Introduction
I shall restrict my remarks to a critical analysis of Australia's competitive advantage as presented in the Strategy 2025 document, and a description of contemporary developments in Spain, especially the Castilla-La Mancha region. I shall conclude with some cautionary remarks to Australian producers, emphasising some contemporary barriers to Australia achieving further export expansion.

My work is as an international viticultural consultant with active clients presently in Australia, New Zealand, several states of the USA, several provinces of Canada, and Chile, Argentina, Uruguay, Spain, Italy, France, Greece, Israel, Mexico, and South Africa. Therefore I do have the opportunity to develop a contemporary international perspective, which viewpoint is valued by some clients.

As geographically disparate as my clients are, they have one feature in common. They are generally competing for the same shelf space in international markets. Australia's successes in wine export of the last decade have not passed unobserved, and there are many international producers who would emulate this quintessential New World approach. Interestingly, this even applies to some Old World producers.

Some Background Studies
Despite the fact that a rigorous study of Australia's competitive advantage was promised as part of the recent wine industry review, as far as I know this did not happen. There should have been commissioned detailed benchmarking studies, as has been recently done for other horticultural industries including table grapes. To help meet this deficiency, Smart Viticulture has undertaken an international benchmarking study of costs of wine grape production as a service to world wide clients. Participating firms are from Australia, New Zealand, Spain, Portugal, USA, Italy, South Africa, Chile, and Argentina. The results will however be confidential to those firms participating.

The 1993 article by Mike Paul of Southcorp (UK) is an incisive analysis of why Australia has done so well in the international wine market place. This article indicates that Australia was in the right place at the right time, and with the right products at the right price points. This viewpoint would contrast with that of Australia possessing some natural advantages over other competitors.

My international experiences do not lead me to share the seemingly widespread and euphoric sense that Australia has an unassailable advantage over other competitors. Some of these experiences will be disclosed in what follows.

I have commented on this issue previously. A n analysis of Australia's competitive advantages in wine exports was previously published (Smart 1994) which was followed by articles about South American threats (Smart 1995) and recent changes in Spanish laws (Smart 1996b). Somewhat tongue in cheek, I also reminded the Australian wine industry that it is so much focused on the future that it failed to properly celebrate its 200th birthday—hardly a proud achievement for any industry! (Smart and Gapes 1995).

At the 1995 Wine Industry Technical Conference, James Halliday presented a SWOT analysis of Australia's position relative to key competitors. These included the USA, South of France, Chile, Argentina and South Africa (Halliday 1996). As I am sure that Mr Halliday would be the first to state, this analysis was essentially subjective and relied on personal and sometimes anecdotal evidence. However, given the wide experience of the author (whose credibility I accept and whose judgement I trust), there are some poignant conclusions, including that every one of our strengths is either presently or potentially matched somewhere else in the world. Fortunately, so many of our weaknesses. The data presented by Halliday reinforce my observations, including that Australian grape prices are presently among the highest of the New World countries.

Strategy 2025: An Analysis of Australia's Wine's Competitive Edge
That Australia might maintain any present competitive edge is a prerequisite for the optimistic growth foreshadowed in the Strategy 2025 document (Australian Wine Foundation 1996). The analysis of Australia's competitive advantage contained in this document was however, in my opinion, shallow and lacked the analytical rigour which one might have been anticipated in such an important document. I intend no disrespect to the author of that analysis (James Halliday), nor do I question the majority of his opinions, but I do believe that his analysis (which was commissioned by the Australian Wine Foundation) was of insufficient substance to justify the conclusions drawn.

Mr Halliday used a 20-point scorecard (as is used for wine judging) to make comparative assessments of 11 countries or regional groupings. The countries/regions included are listed here, along with their total score out of a maximum 320 points: traditional Europe 280.5, Australia 280.0, California 270.5, Chile 268.5, Italy 267.5, New Zealand 252.0, South Africa 248.5, South of France 243.5, Argentina 232.5, Eastern Europe 223.5 and other South American 216.5. Australia's close second place to Europe must have been anticipated in such an important document. I intend no disrespect to the author of that analysis (James Halliday), nor do I question the majority of his opinions, but I do believe that his analysis (which was commissioned by the Australian Wine Foundation) was of insufficient substance to justify the conclusions drawn.

These totals were derived from scores of each of 16 competitiveness factors, which are in turn grouped into four categories of Physical, Human, Market 1 and Market 2. These categories are shown in Table 1, along with Australia's imposing score. While I have no argument with someone making a subjective ranking of different countries within any one category, the summing of points across categories is inherently deceptive and stretches credibility beyond reasonable limits. Can the authors of Strategy 2025 justify one point for varietal choice as being of equal value to one point for human skills or market reputation?

