



# **Broadening Skills in a Context of Change**

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# Issues

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- Coincident Mining and Oil & Gas "boom"
- Global warming
- "Peak" oil
- Sustainable development (reality check)
- Escalating project capital costs
- High staff turnover
- Limited pool of engineering resources (globally)
- "Experienced" engineering skills spread too thin
- Decision making by relatively inexperienced engineers



# Behaviours

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- Expectation of inexperienced engineers to make an impact - now
- Highly motivated - low on initiative
- Relatability of new engineers to senior engineers
- Low level discretionary effort from new engineers



# Future View

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- Motivated to use initiative
- Job Ready
  - Business Financial Imperatives
  - Team Player skills
  - Project management/delivery skills
  - Technical writing presentation skills
- An enquiring mind
- Extended mathematical skills associated with process/systems modelling
- Equipment / unit systems knowledge
- Safety / risk aware



# Food

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- **Redefine “discipline” Engineering**  
[Double Degrees abound – eg Mechanical + Chemical/Commerce/Maths]
- **Materials Engineering**  
[Key to future of equipment design and performance efficiencies]
- **Revisit support of Motor Vehicle Projects**  
[Sustainability.....]
- **Integrated Engineering Degrees**  
[Rebadge double degrees]
- **Research imperatives**  
[Materials, processes, efficiency improvements ...]