



Commercialising Sustainability- the commercialisation perspective

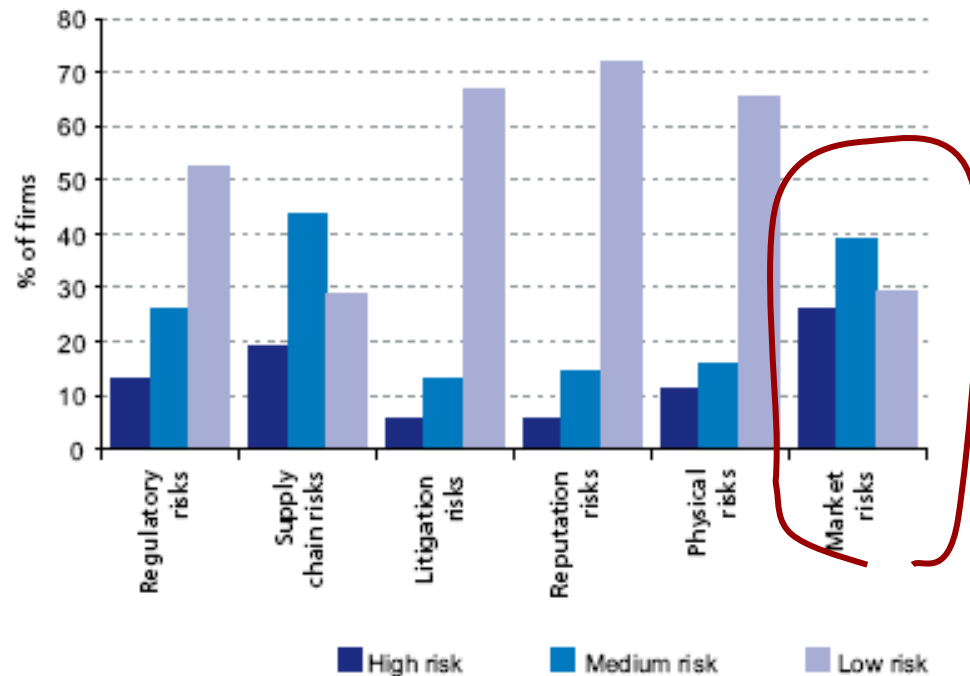
CEDA Forum

Dr Rowan Gilmore
Australian Institute for Commercialisation



Firms' perception of the sustainability challenge is one of high market risk...

Risks from climate change



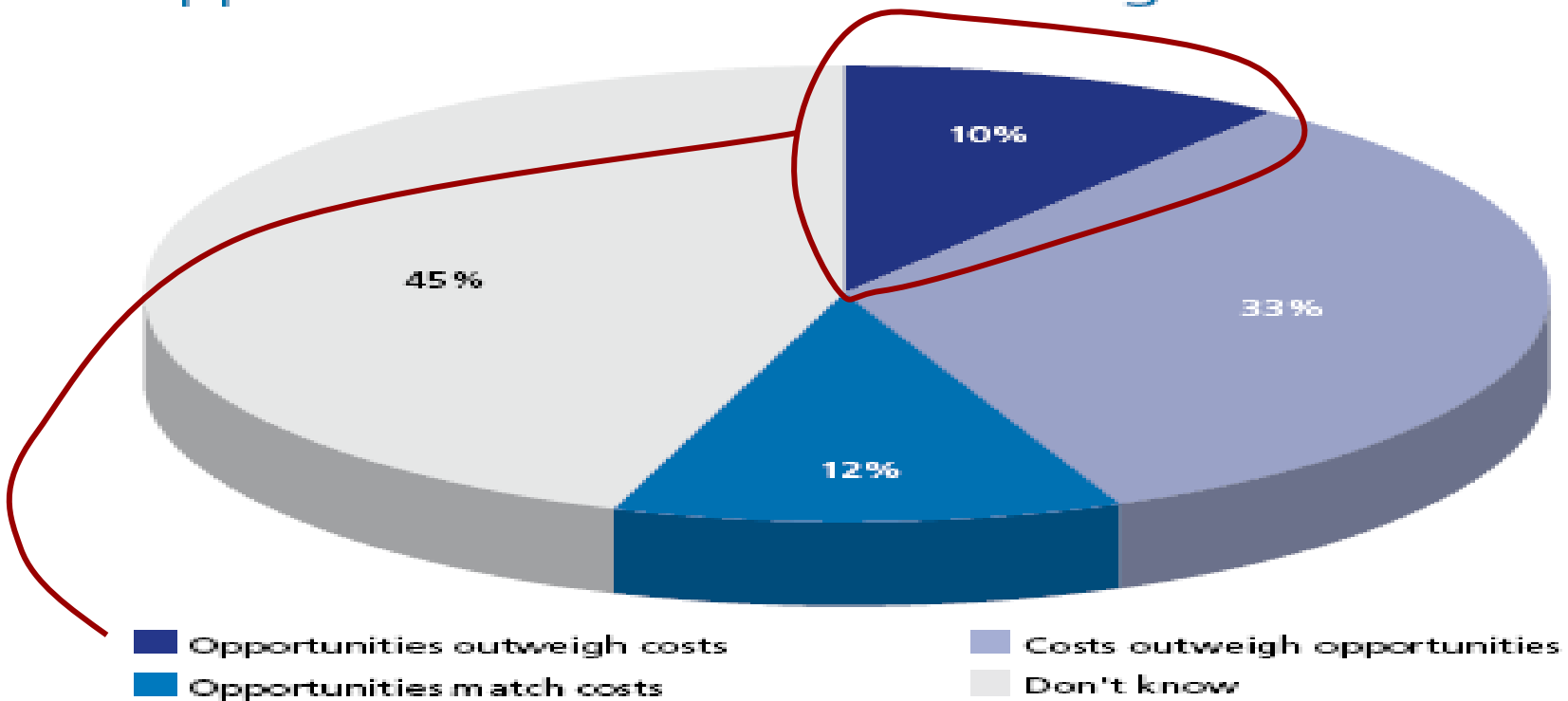
Extracted from "Road to a Sustainable Future" Australian Industry Group

