



AUSTRALIA 2025: THREE GLOBAL SCENARIOS
A Framework for Analysing Australia's Possible Future Workplaces
and Workforce Development Requirements

*Prepared 24th June 2009 and incorporating feedback from stakeholders
attending workshops held by Skills Australia on 18th and 19th June 2009*

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Overview of the Scenarios and Their Purpose

Skills Australia is working with stakeholders to prepare a National Workforce Development Strategy. As an aid to long term strategy formulation, Skills Australia has chosen to use the *Global Scenarios to 2025* developed by the Royal Dutch/Shell Group in 2005 as the basis for examining Australia's possible place in the world of 2025. Shell operates in over 100 countries and has created scenarios that give practical guidance to leaders and managers in many different situations who must plan for the complexities and challenges that are likely to be encountered as we all move into the future. These scenarios are intended to be used to consider the possible future nature of Australian industries, organisations and the workplaces within them, on the one hand, and the possible future demand and supply of the skills that Australia will need in order to be judged "successful" by all key stakeholders, on the other. The analysis will be carried out against the backdrop of "success" as that term is likely to be interpreted by the key stakeholders in each possible future scenario.

The key driving forces that are used to create the future scenarios are:

1. Market incentives
2. Aspirations to equity and social cohesion
3. Coercion and regulation by the state

Each of these forces is directed towards objectives that are valued to different degrees by all societies:

1. Efficiency
2. Fairness or social justice
3. Security

The three scenarios are defined (as in Figure 1) by considering future worlds where two of the above drivers are dominant and the third merely adapts to the context created by the two dominant forces:

1. **Low Trust Globalization** – a world of global markets and coercive states.
2. **Open Doors** – a world of global markets and cohesive civil societies.
3. **Flags** – a world of dogmatic, zero-sum assertion of social values and coercive attempts by states to rally divided societies around the flag.

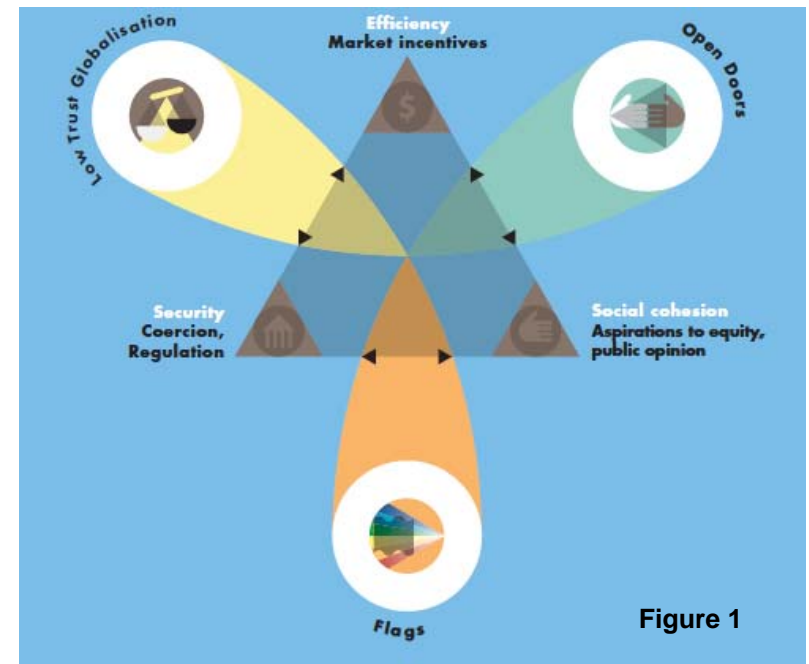
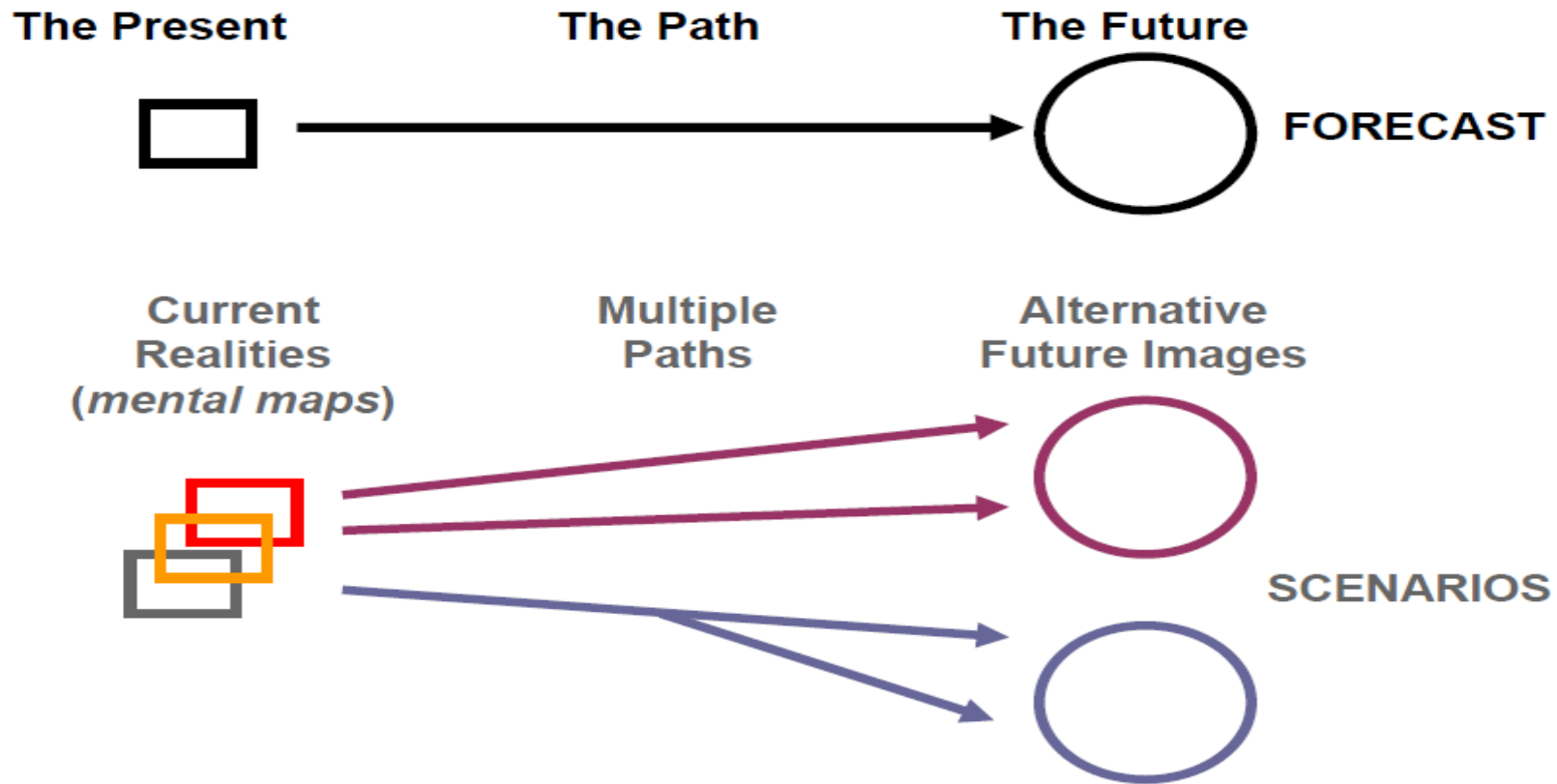


Figure 1

Scenarios vs Forecasts

Many plans are based on forecasts that typically start with an analysis of the present and then make assumptions about the path that will be followed to the future. Scenarios, on the other hand, acknowledge that different stakeholders and institutions may hold different views of the present and can envisage very different pathways to very different (desirable and undesirable) future states. Planning that embraces this diversity of views and aspirations has been shown to be more sensitive to unfolding threats and opportunities and more creative in shaping the world in ways that play to the planning body's values, current strengths and potential capabilities.



Using Scenarios

When organisations or individuals make decisions, they tend to do so on the basis of their ‘mental map’ of the future. People can only have a partial understanding of the world around them, and this understanding helps to shape their particular map of the future, influencing their assumptions about which aspects of the future are important to the choices they face. Until we compare our assumptions with those of others, we often don’t even know we have such a map, let alone what is distinctive about it.

