



Commercialising Sustainability- the commercialisation perspective

CEDA Forum

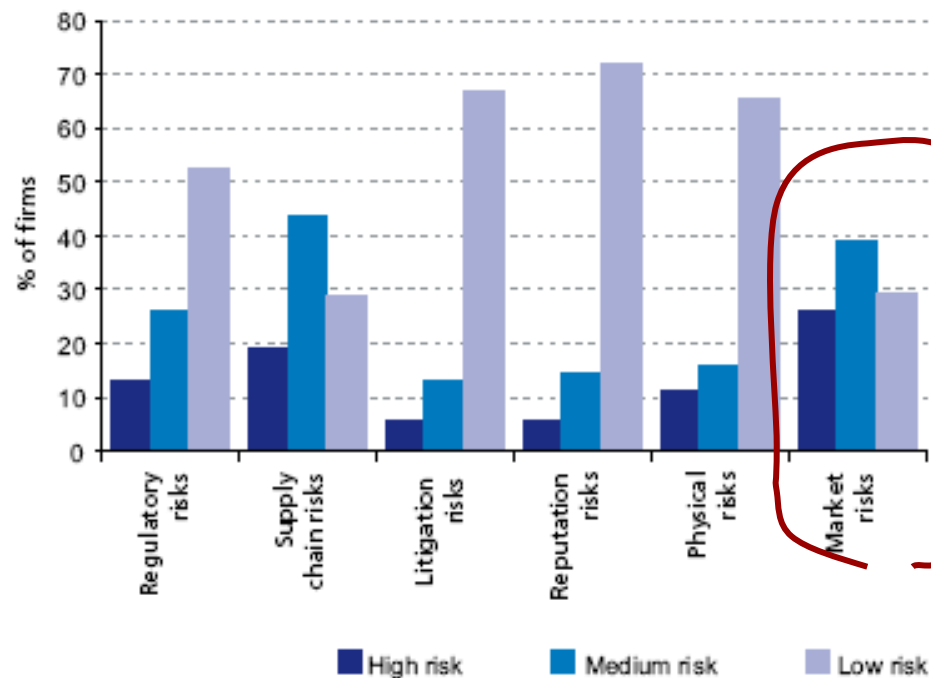
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Firms' perception of the sustainability challenge is one of high market risk...

Risks from climate change



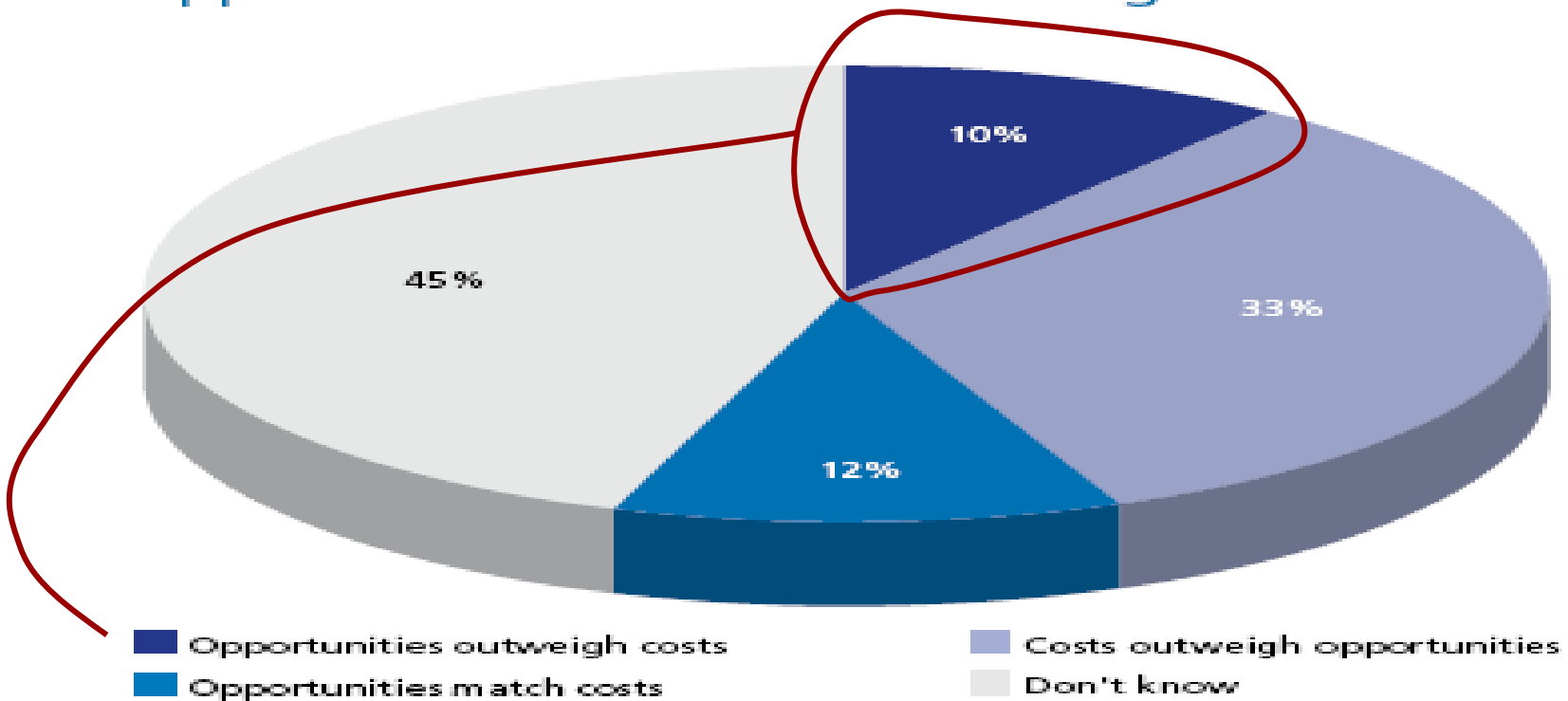
Extracted from "Road to a Sustainable Future" Australian Industry Group