I obtained the background documents for this analysis and
was able to relate to and agree with many of M r Halliday's subjective assessments. However, it seems difficult to accept that costs of production in Australia are higher than those of traditional Europe, as is claimed. The 2025 document also includes errors of fact. Chile does not have cheap land, and while it is attempting to plant premium varieties, ampelographic mistakes about Merlot and Sauvignon Blanc have potentially weakened their effort and marketing position.

The Winemakers' Federation of Australia further modified Halliday's analysis (which was for 1996) by making projections out to the year 2001, and this was also presented in the 2025 document. This analysis covered Australia and the countries of Chile, Italy and South Africa, the group of traditional Europe (France, Germany, Spain) and the state of California. These data are presented in Table 2 of the document, and show Australia now leading the world. The rankings are Australia 289.5, Chile 280.0, traditional Europe 278.0, California 273.5, Italy 272.5 and South Africa 259.0. This analysis emphasizes the possible and necessary changes to entrench Australia's competitiveness for the plan period. Note that strong Government support is a prerequisite to contributing 4.5 points out of the 9.5 improvement target (van der Lee, WFA, notes to accompany Strategy 2025 analysis, dated May 1996).

I have grave reservations about the validity of Halliday's numeric scoring of subjective opinions as presented above, and greater reservations about a second party making even more adjustments. I feel that such analyses can be quite misleading, and might so induce a false sense of complacency in the Australian wine industry. In particular I find the projections for traditional Europe misleading, and they do not take account of current changes, as will be subsequently shown.

Having been critical of WFA for manipulating Halliday's analysis, I now commit the same offence. Justification for this was to question how Spain might fare if one allowed for the projected vineyard modernisation. The Spanish Government has removed vineyard restrictions, and replanting with international varieties and the cost reductions is likely to follow. My reworking of the WFA analysis for 2001 put Spain at 302.5 points, now substantially in front of Australia. My calculations represent the combination of market strength of Europe combined with modern vineyard technology as is practised in Australia and other New World countries.

In the section which follows I will provide some details of how one region in Spain (Castilla-La Mancha) might respond to an altered regulatory environment.

Projected changes in Spain; the example of Castilla-La Mancha

Castilla-La Mancha is the world's largest viticultural region, with presently around 650,000 ha of vineyard, more than nine times the Australian vineyard area. The region is located on the elevated central plateau of Spain, and mostly to the south of Madrid. Vineyards and olives are major dryland crops, but there is also a large irrigated agriculture producing maize, barley, lucerne and sugar beet. The climate is similar to the Barossa although nights are colder. Terra rossa is a common soil type. The most commonly planted grape variety is Airen, a neutral white variety well suited to dryland production in this low rainfall (200–500 mm) area. Vines are untrained and the vineyards clean cultivated. The average vineyard size is 4 ha, and the average yield 3 to 4 t/ha, dropping to 1 t/ha during droughts. There is limited market demand for Airen wine, and it contributes to the wine lake of surplus wine. Some of it is distilled under subsidy, and is sold as ethanol for petrol substitution in Brazil. Most observers would agree that maintaining EEC subsidies for such grape and wine production is not sustainable, neither politically or economically. The EEC has encouraged vine removal under a subsidy scheme, but eventually the farmers revolted at this practice as they perceived they had no alternative income.

In January 1996 the Spanish Federal Government changed the laws which had previously regulated vineyard production. These old laws had forbidden irrigation and had imposed yield limits. Regions such as La Mancha were now free to modify the vineyards, although it is worth noting that the classical Rioja region to the north likely will not. This change in law has come about partly through agitation by persons such as Carlos Falco, the Marquise of Griñon. Don Carlos Falco has a vineyard at Malpica on the western edge of La Mancha, and has had a special dispensation to evaluate irrigation on vinegrapes. M r Falco stated in the widely read Pais newspaper that the Government laws were damaging to the Spanish economy. He pointed out that the economic return by irrigating vinegrapes was much higher than that for field crops, and furthermore that countries such as Australia had a significant advantage over Spain in the international market place because they had no restrictions on irrigation and yield.

I have been consulting to Don Carlos Falco for around five years, and have helped him establish a modern vineyard using world best practices. The common soil type on the property is terra rossa. International varieties are grown (Shiraz, Cabernet Sauvignon, Petit Verdot, Chardonnay) and are trained mostly to the Smart Dyson trellis, the first such installation in Europe. Results have been outstanding, with yields in excess of 20 t/ha being recorded, although 15 t/ha is the average. Wine quality has been outstanding, and in a review of Shiraz wines conducted by the UK magazine Wine, the wines from Malpica scored very well, alongside Grange and Hill of Grace.