Exploring the assumptions we currently hold—individually and collectively—about the future can equip us to act more effectively in the present. It can help us to recognise when our assumptions are being challenged by events and how to respond successfully. In organisations large or small this capacity can mean the difference between success and failure. To help us to see and interpret important data, we need to find ways to develop a thorough understanding of the context in which we operate and how it may evolve. Scenarios offer one such approach.

The scenarios in this report are not presented as predictions of the future to be evaluated in terms of their “rightness” or “wrongness”. A scenario is a story that describes a plausible, possible future. It identifies relevant significant events, the main actors and their motivations, and it conveys how the world might function in the future. Building and using scenarios can help people explore what the future might look like and the likely challenges of living and working in it.

It may be that certain strategic actions are worth taking whatever scenario unfolds. The decision to move on other strategic options, however, will be contingent on how they play out in the different scenarios, and that, of course, depends on which way the external environment actually develops. This is, obviously, a long-term process, consisting in monitoring the external world for indications that events are moving in a particular direction. Decision makers can use the scenarios almost like a map to structure their discussions and guide their thinking about the future. Scenarios allow them to keep different possibilities in mind without being overtaken by the overwhelming nature of uncertainty.

Scenarios are intended to form a basis for ongoing strategic conversation—they are a method for considering potential implications of and possible responses to different events. They provide their users with a common language and concepts for thinking and talking about current events, and a shared basis for exploring future uncertainties and making more successful decisions. Scenarios are most useful if they are used systematically over a period of time—to craft the ongoing strategy of an organisation, to challenge assumptions, and test plans and strategies - rather than just once in response to a particular situation.

Short-term Gateway to the Future: The Global Financial Crisis

Over the next few years, a number of critical global challenges will have significant influences on the particular path the world takes into the future of 2025. Key among these will be the currently unfolding global financial/economic crisis. Other possible “gateway” challenges over the next 5 years that could influence the path that the world takes into the future of 2025 include climate change, a killer pandemic, piracy and terrorism, or the emergence of a rogue nuclear state. Several possible pathways to Shell’s three global scenarios for 2025 are shown below.





SCENARIO: Low Trust Globalisation

The Fundamental Global Dynamics

- This is a “prove it to me” world, a sceptical world. The key words are compliance, compliance, compliance. It’s about playing by the rules, and about being very aware of the diversity of jurisdictions that will come to you with their very different and often overlapping demands.
- A world of lawyers and accountants with a culture of blame. When things go wrong, regulation and litigation are seen as answers. Action is reactive rather than proactive. People do not operate with a sense that common problems can be dealt with in advance.
- Heavy compliance requirements bring high transactions costs in markets and foster greater business scale: markets are dominated by large, vertically integrated companies that can control the potential liabilities in the whole supply chain. Value protection is as important as value creation. Compliance and its cost and scale implications also create large barriers to market entry by small and medium-sized companies.
- In the world of Low Trust Globalisation, listed companies are large multinationals. Bond financing is popular. Small and medium-sized companies are taken out of the public eye by the private equity industry.
- The absence of market solutions to the crisis of security and trust, rapid regulatory change, overlapping jurisdictions and conflicting laws lead to intrusive checks and controls, encouraging short-term portfolio flows and arbitrage as well as vertical integration of businesses.
- In a nutshell, this is a world of “Carrots and Sticks”.

The Global Scenario

Low Trust Globalisation is a world where the dual challenges of security and trust are met by a patchwork of rules and regulations applied by nations and regions. Global institutions struggle to impose some kind of harmonisation, often at the insistence of multinational corporations.

Countries, as well as states and provinces within larger nations, vie for investment, jobs and new enterprises by establishing competitive regulatory environments. Business locates where it can get the best regulatory deal.

National security is perhaps the most fundamental public good and expenditure on it is significant. Defence forces, private security firms and makers of monitoring and compliance technology are growth industries.

International politics is far from harmonious leaving little room for grandiose common objectives. Protection of the global commons is only pursued to the extent that it does not conflict with major national interests. Inequalities between countries increase.

This is a stressful world and there are many stress-related illnesses.

Issues such as pollution and climate change are dealt with on a crisis by crisis basis – resulting in high insurance premiums. Conflicts over water develop. The creation of “coalitions of the willing” becomes an acceptable way of working on common problems and this fosters opportunistic strategies as well as pragmatic solutions.

A strong distrust of government spending causes the emphasis in tax policy to be on simplicity and efficiency rather than the creation of social outcomes. There is a relatively high level of private savings for retirement.

Pressure on companies comes not only from government and other market participants but also from an ever more demanding set of confrontational civil society actors operating under the banner of “corporate social responsibility”. However, in this scenario, these actors take second place to the market and the state.

Research and development is important, with governments collaborating closely with universities and the private sector. New national research clusters emerge. Protecting commercial intellectual property is pursued aggressively through the threat of law suits as much as by striving to gain unchallengeable IP rights. However, cross-country research networks remain limited in size and scope. Even within national borders, a profound lack of trust prevents companies from sharing research outcomes.

The supply of education is increasingly left to the private sector with labour markets essentially determining the curriculum.

Labour markets are largely efficient. Wage negotiations are decentralised, ensuring that wage increases reflect productivity gains. Wage variability is large within organisations and between industries, occupations and regions. But many groups (such as senior executives) are under increasing pressure to justify their large pay packets.

A home bias exists with regard to private investment – a reaction to jurisdictional discontinuities that heighten regulatory risks. Trade sanctions are prevalent and are imposed on any country that is perceived to be a security risk.

Migration is restricted, ostensibly for security reasons, with tightened controls on the movement of people. However, illegal immigration continues to grow. Limited immigration is allowed to fill skill shortages that are seen by governments to threaten national competitiveness.

Inefficiencies in this scenario limit the average global GDP growth rate to around 3% p.a. – with Europe doing worse at around 2% p.a. and China and India doing better at around 7.5% and 6.7% respectively. Long term real interest rates are predicted to be slightly above 3% over the period to 2025.

Energy security is considered fundamental to both national security and domestic prosperity and growing import dependency worries many states. Energy conservation and diversification of supply (both geographically and type of energy) are encouraged by policy and regulatory means. Many countries pursue the reduction of national greenhouse gas emissions and encourage the development of alternative energy sources, notably wind and solar, as well as energy efficiency via hybrid and fuel cell vehicles.

This scenario sees higher oil prices in real terms than in the past and higher oil prices than the other two scenarios. Non-OPEC oil supply grows initially from now in the context of higher oil prices but then resource limits cause non-OPEC oil production to slow and level off. This allows OPEC members to increase their market power in the next decade.

Australia in 2025 under Low Trust Globalisation

Stakeholders from education, government and industry who attended workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the above themes in describing the main changes that will define Australia in 2025 within the global context of the Low Trust Globalisation scenario.

Migration

We will see: migration become pragmatic and temporary to address skill shortages.

Social Equity and Inclusion

We will see: increasing polarisation of the workforce and wider population with increasing gaps between the winners and losers in terms of wealth, education, health and social inclusion; increasing poverty and social disadvantage.

Knowledge and Skills

We will see: increased, systemic skill shortages and underutilisation of existing resources; privatisation of education and training markets with fee based systems; alignment of public training with short-term industry needs; company-targeted training that is often not transferable or recognised across state boundaries; the need for a stronger welfare focus in public education and training.

Technology, Information and Innovation

We will see: increased use of technology to replace labour; lower rates of technology transfer; innovation from smaller companies that are then swallowed up by larger companies and multinationals; deeper engagement in innovation in areas of competitive advantage but not more broadly; more technological solutions in service industries.

Global and Local Economy

We will see: competition become the dominant force, leading to greater conflict, “industrial warfare”, more silos and increased security concerns; economic focus on areas of natural advantage (e.g. resources in Australia); growth in multinationals; growth in industries that don’t add value to the community; a different industrial structure defined by fewer but bigger winners; increased use of contractors; active search for low regulatory havens and cheap labour; more trade barriers reducing Australia’s capacity to “gain from the globe” and compete globally; a stronger focus on bilateral trade (e.g. with China).

