International Rail Safety Conference 2010
Hong Kong

Construction of 3rd track, Minimbah Bank, Hunter Valley NSW, September 2009

October 2010

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Last time in Hong Kong!

October 2010

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System Design: Keeping Railway Developments on the Right Track

October 2010

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Alan Ross - A&K Ross Associates Pty Ltd ‘Tranquillity’, Kangaroo Ground, Victoria, Australia

October 2010

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Challenges in sustaining rail safety: learning lessons from others

Derailment at Drayton's mine, Hunter Valley, NSW, 24th August 2010 – under investigation by OTSI

October 2010

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Learn from the mistakes of others, because you will not live long enough to make them all yourself

***Jerome F Lederer, Founder Flight Safety Foundation,* 1902 - 2004**

- This is not a new concept, but we ignore it at our peril
- You can obviously also learn from the success of others

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Jerry Lederer was a de facto safety adviser to Charles Lindbergh in 1927

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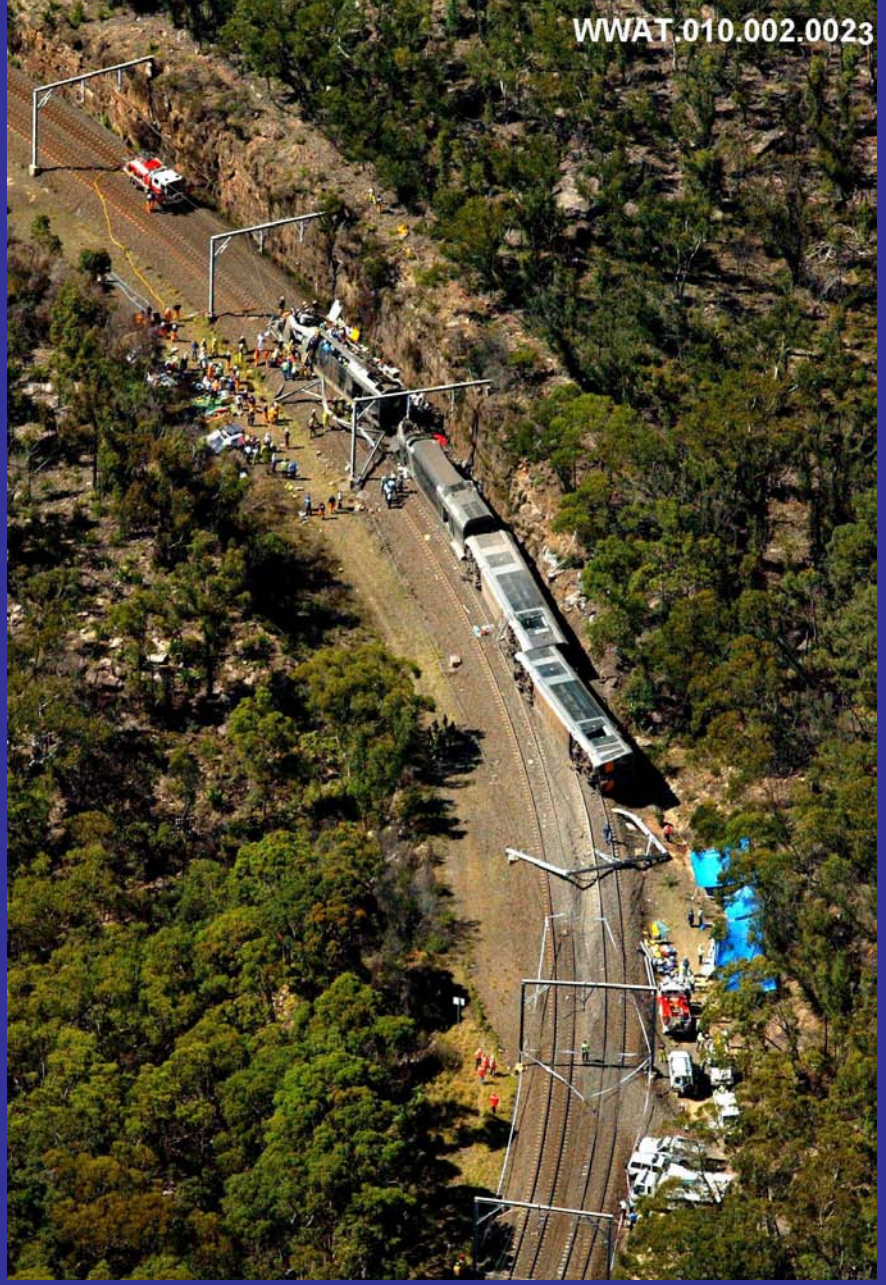

