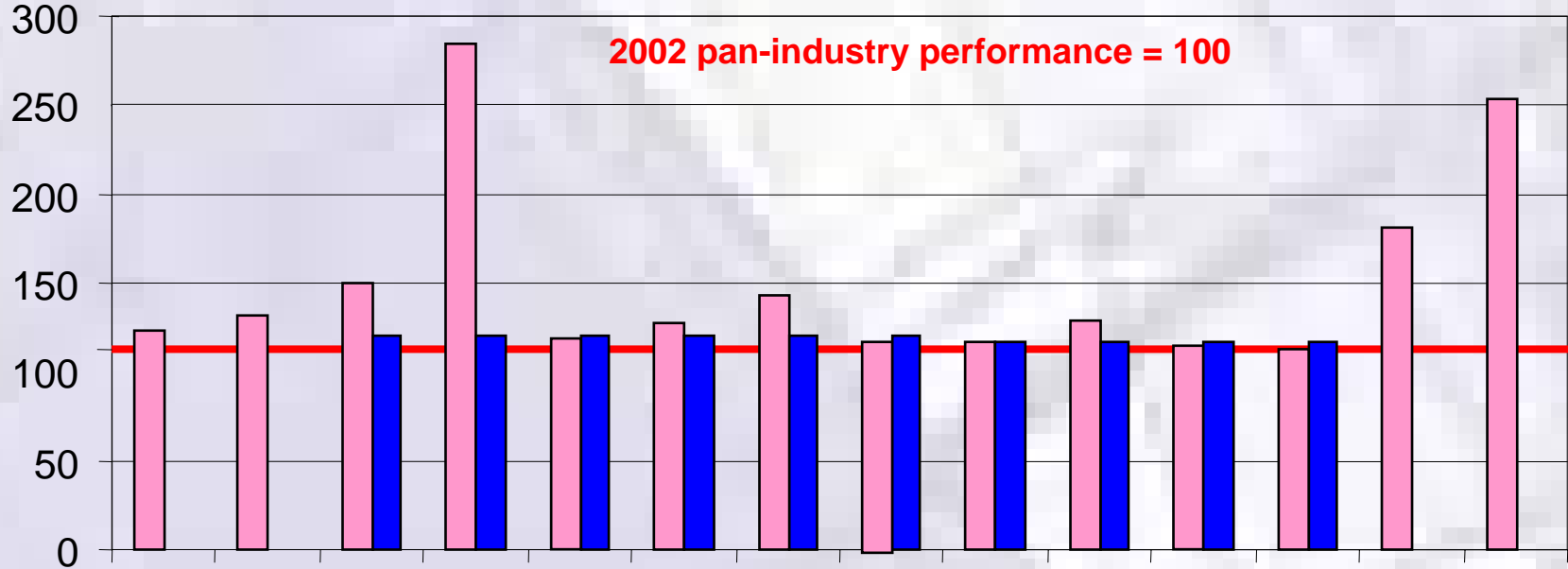
	2000	2003	2000	2003
	Industry		RC	
Env. Impact - Process -		51%	-	76%
Env. Impact - Product -		28%	-	62%



RC 2003 v Egan year-on year target



RC 2003 Egan Year-on-Year Target



Client Satisfaction - Product
 Client Satisfaction - Service
 Defects
 Safety
 Predictability Design Cost
 Predictability Construction Cost
 Predictability Design Time
 Predictability Construction Time
 Profitability
 Productivity
 Cost
 Time
 Environmental Impact - Process
 Environmental Impact - Product



Clear Evidence that “Rethinking” works

- Industry performance is on the up trend
- Demo Projects are still reaching for and achieving the targets despite economic trends
- More to do on productivity- reducing people waste
- Still “out-Eganning Egan”
- Performance **WITH SAFETY**



Useful Contact Sites

- www.rethinkingconstruction.org.uk
- www.lgtf.org.uk
- www.thehousingforum.org.uk
- www.cbpp.org.uk
- For partnering guidance- www.cic.org.uk
- For partnering contract- www.ACArchitects.co.uk
- And if all else fails- alan.crane@lineone.net





**Clients, industry and government
working together to improve UK
construction**