Role of Government

We will see: increased size and centralisation of government; greater expectations that government should have a bigger role in regulating economic activity; high levels of competition for public investment; “benevolent dictator” strategies of picking winners; less money available to government for public services (leading government to be harder nosed about where money goes); government agendas dominated by foreign policy with greater use of non-tariff barriers and foreign aid to influence foreign governments; increased spending on defence and security; less engagement with the international community. In this world, the role of government is primarily that of “umpire”.

Environment and Climate Change

We will see: environmental pressures continue but be in tension with the dominant drive to gain competitive advantage; Australia continues to export coal; fragmented policy leads to extreme weather events and urban relocation.

Leadership

We will see: leadership becoming focussed on market imperatives; less transparency; less corporate social responsibility; less participatory forms of governance.

Other key future drivers that were touched on in the stakeholder discussions of this scenario but which may warrant further examination by Skills Australia include:

- ***Demographics*** – how will the ageing Australian workforce be managed in this scenario; what role will Australia play in helping to find gainful employment for the many younger workers in developing countries that do not have sufficient local job opportunities?

- **Technology** – what form is new technology likely to take; how will it be disseminated and to what extent will it be taken up by individuals and employers; what ethical issues will it give rise to; how much will it cost and who will not be able to afford it; what impact will technology have on Australian society and particularly on how we learn and work?
- **Extremists** – what groups in society are likely to actively oppose the dominant paradigm; what forms will their opposition take; how will these groups be dealt with by government and society?
- **Systemic shocks** – how might major earthquakes, tsunamis, volcanic eruptions, ice shelf break-ups, nuclear accidents, or virulent pandemics affect the future of Australian society in each scenario?
- **Inherent catalysts** – is this scenario (and the other scenarios) likely to be a stable state or might it contain within it catalysts that will sooner or later transform it into something else?



LOW TRUST GLOBALISATION: Key Features That Could Shape the National Workforce Development Strategy in Australia

- “Success” in this world means winning in the markets that are relevant to you or your organisation; e.g. consumer, labour, capital, member, electoral, etc. Hence, skill “needs” and the “effectiveness” of workforce development will be judged by the yardsticks of this prevailing paradigm.
- In the absence of government intervention, or intervention by institutional investors with longer time horizons, or requirements to comply with international agreements, national skills requirements are determined by short-term business priorities and imminent social and environmental crises. Business leaders give low priority to proactively developing the skills needed for longer term nation building or for delivering public goods such as “environmental sustainability”. At the international level also, protection of the global commons is only pursued to the extent that it does not conflict with major national (economic and security) interests.
- Education and training “products” are designed around the short-term needs of employers and workers which, in turn, influence how governments target their education and training support. Pricing signals from the labour market as to what skills are in greatest demand heavily influence “customer” demand for education and training offerings. The needs of fee-paying students are given high priority by education and training providers.
- Tertiary education sees significant growth in the number of private providers that target particular industries or skill niches.
- Knowledge communities are linked by ICT or cyber-infrastructure but they tend to form around particular research or teaching ventures that have significant potential commercial value. The participants in these communities are often bound by confidentiality agreements designed to protect valuable IP. Without the incentive of long-term government funding, there is little enthusiasm on the part of researchers, practitioners or students for engaging in more open learning communities that are working on pushing back the frontiers of basic scientific knowledge.
- International migration is restricted to filling temporary skill gaps that are seen to threaten national competitiveness. Combined with the continuing low fertility rate, this causes a slowdown in the growth of the national workforce. In turn, this leads to enhanced competition for scarce skills as well as spurring investment in labour saving technology and more efficient forms of work organisation.

- Companies desire government support for innovation and market development but are unwilling to share information that could give market advantage to others, especially to parties across state and national borders. Large organisations aggressively protect their intellectual property in the courts.
- Investors, customers and companies (and nations) deploy significant energy to protect themselves against the misdeeds, or potential failings, of others. The state and a host of NGOs and community groups play a major role in overseeing the process whereby trust in markets (including the skills development market) is preserved through opportunities to seek redress for market abuses or dysfunctions. Many of these bodies strive to enhance their influence by forging alliances with major investment groups, political parties, and the media.
- In order to maximise the return on their investment, employers push to have the workforce skills and qualifications they have acquired, or helped to develop, recognised in all jurisdictions that are relevant to their operations. Regions and states compete to provide regulatory environments that are attractive to business (including education and training providers) and to their investors, customers and other major stakeholders.
- Venture capitalists are active in funding disruptive technologies that have the potential to create new revenue and profit streams – and new skill requirements.
- Labour markets are efficient, with industrial relations largely decentralised. This ensures that wage increases reflect productivity gains.

Stakeholder Feedback on the Main Workforce Development Challenges in Australia under the Low Trust Globalisation Scenario

Feedback from the stakeholder workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the themes listed above in describing the main workforce development challenges that are likely to be faced by Australia in 2025 within the global context of the Low Trust Globalisation scenario.

Labour Markets

We will need: to ensure that increased use of contract labour does not result in lack of skills development; to ensure that company-focussed training does not lead to a less adaptable and mobile workforce; to manage the lack of flexibility arising from the alignment of education and training with short-term industry needs; to minimise the negative effects of predatory business practices.

Migration

We will need: to manage skilled migration to address specific skill shortages.

Social Inclusion

We will need: to engage disenfranchised groups; to ensure that the focus on short-term commercially valuable training and providing training for the existing workforce does not lead to further exclusion of disadvantaged or marginalised groups; to manage growing conflicts between winners and losers.

Knowledge and Skills Mix

We will need: to meet the continuing high demand for general foundation skills; to balance the increased spending on compliance with skills training that contributes to national capacity building and innovation (especially transformational innovation); to manage the increased demand for business and finance skills at the expense of people management skills; to ensure that a focus on short-term, user-pays training does not result in reduced R&D investment, the loss of long term strategic skills and future skill gaps.

Transferability of Skills

We will need: to increase transferability of skills and skill recognition across industries and jurisdictions; to manage the fragmentation, waste and duplication of effort resulting from lack of skills recognition and inconsistency of standards across borders.

Education and Training System

We will need: to avoid tensions arising over potential mismatches between the learning needs of employers and employees; to ensure that training providers are equipped to change the skills mix quickly in response to changing demands; to ensure the system can meet increased individual demand for skills that will help maintain employability; to manage the tendency for the training system to fragment around short term industry needs; to adapt to pressure for publicly funded training and qualifications to become more general with industry providing specific training and non-accredited qualifications; to manage the risks that the public provider system may become marginalised; to accommodate employers' desire to work more closely with schools in order to gain early access to young people (e.g. more VET in schools).

Roles of Government, Employers and Learning Providers

We will need: to manage the pressure on public expenditure by getting the public/private balance right; to limit blame-shifting and avoidance of responsibility as industry expects government to deliver adequate workforce knowledge and skills; to direct government funding into areas that limit or reduce social inequality; governments to establish base skill levels and quality standards; to ensure that government props up protected industries in ways that do not compromise the nation's long-term interests; government to manage potential competition for limited resources; government to compel business to take greater responsibility for training and development; to manage the possibility that large, vertically integrated organisations will gain unfair competitive advantage by pouring large amounts of money into training design and delivery; the federal government to help national companies deal with increased regulation and difficulties in operating across borders; governments to manage the

carrots and sticks necessary to increase industry/enterprise responsibility for workforce development; governments to manage crises and conflicts involving different sectors of society.

Workforce Data and Planning

We will need: to adapt to the lack of employer interest in investing in a national workforce development strategy; to deliver better and more transparent information for decision making and monitoring of the health of the workforce development system; to ensure that workforce development strategies are sharply targeted in order to gain employer buy-in; to ensure that poor planning does not lead to an increase in the pool of unskilled workers who are unable to meet the skills challenge; to respond to an increase in the number and diversity of lobby groups.