In the last two years I have spoken to conferences in La Mancha about the opportunities for modernisation of La Mancha vineyards using modern viticultural techniques of drip irrigation, canopy management and mechanisation. Both conferences have incorporated trips to Malpica, and the local vignerons and winemakers have been truly amazed at the increases in productivity which have been achieved there, as well as the wine quality.
The future of Castilla-La Mancha

From the government viewpoint, the opportunities offered by the rejuvenation of La Mancha vineyards is welcome relief from a difficult social and political situation. The population of the province is 1.7 million, and 20% of the people are involved in agriculture. The provincial government clearly wants to maintain life in economically viable rural villages, and to avoid desertification of the countryside.

Further, there are obvious economic benefits for the regional and national economies. Studies have shown that the extra production from irrigation are around 5 t for grapes, 4 t for barley and 2 t for maize. In terms of value produced, grapes are a clear winner with $2,000 to $4,000 per megalitre of water, compared with $800 for barley and $400 for maize. A nother advantage of irrigating vineyards is that less water is required than for maize, respectively at 2 megalitres per hectare compared to 10 for maize.

The cost of water to farmers is subsidised, currently being at $190 per megalitre. There is sufficient irrigation water available for all of the 700,000 ha of vineyard if it were diverted away from other crops. A simple calculation gives an idea of the benefits from converting vineyards from dryland to irrigation, and vineyards from Airen to more desired varieties. At present L a Mancha has around 650,000 ha producing at 3.5 t/ha (2,275,000 t); the (subsidised) value of Airen is currently around $530 per tonne, so the gross value of production of grape production in the area is $1,205m. With an increase in yield to 15 t/ha, and of grape value to $1,000 per tonne (current La Mancha price for Cabernet Sauvignon), the production could be as high as 9,750,000 t with a gross value of $9,750 m. It is however unlikely that all of the present La Mancha vineyard might be converted over to irrigation.

Some further calculations show the enormous gain to be had from changing varieties and improving vineyard yield by considering wine retail price. Using an average yield of 3.5 t/ha and 900 bottles per tonne, and the average retail price of a bottle of Airen at $2.50, the gross wine income is about $7,900 per hectare. Don Carlos Falco averages 15 t/ha and $15 per bottle, for a gross wine income of $202,500 per hectare, a 26 fold increase! Even at a more likely sustainable retail market value of say $8 per bottle which could be achieved by an expanded La Mancha production, the gross retail income per hectare is $120,000 per hectare, or a 15 fold increase.

The La Mancha Government is now moving to encourage adoption of these new technologies. For those farmers prepared to install drip irrigation for grapes or olives, there is a grant of 40% of the cost while the remaining 60% can be borrowed at subsidised interest rates, and with deferred principal repayment for three years. Perhaps outside investment will be attracted, as land prices are quite competitive. Larger farms with water rights currently used for say maize production sell for around $6,000 per ha, while existing vineyards with no water rights sell for around $4,000 to $17,000 per ha, an indication of how subsidy payments distort market values!

It seems to me that the possible redevelopment of La Mancha could go either of two ways. If the process is left to traditional vine farmers who will need to access water supply, to consolidate holdings, and to learn the new approach of mechanised and irrigated viticulture, then progress will be slow. If on the other hand new farmers or investors are attracted to viticulture who have access to large farms and plentiful water with irrigation infrastructure in place, and who will readily adopt new methods, then the changes will be rapid. The University of La Mancha has four campuses in the region, and is willing to become involved in the necessary teaching, research and extension.

If these vineyards are modernised to use New World approaches as they might, then Spain is likely to become an even more important wine exporting force. Present New World exporters will lose some of their important advantages. Further, one wonders how French and Italian producers might view the changes in Spain. They also have Mediterranean climates which would benefit from irrigation.

The actuality of Austrailia's competitiveness

If Austrailia is to even approach the ambitious targets of the Strategy 2025 document, our new vineyards must be internationally competitive. While we may feel satisfied that many world best practices are now being used (for example in mechanisation), the standard of planting material is decidedly inferior. Not only must Austrailian growers work with a limited and sometimes second rate group of scion clones and rootstocks, much of the planting material seems to be diseased (Smart 1996). I consider that grapevine yellows infection of planting material is widespread throughout the country, causing uneven growth and sometimes vine death in new vineyards. Despite the fact that such a disease can be eliminated by hot water treatment of nursery material, its adoption is still being resisted by some vine improvement societies and nursemens. More recently there has been evidence of leaf roll virus in planting material. This situation augurs poorly for the future productivity and fruit quality from Austrailian vineyards.

A second factor which I believe should be given more cognisance is the relative lack of preparedness of the viticultural industry to adopt new technologies. While we are continually being told that Australia is a world leader in innovative technology (Strategy 2025), this is an arguable opinion. In my experience technology is being adopted more quickly in other countries, Chile for example. I think the age, gender, technical training, adherence to tradition and lack of international awareness of our growers are issues affecting technology adoption, and that Australia is not always as technologically advanced as some of the captains of the industry indicate in their public statements.

I am concerned about complacency about some of these issues, much of which can be attributed to believing our own press releases.

References