..with risks blinding the opportunities

Opportunities from climate change



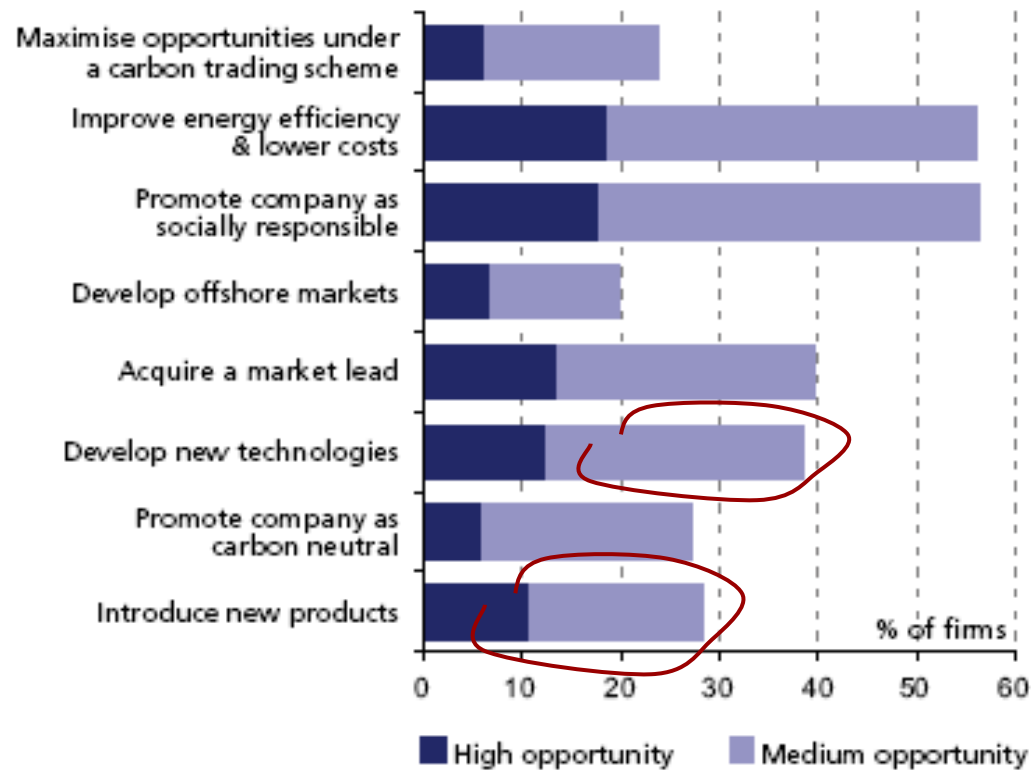
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.. and opportunities mainly to lower cost

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, NASDAQ listed for \$6B





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!