SCENARIO: Open Doors

The Fundamental Global Dynamics

- Open Doors is a “know me” world, a world of trust: in global systems, and in globalisation. It is a pragmatic, proactive and co-operative world. People cooperate with others to deal with future problems, because it is the most efficient way to deal with them.
- Underpinning trust is the precautionary principle, which broadly states that caution should prevail where the possibility of harmful effects on health and the environment have been identified and scientific evaluation of the risks proves inconclusive.
- In this world, government acts in the background, maintaining trust and security through incentives and soft power rather than intrusive checks and controls. States are inclusive, taking responsibility for the wider constituencies in society.
- Reputation can be a substitute for intrusive controls. A world of constant questionnaires by rating agencies and media. Reputation carries a premium, but also makes companies vulnerable. Voluntary best-practice codes, and close links between investors and civil society encourage cross-border integration and virtual value chains. Networking skills and superior reputation management are essential.
- Competitive advantage through innovation is short-lived, but not to innovate is not an option. Companies are driven to innovate more to compete. More capital is available in Open Doors to invest in innovation, because financial markets have a higher appetite for risk.
- Innovations are disseminated faster, because of the openness of the global business environment.
- Global equity markets become more integrated and large sums of venture capital chase superior returns.
- In a nutshell, this is a world of “Incentives and Bridges”.

The Global Scenario

In this scenario, companies, civil society organisations, faith based organisations and governments work in an increasingly overlapping and integrated manner. There are high levels of openness and sharing of plans and information. This is a stakeholders’ and shareholders’ world in which participatory processes are widespread, principles of legitimacy widely shared and consensus valued. Many of these participative governance mechanisms grew out of global and national forums that were established to deal with the global financial crisis of 2008-2010.

A spirit of tolerance and the search for “win-win” is a distinctive feature of Open Doors. Politics is inclusive but consequently more complex. A single world government is never on the horizon. Referendums are more numerous and the state is often called upon to forge common ground in debates that pit different groups in society against one another. “Time to market” must now include “time to consensus”.

The individual plays a central role in this scenario, even though there are still precise rules and processes. This is a world of multiple identities and multiple belonging. Companies are reconciled to the fact that they receive only partial loyalty from employees who are also members of a variety of community based organisations, governance tracking bodies, etc. The role of NGOs is valued and taken very seriously by leaders in all spheres.

States are no longer seen to have definitive solutions to economic and social problems. Consequently, state authority diffuses downward to a host of local institutions and NGOs and upward to a series of “born again” reformed global governance institutions. These institutions are accountable to their many stakeholders through strict monitoring and evaluation processes. The “soft power” emanating from having values, ideals and policies that are admired by others keeps this world together rather than military might. Attempts are made to understand and accommodate differences rather than repress them.

“Built-in” rather than “bolt-on” technology plays a key role in ensuring high levels of security and trust. Smart bar codes, global tracking, databases and many other techniques are called on to minimise interferences and delays. Standardisation of legal codes and mutual recognition arrangements ensure that operations that occur across different jurisdictions are no more costly than those which occur within a single jurisdiction.

At work, people seek self-fulfilment as well as employability through horizontal links with peers, professional communities and other groups in society that share values and interest that are relevant to the workplace. Companies display greater confidence, therefore, in entering joint ventures and in working as members of consortia. Inter-operability, partnering and virtual teams are increasingly common. New entrants and SMEs have greater scope to become established as long as they can set up and manage the appropriate connections with other players.

Investors seek to maximise value over the longer term and are prepared to give companies adequate time to restructure and implement value maximising strategies. Ethical investing and socially responsible investing continue to develop. The emphasis placed on corporate social responsibility and personal accountability leads to employees and employers being taken to court for anti-social actions. Security and trust are thus jointly produced by companies, investors, civil society and the market.

Corporate reporting to the market goes beyond financial reporting to include significant voluntary disclosure, which is often done in conjunction with other like-minded companies. Reputations are tracked, checked and challenged – and this can lead companies to be more risk-averse. Few projects are undertaken without a whole gamut of impact assessments and diligence checks being carried out. Leading businesses go further and strive to adopt environmental, health and safety standards that are higher than established requirements for good citizenship. The “precautionary

principle” is widely adopted whereby changes with uncertain long term environmental or social outcomes are avoided. Company reputations depend not on the courts but on opinions in society. Mediation and arbitration are valued alternatives to lawsuits. Opportunistic behaviours and breaches of trust are punished in the court of public opinion.

There is a blend of cooperation and competition between states as they endeavour to provide a better market environment globally. Regulatory negotiation is common as NGOs, industry groups and regulators work together to set standards. Regulation is about processes and outcomes rather than targets which increases the opportunity for differences to coexist in a spirit of mutual recognition. Countries have put in place a global financial architecture conducive to greater financial stability. When financial crises do emerge, countries are prepared to act collectively.

In relation to unemployment, people are given incentives to find work although it is society’s responsibility to ensure that labour-market opportunities are available. People have become remarkably mobile, with no-frills airlines helping to define new global standards of openness and accessibility. Sharing of name-files among customs and police forces of different countries and the use of biometrics reduces the need for visas. All this adds to the opening up of global boundaries and enhances labour market efficiency.

At the national level, the distinction between public and private goods becomes increasingly blurred. Goods that were traditionally supplied by the state are increasingly supplied by the private sector. At the same time, there is increasing recognition that at the regional and global levels certain goods such as public health and knowledge will remain undersupplied unless governments play an active role in their provision. Companies, NGOs, international organisations and governments find it natural to work together towards specific objectives and to co-produce essential services like education and health. This is indeed a transnational world in which the “public space” has become almost as globalised as the marketplace.

The avoidance of large divides both within and across countries is given high priority and, consistent with this policy objective, tax systems are generally progressive and redistributive. Using incentives such as matching grants for private initiatives is a central feature of how governments preserve an important role for themselves. Subsidies for energy efficient activities match the taxes for energy-inefficient activities so there is no increase in the overall tax take.

Success in the Middle East is critical for achieving the more peaceful global environment of Open Doors. It is a reformed US approach and the Turkish secularist model that play key roles in reducing tensions in the Middle East. Gradually extreme movements lose their appeal and a “Marshall Plan for the Middle East” is launched by a large coalition of donors.

Innovation and efficiency is maximised by the removal of institutional discontinuities and the nurturing of trust in this scenario. Productivity growth is kept high by an increasingly mobile and trained workforce. Global GDP in Open Doors grows on average by 3.8% p.a. until 2025.

Oil remains the dominant global fuel through to 2025 and demand growth is on average nearly 1.9% pa. Limited spare capacity breeds uncertainty and price variability. The use of natural gas for power generation and cars, via application of gas-to-liquids and fuel cells technology, expands rapidly at 3.5% pa, encouraged by economics, convenience and environmental qualities. Although its rate of growth is slowed by the imposition of carbon taxes, coal production almost doubles from 2004 levels by 2025, enabled by cleaner coal technologies. Despite this, the market share of gas grows. Renewable energy growth is approximately 9% pa which delivers a market share of 5% by 2025.

Australia in 2025 under Open Doors

Stakeholders from education, government and industry who attended workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the above themes in describing the main changes that will define Australia in 2025 within the global context of the Open Doors scenario.

Migration

We will see: increased immigration (permanent and temporary) leading to a more diverse, multicultural society and changes in what it means to be Australian; increased shifts from urban to regional areas; more individuals seeing themselves as global citizens; more movement of people but not necessarily an increase in net migration.

Social Equity and Inclusion

We will see: the notion of participation extending beyond the workplace to accommodate wider individual involvement in society; social cohesion improve but with the potential to have highly marginalised people if Open Doors implies a “one party” state; reduced inequality and increased social cohesion and trust within and between countries; greater workforce expectations to share in the benefits of higher productivity and innovation and to have their living standards raised; growth in high value-add industries requiring participation from currently under-utilised groups; significant changes in the nature of the workforce driven by the need to encourage greater participation by women and marginalised groups.

Knowledge and Skills

We will see: education, training and learning supporting broader participation in society and the economy; a drive to radically improve basic numeracy and literacy skills among currently marginalised groups; people will need the capacity to deal with increased levels of change; greater harmonisation of skills and qualifications frameworks to support workforce mobility and adaptability.

Technology, Information and Innovation

We will see: greater access to and diffusion of technology; technological change driven by the need to act on climate change; greater sharing of knowledge and information - more open access; systemic innovation at all levels in all organisations.