Justice Peter Aloysius McInerney

Waterfall crash, NSW 2003

October 2010

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Lessons Learned

3 very expensive brand new locomotives in the dirt

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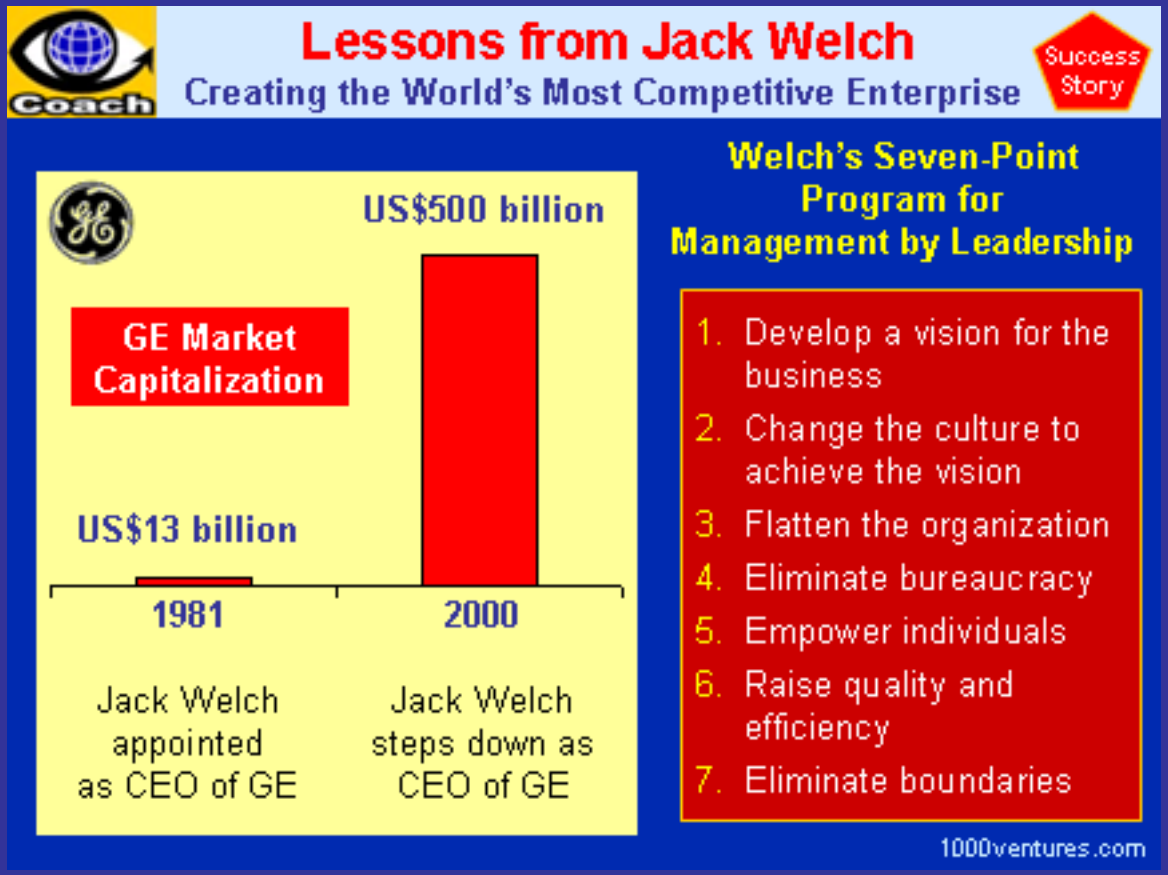
Jack Welch CEO GE 1981 - 2000