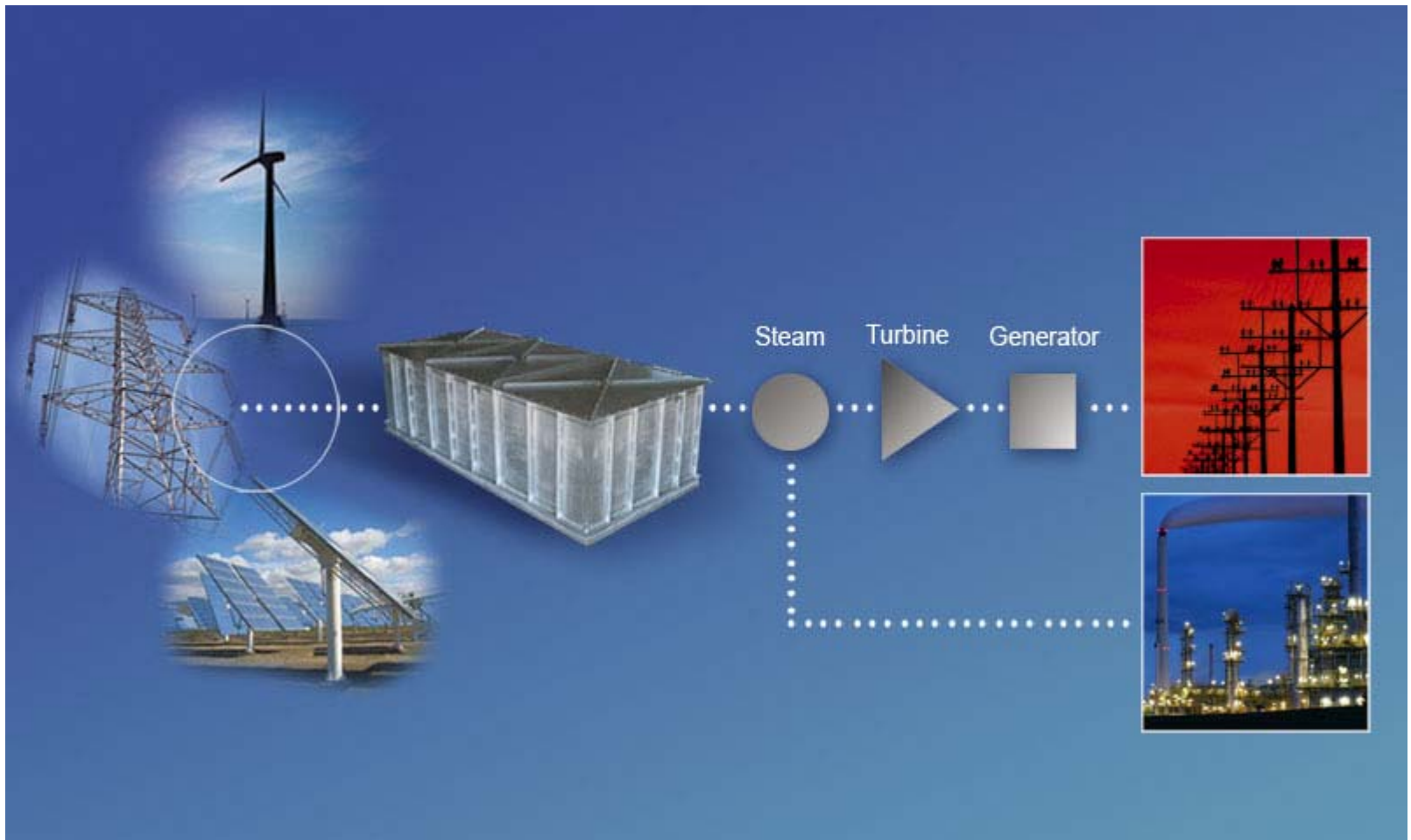


Local opportunities

- 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