Global and Local Economy

We will see: markets dominated by global companies if smaller companies find there are barriers to them taking their innovations to global markets; increased trust and reduction of jurisdictional barriers stimulate “collaborative competition” that leads to more capturing of global opportunities; Australia focusing on high value-add industries (including services); GDP questioned as a measure of our success as global citizens and the development of different measures of success that reflect economic, social and environmental aspirations.

Role of Government

We will see: a lesser directive and controlling role for government but a more enhanced government role as a facilitator; growth in federal and community powers and the abolition of the states; a political consensus that fundamental change is needed (e.g. harmonisation of legislation across states and reduced role for states); government being expected to ensure that equity considerations are not ignored when sustainability trade-offs are being negotiated. In this world, the role of government is primarily that of “facilitator”.

Environment and Climate Change

We will see: a changed approach to infrastructure and the environment to permit more demand-driven requirements; a carbon constrained economy that addresses climate change and identifies and overcomes barriers to change; the need for concerted global action creates rapid shifts in community expectations that lead to new industry technology and workforce shifts.

Leadership

We will see: changes in governance arrangements tailored to suit global/national and local/community enterprises; more individuals empowered to initiate change; leadership at all levels demonstrates high levels of social, economic and environmental sustainability; decisions will be slower but more sustainable; more decisions being made locally but within a global perspective; changed management policies and practices reflecting a different set of values and ethics; standardised reporting on non-financial performance will be available to stakeholders.

Other key future drivers that were touched on in the stakeholder discussions of this scenario but which may warrant further examination by Skills Australia include:

- ***Demographics*** – how will the ageing Australian workforce be managed in this scenario; how will Australia adapt to much higher levels of immigration and international competition for talent?
- ***Technology*** – what form is new technology likely to take; how will it be disseminated and to what extent will it be taken up by individuals and employers; what ethical issues will it give rise to; how much will it cost and who will not be able to afford it; what impact will technology have on Australian society and particularly on how we learn and work?
- ***Extremists*** – what groups in society are likely to actively oppose the dominant paradigm; what forms will their opposition take; how will these groups be dealt with by government and society?

- ***Systemic shocks*** – how might major earthquakes, tsunamis, volcanic eruptions, ice shelf break-ups, nuclear accidents, or virulent pandemics affect the future of Australian society in each scenario?
- ***Inherent catalysts*** – is this scenario (and the other scenarios) likely to be a stable state or might it contain within it catalysts that will sooner or later transform it into something else?



OPEN DOORS: Key Features That Could Shape the National Workforce Development Strategy in Australia

- “Success” in this world means being a good local, corporate and global citizen. It means living by one’s values, fulfilling one’s economic, social and environmental responsibilities and respecting the rights and values of others. Hence, skill “needs” and the “effectiveness” of workforce development will be judged by the yardsticks of this prevailing paradigm.
- The widespread participatory decision making processes in this world mean that everyone is motivated to acquire higher level communication, networking and relationship management skills. Conflicts are resolved by advocacy, dialogue, listening and mutual accommodation and these competencies are also seen as fundamental life skills.
- People are active in a variety of organisations, groups and institutions (and are not just focussed on preparing themselves to perform at their paid job). They want to make a difference on a wider stage and they readily enter into real or virtual relationships with others who share their professional and wider social or environmental interests. Much learning happens in these diffuse communities of interest.
- A climate of trust fosters entrepreneurial risk taking and money is readily available to fund new ventures. At least half the workforce works in SMEs of fewer than 20 people. Relatively high turnover of these organisations is seen as normal and job security is seen as deriving from high levels of employability.
- Much research and innovation happens in knowledge clusters that involve private sector organisations, universities, specialist centres of excellence, and government agencies (the role of the latter being to foster clustering, provide seeding funding and assist in introducing new products to global markets). Learning institutions in Open Doors typically recognise that most learning happens in communities that create, disseminate, and preserve knowledge and practice (explicit and implicit knowledge) and ICT is widely used to extend the temporal, geographical and membership boundaries of knowledge communities.
- Governments are concerned to remove or at least reduce jurisdictional boundaries to innovation or productivity growth. Hence, learning, assessment and qualification standards and processes are harmonised across the Australian states and also with our global partners. There are many pathways for lifelong learning and they are relatively independent of where a person happens to be living or working.

- In Open Doors, reputations are just as important as qualifications or shareholder returns. Reputations are monitored by a variety of regulatory, professional and informal bodies or networks. Reputations include judgements about who you are, your values, and what you stand for – as well as what you have achieved in a corporate or economic or career sense. People choose learning providers whose values are aligned with their own.
- The workforce is remarkably mobile (either being ready to move geographically or able to deliver knowledge and skills anywhere through skilled use of communications technology). Harmonisation of professional standards and the global climate of inclusiveness and trust increase people’s willingness to re-locate.
- There is widespread commitment to reducing social inequalities and “skill poverty”. Governments, individuals and groups are willing to put resources and effort into making learning and development accessible to disadvantaged sectors of society.
- Corporates, individuals and special interest groups provide valuable sources of funding for education and skills building purposes that are aligned with their objectives, values and aspirations. Donors are willing and able to fund projects and programs across jurisdictional borders. Public investment is designed to be complementary to private investment and governments often enter into partnerships with enterprises, NGOs, and international bodies to deliver public goods like education and health.

Stakeholder Feedback on the Main Workforce Development Challenges in Australia under the Open Doors Scenario

Feedback from the stakeholder workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the themes listed above in describing the main workforce development challenges that are likely to be faced by Australia in 2025 within the global context of the Open Doors scenario.

Labour Markets

We will need: to develop systems to support much greater workforce mobility; to attract and retain our own and global talent in a highly competitive world without boundaries (e.g. by increasing the flexibility of workplaces to accommodate workers with a range of different needs; establishing globally competitive remuneration and lifestyle packages); to increase participation using carrots rather than sticks; to manage the increased empowerment and freedom of employees who are mobile across boundaries (e.g. may need to pay them more); to manage the possible siphoning off of creative talent and effort into charitable endeavours and other non-traditional areas of engagement; to manage the big HR challenges that will flow from greater labour flows both into and out of Australia; to manage the potential disincentives for private investment in skills in a world where it is easy to hire in new people.

Migration

We will need: greater investment in training for new arrivals; government to develop a coherent and consistent migration policy that is consistent with the national workforce development strategy.

Social Inclusion

We will need: to improve the aspirations for socially marginalised groups; to engage socially marginalised groups in workforce development systems; to facilitate the increased workforce participation of under-utilised groups (e.g. women, indigenous, disadvantaged, the aged); to manage the risk of marginalised groups becoming more highly detached from the dynamic Open Doors labour markets; to build more culturally inclusive workplaces and institutions; universal child care, health care and mental health care.

Knowledge and Skills Mix

We will need: to develop the skills that promote innovation and the broader skills that enable employees to adapt to change; to develop the skills that facilitate international engagement (e.g. second language; cultural awareness); to embed foundation creative skills in all areas of the workforce (e.g. entrepreneurship and innovation; negotiation; communication; problem solving); more general and higher level, non-vocational education reflecting common values (especially among marginalised people); a greater focus on skills deepening; to develop continuing education and a broadening of skills and knowledge required to engage in the workforce.

Transferability of Skills

We will need: to maintain nationally coherent systems of skills recognition, certification and articulation; to ensure that skills developed in Australia are internationally recognised; to integrate Australia's recognition systems with global standards; to reduce barriers to enhanced labour force mobility and participation.

Education and Training System

We will need: to enhance the flexibility and responsiveness of the training system to technological, market and social change; greater integration of learning on and off the job - learning will happen everywhere; to facilitate transitions between knowledge/skills acquisition and work; transformation of the way the workforce is developed as the rise of SMEs makes it difficult to tailor training to industry needs; to more actively access global capability to improve the local education and training system; community and industry to develop a new education model that ensures completion (especially by marginalised people) and continuing opportunity for learning throughout life; to change the school system so that it offers lifelong learning opportunities.