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You can also learn from success elsewhere

- **LEAD** – managers muddle, leaders inspire
- **Articulate your vision** – inspire others to act
- **Get less formal** – so staff will challenge ideas
- **Energise others** into extraordinary performance
- **Face reality** – say and do what may not be popular
- **Get good ideas** from anywhere – new ideas - **lifeblood**
- **Follow up** - a key measure of success
- **Eliminate boundaries** – no ‘silos’, free flow of ideas

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Learning from success (2)

- **Create a learning culture** – continuous learning
- **Involve EVERYONE** – literally – capture intellect
- **Make everybody a team player** – coaching levels
- **Stretch** – goals that really challenge people
- **Be number 1 or number 2** – control your destiny
- **Constantly focus on innovation** – quantum leaps

Make it fun – enjoy your job!

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Case Study – 2008, Heathrow

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Case Study 1 Afghanistan 2006

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Case Study 2 - US Gulf 2010

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Not all accident reports are made public

- We must fight this phenomenon
- It is completely counter productive
- It is almost criminal
- Vital lessons can be lost
- Others suffer in similar accidents
- It couldn’t happen in Australia????!

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It does happen in Australia: Telarah NSW, March 2009

One dead, four seriously injured while positioning a new turnout

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Case Study 1 Afghanistan 2006

'*A failure of Leadership, Culture & Priorities*'

Design flaws and **Latent Pathogens** – **'never been airworthy from the first time it was released into service nearly 40 years ago'**

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A long time ago!

The Nimrod aircraft involved in the crash entered service **after** this picture was taken!

akra

Nimrod XV 230 – key shortcomings

- Presence of **'latent pathogens'**
- Failure to adhere to basic principles
- **Safety Case** regime ineffective and wasteful
- Weaknesses in personnel
- Safety Culture allowed 'business' to eclipse airworthiness
- Failure to act on previous incidents

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What is a Safety Case?

- Documented commitment to eliminate or reduce risks as low as is reasonably practicable (ALARP) by:
- Identifying hazards and assessing risks
- Implementing measures to eliminate or control risks
- Having a comprehensive and integrated system for the management of risk
- Monitoring, audit, review and continuous improvement
- **Normally subject to regulatory approval**

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Nimrod Safety Case

'*Many of the lessons learned are not new*'

- Nearly 4 years to produce
- Cost approximately US$1 million
- 3 participant groups – Designer (BAE Systems, Owner (Defence) & specialist independent adviser (QinetiQ)
- Failed to identify the potential for the catastrophic fire that destroyed XV230
- Why?

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Case Study 2 - US Gulf 2010

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Frigg Field North Sea, 1977 - 82

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What is a Blow Out Preventer?

- A series of hydraulic rams designed to close and seal off the flow of oil/gas
- The last resort are the shear rams, designed to completely cut through the drill pipe
- BOP can weigh up to 400 tonnes

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What went wrong? What didn't go wrong!

- Procedures not followed
- Modifications to critical equipment (BOP) not fully documented
- 'Fail safe' equipment (BOP) did not operate when required
- 260 failure modes identified for BOP

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This was the result

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A plea to those who keep incident reports hidden – Telarah NSW 2009

October 2010

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Engineering solution for the risk

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Nobody needs to go near the thing!