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..with risks blinding the opportunities

Opportunities from climate change

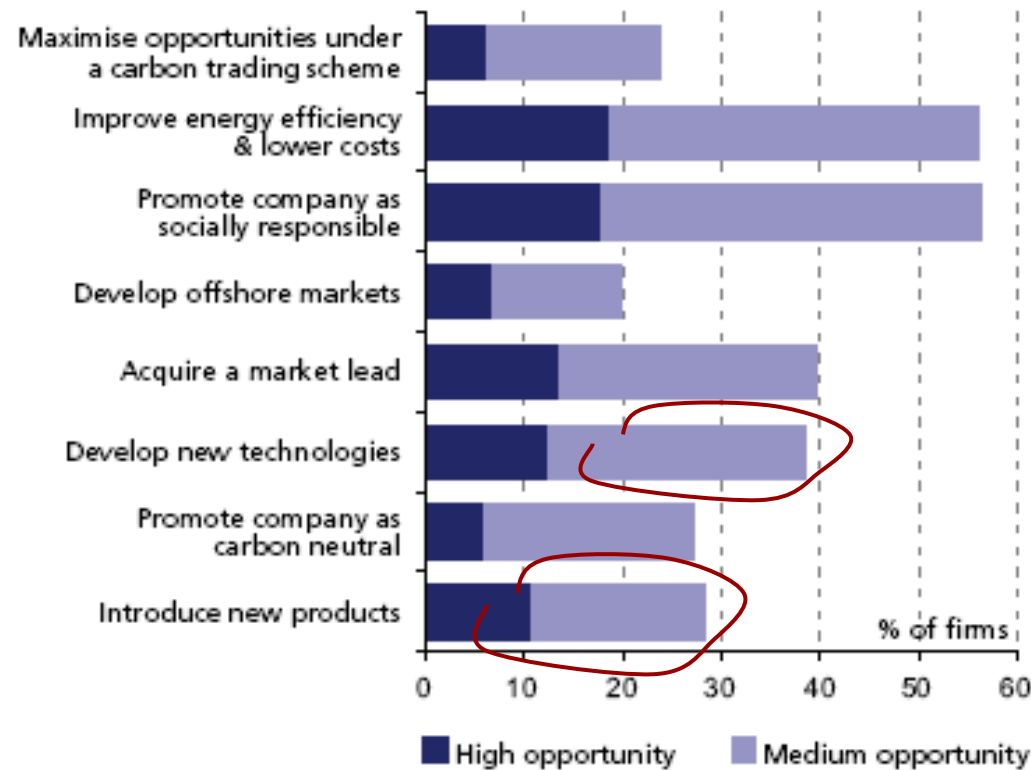


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.. and opportunities mainly to lower cost

Opportunities from climate change





Lost opportunities



1MW on-grid BIPV System for Suntech's new R&D Center in Wuxi, China

→ Suntech Power

- Dr. Shi Zhengrong studied at UNSW under Prof. Martin Green in the Solar Photovoltaics Group
- Commercialised UNSW solar cell technology, in Wuxi in 2001 with financial assistance from the Wuxi government
- Suntech is now one of the world's largest producers of solar cell modules, NYSE listed for \$10B



Have we learned?

- **University of Sydney received a 2006 ARC Linkage Grant of \$945,000 to develop a biomimetic photovoltaic device**
- **Needed to find an industry partner prepared to co- contribute \$300,000 over 3 years**
- **AIC called in to identify industry partners at the last minute**
- **No luck!**







Local opportunities

→ Water conservation

→ Australia leads the world in restrictions and regulations!