Roles of Government, Employers and Learning Providers

We will need: greater investment in sustainable infrastructure (road, rail, urban environment, skills, technology and education) – and resolution of questions around who will build it and how it should be built; to account for the fact that work is only a part of a person's life (i.e. measure aspects of system performance other than productivity and GDP growth); new funding models that define a new mix of requirements and

responsibilities for individuals, employers and government; industry (especially SMEs) to be far more engaged with providers; to manage the inhibiting effects of very thin markets in Australia; governments to offer incentives for employers to take greater collective responsibility for training; to locate specialist (firm-specific) skills training in enterprises and general skills training in providers and communities; all parties to be aware of the need to work within national and global governance agreements; government to be a leader, catalyst and facilitator rather than being directive; governments investing at the “equity end” to facilitate/encourage participation; governments to articulate community values simply and clearly in order to encourage increased participation; governments to support, encourage and participate in a highly visible, cross sectoral and nationally coherent program to develop leadership, culture and management practices that enable high performance workplaces.

Workforce Data and Planning

We will need: to improve the quality of data available for decision-making on workforce development (e.g. promote consensus on what workforce development is and whether we are making progress); to capture a wide range of aptitudes and creative skills we don't currently measure; to engage all stakeholders in sharing information and in long term workforce development planning.



SCENARIO: Flags

The Fundamental Global Dynamics

- Flags is a “follow me” world, where people are dogmatic about their codes and causes.
- Although still interconnected with the rest of the world, people and communities feel a stronger need to express their own identity in terms of the group/club/nation/religion to which they belong.
- Flags is fragmented and polarised – both internationally and domestically. People distrust elites; they distrust others with whom they cannot closely identify. They want to show their differences from others by stating it clearly and saying ‘no’ to anything counter to their norms, views or beliefs.
- Opposed groups in society try to capture the state for their own objectives, by one route or another: votes, violence or money. Or governments wave the national flag, encouraging unity among the diverse groups and communities by reminding them ‘we all belong to the same country.’ Careful country-risk management is a priority.
- Security is pursued through isolation and gated communities. Global mobility of people and money is seriously hampered and trade is curtailed.
- Businesses with strong national identities fare well and are granted state protection through subsidies and the tax system.
- High military spending promotes innovation – for example, in fuel efficiency.
- In a nutshell, this is a world of “Nations and Causes”.

The Global Scenario

Flags is a world of many different communities, each claiming the sole allegiance of its members. Reactions to globalisation vary enormously and there is a search for new economic models including different varieties of hybrid capitalism that combine Anglo-Saxon approaches with continental European or Asian practices that give an advantage to insiders and local players. There is no prevailing economic ideology to dictate “best policy”.

Economic nationalism leads to a world of complex and diverse national regulation and there is debate on whether and to what extent economic “self-reliance” is important in a number of “strategic” sectors. In the regulatory domain, these pressures translate into a world of demanding requirements and rules established by national authorities. This drives up compliance costs and makes it hard for companies to become truly

global organisations operating throughout using one set of standards. They often have to compete against state-supported national champions and find it difficult to deliver global synergies and economies of scale.

Governments find themselves constantly fighting with distrust and needing to reassure the public about their capacity to provide security. Social legitimacy takes priority over market efficiency. There are strong social pressures to increase welfare spending but governments also face political pressure to moderate taxes.

The trend towards economic incentive based regulations continues but old style “command and control” tactics are still widely popular with governments. Standards that are relatively inflexible and widely divergent across jurisdictions translate into high compliance costs and significant non-tariff barriers to trade.

Media scrutiny focuses on political compromises, scandals, and connections that distort markets rather than on standards of social responsibility as is the case in Open Doors. NGOs aggressively attack companies for perceived lack of transparency in their dealings with national governments and local elites.

The state is central to domestic politics. States assert dominant identities that are often, but not always, nationalistic and sometimes narrowly ethnic. Within society many different ideas and political groupings contend for government support. This leads to populist politics and often degenerates into situations where the ruling elite exercises patronage, handing out privileges to clients and supporters. In reaction, populist protest often turns violent with strikes and demonstrations as disaffected groups assert their agendas. Flags is a world in which national identities are asserted, often as a substitute to an effective “social contract” internally. Blaming foreigners is politically appealing.

The future world of “Flags” reinforces conventional state-to-state relations as states pragmatically pursue a mix of multilateral deals, bilateral agreements and regional pacts. The world is not global but rather inter-national. Sovereignty is opaque with events within a state’s borders being held by governments to be entirely internal matters. The EU is an exception.

Weak international institutions, including an eviscerated WTO, provide little discipline to control the tendency of nationalistic governments to lean towards “beggar thy neighbour” policies. Across many realms where reciprocal action among nations is the key to success (as in the management of climate change) worldwide policy efforts flounder.

With trust fragmented, as it is in Flags, investors are naturally sceptical about global markets and need to be enticed by high premiums to overcome their preference for domestic investment. Differing national rules and standards, as well as protectionist demands, restrict the global mobility of investment and capital and diminish trade and migrant flows.

Reacting to the failure of markets to meet social needs, states are proactive in regulating the market and in providing public goods and services; and setting standards in a wide range of areas of market activity. Governments run higher deficits and have higher borrowings as their expenditure rises to meet security and social demands. As a result, domestic interest rates tend to be higher and the global sovereign debt market remains exposed to frequent crises.

Lower competitive pressures leave greater room for inflation, which is clearly higher and less homogeneous across countries than in the other scenarios.

Globalisation opens up deep fault lines in societies and pressures governments to act against it to preserve a very fragile social cohesion. In practice, consumers still shop for cheap products and globalisation proceeds, but in a far more acrimonious context and more unevenly, creating an inherently unstable international system.

Trade barriers, reduced mobility of labour, inhibited sharing of knowledge and innovation all contribute to low productivity growth in this scenario. Global GDP growth averages only 2.6% pa. However, weaker international connectedness means that local economic crises generally have less of a global impact as countries with little strategic importance are marginalised.

Emerging fears that access to oil and gas resources will become restricted, along with tough environmental demands from citizens, lead governments to assert themselves in shaping the energy system. They embrace market forces when it is opportune but allow monopolies to coexist with liberalised markets. Wind, hydro and nuclear power, as well as new fuels, all have their staunch supporters and resolute opponents. Unlike the other scenarios, geothermal and biomass grow relatively strongly as indigenous energy supplies. Oil demand growth slows and oil's market share declines from 39% to 32% by 2025. France and China spearhead a global revitalisation of the nuclear industry around a new generation of power plants, with the Green movement divided as to whether the problem of climate change justifies a reassessment of their traditional opposition to nuclear power.

Carbon taxes are not implemented in a harmonised way across regions, while market based instruments such as internationally traded carbon permits are not trusted, being considered complicated and vulnerable to deception. When governments need to choose, they give priority to energy security and employment over global environmental concerns. There is also a lack of political will to break up incumbent power strongholds.

Below trend world economic growth and the strong focus on increasing energy efficiencies across all sectors results in overall energy demand growth of around 1.6% pa. The focus on renewables to address security of supply fears results in annual growth rates above 10%, particularly beyond 2015. Their overall market share becomes around 8% by 2025. Wind is the fastest growing renewable, followed closely by solar.

Australia in 2025 under Flags

Stakeholders from education, government and industry who attended workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the above themes in describing the main changes that will define Australia in 2025 within the global context of the Flags scenario.

Migration

We will see: the arrival of more climate change refugees; declining access to international talent; systemic cultural change as reduced skilled immigration affects the diversity of our workforce.

Social Equity and Inclusion

We will see: increasing gaps and tensions between diverse groups as a result of corruption, nepotism, and a lack of transparency; the emergence of social and industrial ghettos; increasing levels of dissent from disadvantaged groups; foreign and domestic conflict over food and resources; an increase in xenophobia; some marginalised groups become active in promoting self-help; reduced equity of opportunity for women and marginalised groups.

Knowledge and Skills

We will see: indoctrination rather than education; a decline in international education and access to skills.

Technology, Information and Innovation

We will see: inefficiency and stagnation resulting from a lack of innovation and lower productivity.

Global and Local Economy

We will see: industry structural change (e.g. industry diversification) as a result of protectionism and a desire for self-reliance; e.g. resurgence of manufacturing; development of a self-sufficiency mentality in relation to food, energy and defence; protected industries foster more industrial dinosaurs; a rise in criminal/illicit activity and the emergence of grey/black economies; an over-reached economy pushes costs onto future generations; increased tariffs, reduced global and inter-jurisdictional trade and less wealth; growth in family businesses which provide a safe alternative to a world that is seen as increasingly dangerous; more social and industrial unrest; multiple job holding and increasing casualisation of the workforce; “buy Australia” campaigns.