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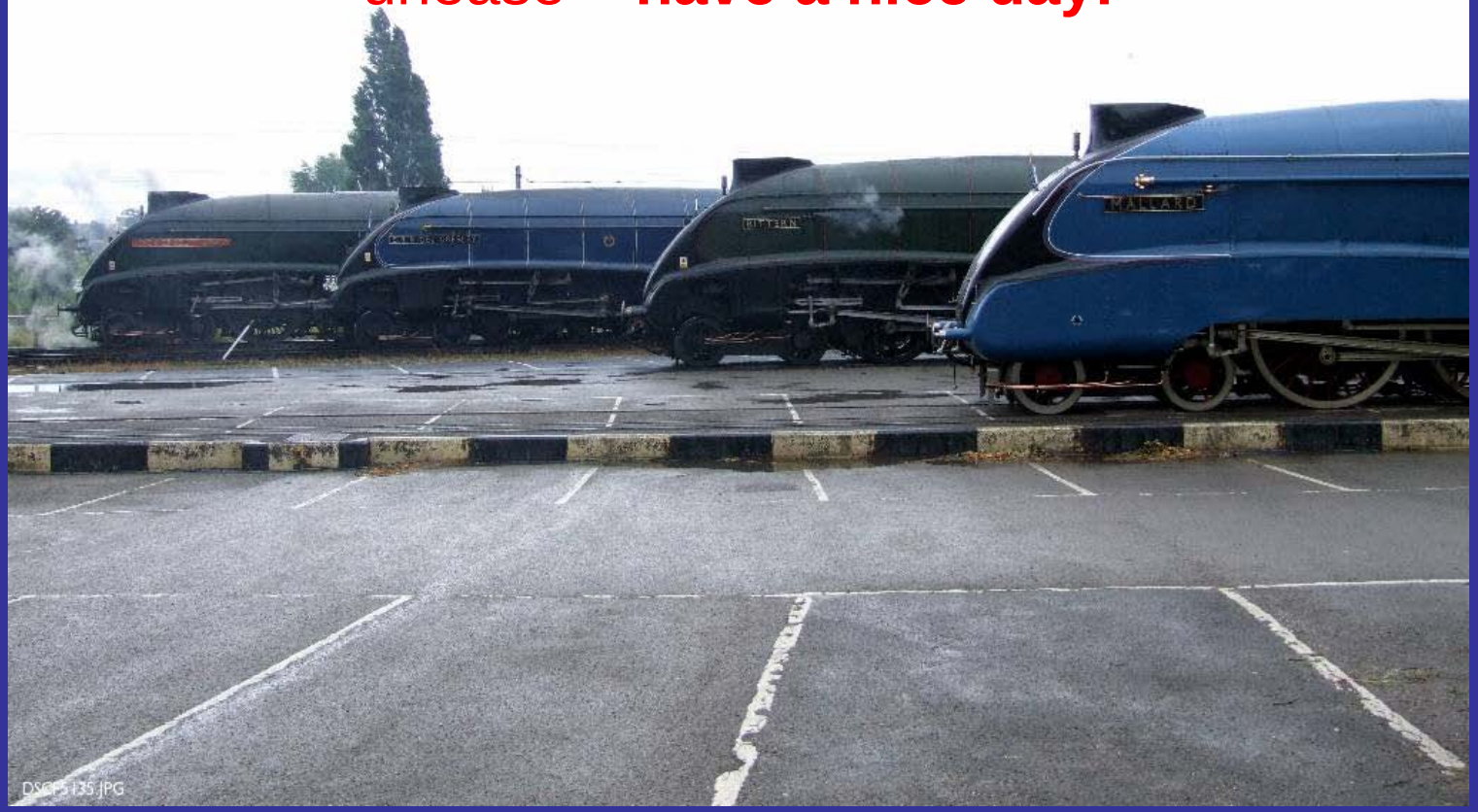
Thank you!

Remember - assume every day will be a dangerous day, always expect the worst, never relax your guard, maintain a state of chronic unease – **have a nice day!**



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