→ Energy systems

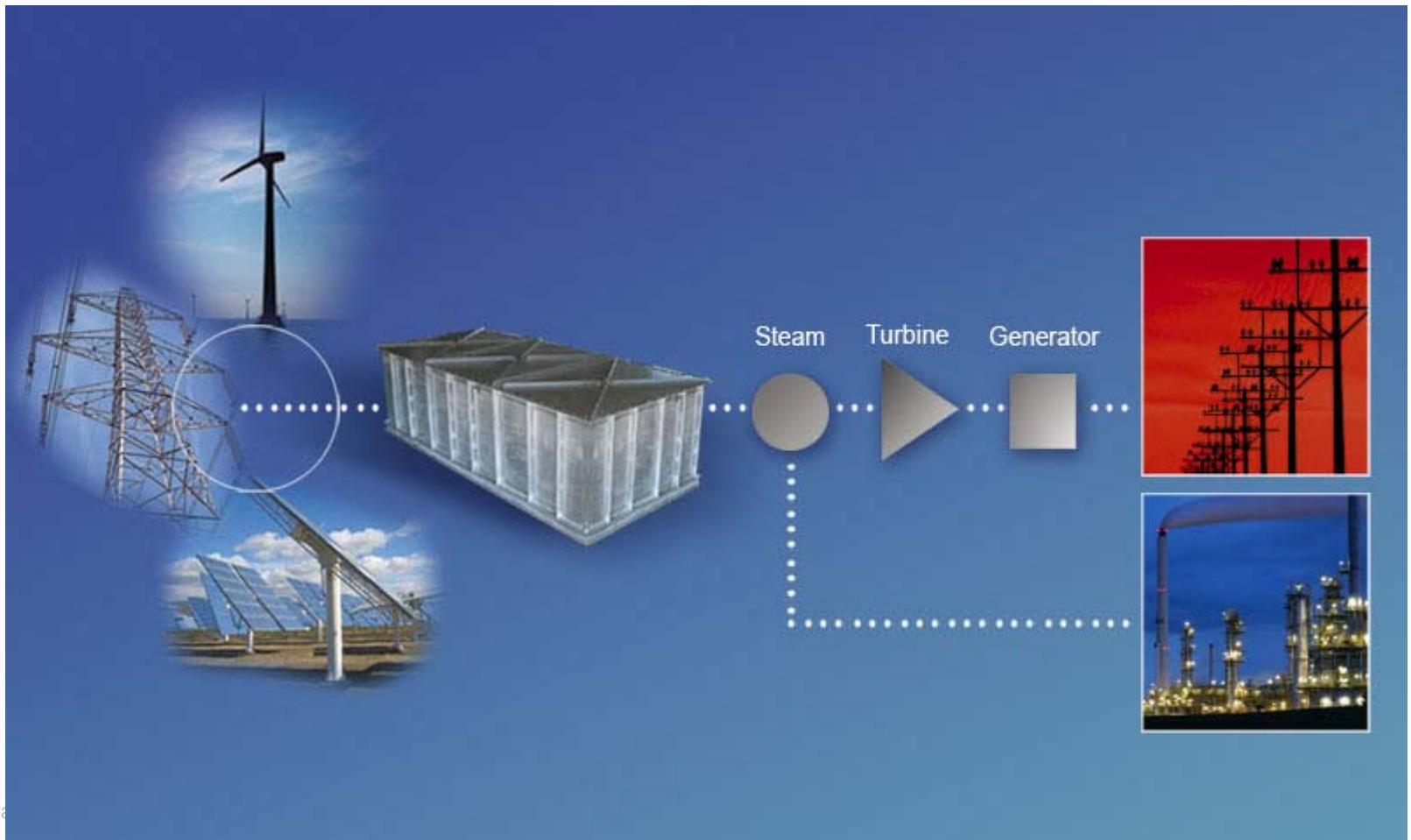
→ Systems integration

→ Storage technologies

→ Hot rock projects?



LES Consortium with Ergon





Challenges of commercialisation

→ Capital (especially for demonstration projects)

→ Start up-route

- Southern Cross \$175M raised in 2007
- Starfish Ventures \$250M raising now (1/3 in pre-seed clean energy) – reviewing 400-500 cleantech deals per year
- Technology Venture Partners \$100-\$200M proposed in 2008
- CVC Sustainable Investments, Cleantech Ventures (CEGT), QSEIF, etc

→ Need industry and government procurement processes to recognise innovation requirements and risks



Challenges of commercialisation

→ Market risks

- Linking together the value chain
- Solution: facilitate increased collaboration
 - Avoid the biotech “industry” single product company problem
 - Round tables and technology clinics
 - Technology foresighting to align R&D with industry
- Pricing in the absence of carbon trading or tax schemes

→ Technical and IP risks

- Differentiation of IP in a crowded field
 - Need for more market research
 - Industry – research sector collaboration



Concluding observations

- Cleantech industry is like the biotech industry of 20 years ago
 - Lacking in scale and clustering
 - Innovation tends to be around service delivery
- Industry procurement driven by least cost because environmental issues are viewed as a liability
- Government focus on open tender, low risk, and least cost for projects does not favour innovation
 - eg water reuse becomes a civil project, moving large volumes of concrete and earth
- Overwhelming focus must be to build scale and encourage innovation, perhaps through clustering based on government contracts