Role of Government

We will see: government torn between the political need to protect powerful elites and the social need to manage the disaffection of those who “do not count”; the rise of nationalism and the politics of blame and exclusion; increased focus and expenditure on defence and security (including an increased regional role); foreign policy focused on bilateral or regional issues rather than global issues; government decisions driven by sectoral interest leading to winners that align themselves with the “national interest”; low transparency and inefficient regulation; tensions within the Australian federation; more demands on government to compensate for lower levels of private wealth by providing increased funding for the provision of services; selective industry policies designed to grow exports to fund increased debt levels. In this world, the role of government should primarily be that of “safety net” but is more likely to be that of “the elite’s friend”.

Environment and Climate Change

We will see: the responses to this continuing issue being fragmented and localised; a lack of global solutions; food security issues in parts of the world; more climate change refugees; less pressure on resources as mass consumption declines.

Leadership

We will see: the rise of a privileged elite with a strong social consensus among those who “count”; leaders demonstrating more conservative values and a greater local focus (because the world is seen as dangerous).

Other key future drivers that were touched on in the stakeholder discussions of this scenario but which may warrant further examination by Skills Australia include:

- ***Demographics*** – how will the ageing Australian workforce be managed in this scenario; will they be valued for their wisdom and historical perspective or will they be marginalised in a world where many young people may feel that they have been denied the prosperity enjoyed by older generations?
- ***Technology*** – what form is new technology likely to take; how will it be disseminated and to what extent will it be taken up by individuals and employers; what ethical issues will it give rise to; how much will it cost and who will not be able to afford it; what impact will technology have on Australian society and particularly on how we learn and work?
- ***Extremists*** – what groups in society are likely to actively oppose the dominant paradigm; what forms will their opposition take; how will these groups be dealt with by government and society?
- ***Systemic shocks*** – how might major earthquakes, tsunamis, volcanic eruptions, ice shelf break-ups, nuclear accidents, or virulent pandemics affect the future of Australian society in each scenario?
- ***Inherent catalysts*** – is this scenario (and the other scenarios) likely to be a stable state or might it contain within it catalysts that will sooner or later transform it into something else?



FLAGS: Key Features That Could Shape the National Workforce Development Strategy in Australia

- “Success” in this world means being judged to be a “good” member of the important “tribes” to which you belong. This means that many definitions of “success” proliferate and these are often in conflict with each other. Loyalty and adherence to corporate values are important (if often implicit) dimensions of assessments of a person’s “performance”. Hence, skill “needs” and the “effectiveness” of workforce development will be judged by the yardsticks of this prevailing paradigm.
- In the absence of strong multinational agencies of global governance, bilateral and regional alliances and agreements are entered into by governments and national bodies in areas of mutual national interest. However, there is little enthusiasm for pursuing proactive or interventionist international roles that have broader social or environmental goals; e.g. addressing climate change; international public health crises; drug trafficking; terrorism; poverty; etc.
- Education and training providers and businesses with good relationships with state and federal governments tend to be relative winners in bids for government funding and support. These “winner” organisations typically are strong supporters of government policies and objectives. Signs of patronage or corruption are challenged by NGOs and the media.
- ICT-based or cyber-infrastructure is used in leading higher educational institutions but access to it is nowhere near as inclusive as it is in Open Doors. Indeed, many learning institutions regard access to their knowledge communities as an important part of their proprietary service offering and only approved students, researchers or business partners are invited to be part of knowledge creation and enhancement activities.
- Governments actively regulate markets that deliver public goods and services such as education and training. Education and training standards and qualification frameworks are comprehensive and vary considerably across nations, regions and states as leaders strive to protect or create advantage for their local constituencies. Efficiency is often sacrificed in the interests of creating a measure of security and social cohesion in a fundamentally divided society that is organised around many different flags (values, causes, and aspirations). Standards and rules tend to be inflexible even though they are at times vigorously challenged by groups in society that see them as biased or unfair or inefficient.
- Governments run higher deficits and carry higher levels of debt as they try to satisfy the diverse and powerful demands on their “loyalty”.

- Trade barriers, reduced mobility of labour, inhibited sharing of knowledge and innovation all contribute to low productivity growth in this scenario. Investors are sceptical about “foreign” markets and require high premiums to overcome their natural preference for domestic or local investment. This limits the formation of truly multinational organisations and makes life difficult for them.
- Governments in this scenario give high priority to energy self-sufficiency and consequently actively promote investment in a wide range of alternative energy sources, including wind, solar, geothermal and biomass. These energy initiatives foster new industries with new skill requirements.
- Lower rates of economic growth in this scenario, together with a prevailing antipathy towards “outsiders”, lead to reductions in the level of immigration. Consequently, in the face of continuing below-replacement fertility levels, the rate of growth of the workforce slows appreciably.
- A loose and inefficient international financial architecture means that there are considerable misalignments of exchange rates, deep trade imbalances, and major fiscal imbalances. In this business climate crises are a common occurrence and the international governance machinery is not in place to deal with them effectively and fairly.

Stakeholder Feedback on the Main Workforce Development Challenges in Australia under the Flags Scenario

Feedback from the stakeholder workshops held in Sydney and Melbourne on 18th and 19th June 2009 reinforced and elaborated on many of the themes listed above in describing the main workforce development challenges that are likely to be faced by Australia in 2025 within the global context of the Flags scenario.

Labour Markets

We will need: to create opportunities (in a low growth world) for a cohort of chronically unemployed and underemployed as well as manage the significant impacts of an ageing workforce where the 18-24 year age group declines as a percentage of the Australian workforce; to manage a more localised, less mobile and less dynamic workforce; to deal with increased patronage and corruption in hiring and promotion; to adapt to less turnover and more loyalty (a retreat to “womb to tomb” employment); to build an industrial relations framework to support employers and provide job security for employees.

Migration

We will need: to manage lower workforce mobility and the consequent reduction in opportunities and flexibility for youth.

Social Inclusion

We will need: to offer incentives to encourage people to participate and innovate; to find ways to attract youth into the workforce; to develop good social structures to help the disenfranchised manage the challenges that arise from increasing inequality in skills and vocational opportunities.

Knowledge and Skills Mix

We will need: to manage an expected decline in literacy and numeracy standards as part of a more general, community-wide decline in knowledge and skills; less emphasis on growth, change and innovation; as we bunker down, we will need language to match bilateral trade arrangements (e.g. Chinese or Japanese); re-skilling as we go back to manufacturing and enhanced emphasis on our areas of competitive advantage (e.g. natural resources); to make sure that we have the skills needed by the education workforce; a broader mix of industry skills, including building green skills into training and jobs; to adapt to less consistency in education and training requirements and outcomes across the country; to develop skills in security, defence and related industries.

Transferability of Skills

We will need: to adapt to the maintenance of separate state registration systems for many occupations.

Education and Training System

We will need: to manage the lower level of entrepreneurship and the lower support for learning and innovation by industry; to adapt to increased training being provided by enterprises and social groups (with costs borne by the state); to adapt to lower funding/investment in innovation and education; to manage and engage with universities that return to a more elite model (where the Bradley targets are not met); to fight to maintain the national VET system as states seek more influence; more market failure, therefore more government investment; e.g. more government funded apprenticeships; more online, just-in-time training.

Roles of Government, Employers and Learning Providers

We will need: government to become more skilled in managing priorities with fewer resources; to prevent further economic, social and environmental decline; to maintain a critical capacity of the economic and social system to minimise and mitigate external shocks; government to “incentivise the birth rate” and manage persistently high levels of unemployment; implement “learn for the dole” programs; government to manage stakeholders’ demands for protection and maintenance of the status quo rather than for assistance in promoting innovation, renewal and growth; government to build a safety net for disadvantaged groups.

