

Scale of the problem

- 60 70 % of all variations due to poor design & documentation
- 1 price variation results from every 3 Requests for Information
- Poor documentation contributes to about 10% of project costs

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Impacts

- Cost over-runs, re-work & extensions of time
- High stress levels, loss of morale & reduced output (efficiency)

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- Adversarial behaviour
- Decline in safety standards

Basis of claims Research by CSIRO & others Confirmation by industry – case examples

Engineers Australia (Queensland) activities – seminars & workshops

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Elements of the problem

- Design quality is often deficient
- Documentation quality is often poor
- Unrealistic expectations on designers

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Poor co-ordination across project phases ______

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Design quality is often deficient

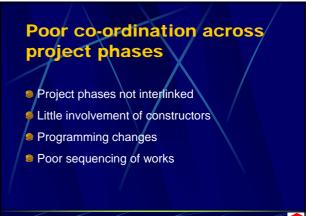
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- Inappropriate design
- Inadequate checking
- Constructability problems
- Lack of innovations

Documentation quality is often poor

- Accuracy, clarity and timeliness
- Inadequate or incorrect detail
- Co-ordination problems
- Confusing & conflicting information





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Some principal causes - interlinked & all stakeholders involved Inadequate time for project planning Inadequate review & insufficient checking Design by crisis - short timeframes Adversarial attitudes (all parties) Failure to appoint an overall project manager Clients persist with short-term views : Iowest possible costs in the development phases unaware of whole-of-life considerations unrealistic expectations about time & cost constraints

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Dimensions of the preferred situation

- Well qualified people, sensible time frames, realistic budgets
- Sufficient planning prior to commencement of design
- Competent processes of design, design co-ordination & design review
- Client acceptance & commitment at key stages of planning & design
- Effective communications & collaboration
- Equitable forms of contract with a no-blame culture

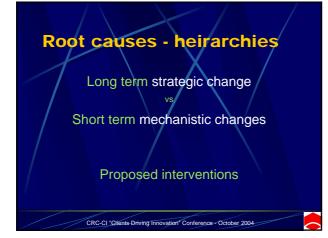
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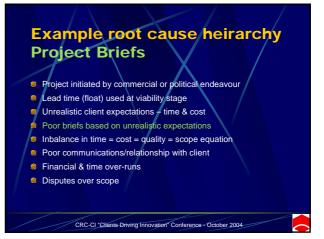
Someone has to turn things around

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Package of solutions

Guidelines & regulatory
Awareness & edification
Equitable remuneration
Equitable delivery
Professional development & training
Project delivery
Technology
Culture improvement

Engineers Australia (O'land) Task goud objectives/intentions Draft report (& proposals) – early 2005 Final report – mid 2005 Specific discussions – other stakeholders (eg developers, financiers) Widespread publicity & discussion Establish arrangements for whole-of-industry implementation

OUTLINE OF PRESENTATION

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the Problem

- Preferred Project Environment
- why things haven't changed
- dimensions of real solutions
- Engineers Australia (Q'land) Task Group

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proposals