Workforce Data and Planning

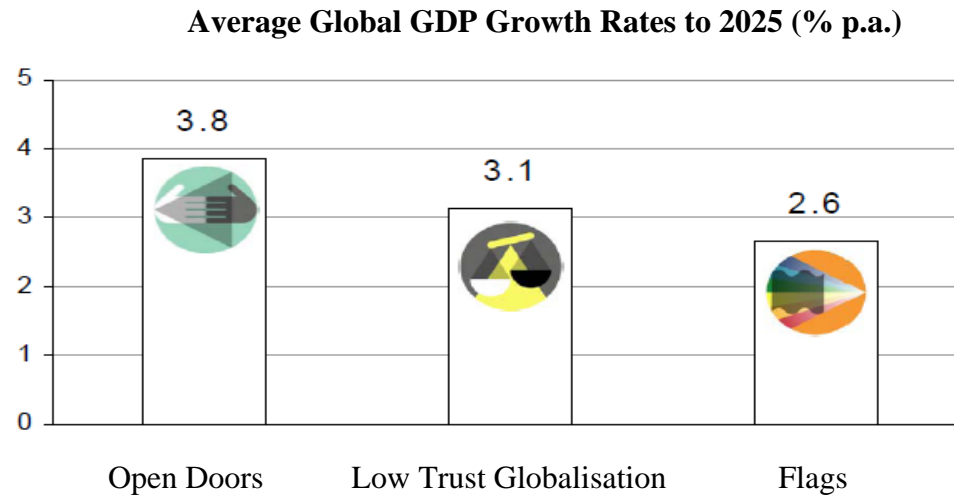
We will need: government to balance its focus on safety net policies with a continuing focus on workforce development; to ensure that workforce development is closely aligned with both industry needs and the broader national interest, especially security and defence; to consider that there will be less expressed need for a consistent national workforce development strategy in this scenario with states and regions seeking to retain their own approaches; planning to identify clear priority targets for training as we will not be able to afford to train in the wrong areas.

Main Points of Difference between the Three Global Scenarios

Feature	Low Trust Globalisation	Open Doors	Flags
<i>“Success”</i>	Winning, gaining power and material wealth	Responsible local and global citizen, with compassionate, inclusive values	Good neighbour, good employee, good group member – i.e. with “our” values
<i>The economy</i>	Intermediate GDP growth. Higher inflation and real interest rates.	Higher productivity and GDP growth.	Curtailed trade and lower GDP growth. Higher inflation, interest rates, govt. debt.
<i>Energy</i>	Development of alternative energy sources is encouraged for national security reasons.	Natural gas use grows. Price signals used to promote use of renewables.	Energy security concerns promote increased energy efficiency and use of renewables.
<i>Industry and markets</i>	Heavy compliance costs. Large, vertically integrated firms dominate. R&D is important but low trust limits sharing. Home bias in investment.	Shareholders and stakeholders cooperate. Comprehensive corporate reporting to markets and stakeholders. Companies (especially SMEs) innovate, partner, share information. Harmonisation of workplace legislation.	Globalisation falters. Reduced competitive pressures. States act to provide public goods as markets fail to do so. Rate of workforce growth slows appreciably. Inefficient labour market.
<i>Occupations and jobs</i>	Defence, security, monitoring and compliance (e.g. law, accounting), wealth management are growth areas.	Growth in most knowledge-economy jobs. Workers are very mobile. Team and networking skills are in greater demand.	Localised over and under supply of skills is common. Lower aggregate demand for most skills but public employment grows.
<i>Technology</i>	Venture capitalists fund disruptive technologies that might challenge large players.	Built-in technology ensures high levels of security and trust. Standardisation facilitates use. Entrepreneurial risk-taking.	High military spending promotes innovation. Private investors demand high risk premiums. Technology, IP is hoarded.
<i>Workplace and management</i>	Planning is short-term, reactive. Work is stressful, demanding and competitive. IR is largely decentralised.	Consensus and mutual accountability are valued. Work competes with other loyalties in people’s lives. People seek fulfilment as well as employability. Participative management.	Nepotism and patronage are commonplace despite scrutiny by media and community groups. Many government rules and regulations.
<i>Migration</i>	Restricted and tightly controlled. Limited migration to fill nationally important skill gaps.	Open borders and acceptance of differences foster migration.	Seriously restricted within and between nations.
<i>Community</i>	Inequalities increase between and within countries. Community and NGO groups are active but frequently unable to influence events.	People actively participate in multiple groups. More equitable society. Social groups and media have powerful voices.	Strong identification with local community. Distrust of outsiders.
<i>Government</i>	National security is primary focus. Overlapping jurisdictions; conflicting laws; intrusive checks and controls. Competition between governments. International politics is driven by self-interest. Trade sanctions are prevalent.	Politics is inclusive but more complex. Security and trust are jointly created by government, companies, investors, community. Governments cooperate for shared and longer term benefits.	Opposed groups vie for influence leading to populist politics and patronage. Nations impose self-serving rules, regulations and trade barriers limiting transnational activities. Fractured global governance.
<i>The environment</i>	Pollution and climate change issues are dealt with as crises emerge.	Global challenges dealt with cooperatively and proactively. Precautionary principle.	Strong community calls for action. Govts. reluctant to challenge local power bases.
<i>Learning and skills development</i>	Supply of education is increasingly left to private sector with labour markets determining curriculum. People seek to learn skills with high market value. Short term and niche focus.	Innovations quickly disseminated. Skill development well funded by all stakeholders. Harmonisation of qualifications and assessment processes nationally and globally.	Government regulation and funding biased towards loyal, local employers, providers and electorates.

The Different Economic Outcomes in the Three Global Scenarios

Global GDP in 2025 is forecast to be some 40% higher in Open Doors than in the fractured world of Flags as a result of the average differences (shown below) in the rates of economic growth in each scenario during the period to 2025:



The emerging economies are the real winners in Open Doors with China's growth rate averaging 8% pa expanding the economy six-fold between 2004 and 2025. In India, per capita income grows from 1/20th to 1/10th of the corresponding US figure.

Lower risk premiums in Open Doors mean that average bond yields are below 2% in real terms.

In Flags, China is forced onto a structurally different growth path as a result of poor export demand. Its growth rates average 6-7% pa for the period to 2025. India and the other BRIC countries also suffer from a lack of foreign investment and must offer high risk premiums to attract the capital they need in order to grow.

Trends and Events Likely to Shape the National Workforce Development Strategy Regardless of Which Global Scenario Unfolds

- The ageing of the population and the retirement of important skill sets from the workforce; e.g. trainers. New learning demands may emerge; e.g. older people who wish to keep working but in a totally different field and who wish to gain a workable skill set without investing the time and effort needed to gain full qualification; or people who wish to develop professional recognition as a mentor or trainer.
- Growth in the proportion of older workers may also trigger changes in work organisation, management styles and methods of assessing job performance.
- Government initiatives to tackle climate change, develop new forms of energy, and increase energy efficiency will all require new jobs to be performed and these may require new knowledge and skills.
- As developing countries continue to move up the value chain in global product/service markets, there will be pressure on Australia to keep increasing knowledge and skill levels so that it too can migrate to higher value-adding, and typically knowledge-intensive, industries. Educated professionals are likely to demand (and create) new learning pathways to keep their knowledge and skills at the leading edge.
- The global financial crisis. As suggested in the diagram on page 4, how nations respond to this crisis will increase the probability of the different scenarios unfolding.
- The impact of new technology on new generations of learners; e.g. Generation Y are much more likely to use blogs and social networking sites to gain the knowledge and information they need. They are likely to increasingly resist traditional teaching, learning and assessment methodologies.
- Specific government policy initiatives; e.g. subsidies for home insulation or solar heating; the introduction of digital TV; support for entrepreneurial ventures or SMEs; the construction of a national broadband network; or other investment in new infrastructure in areas deemed to be of high national priority (or in marginal electorates of high political priority).
- Significant change of one kind or another is likely to challenge Australia and most other countries between now and 2025. Hence, there is likely to be a need for more change agents, trainers, counsellors, communicators, team builders, leaders and others with the skills needed to design, implement and assess the progress of institutional, organisational and social change.

The Future Scenarios and Current Workforce Development Planning by Australian States in 2008

Most states' workforce development aspirations and plans appear to be based on assumptions about the future that attempt to incorporate the best features of each of the three future scenarios.

For example, some of the goals they have set in 2008 include:

Elements associated with Low Trust Globalisation - enhance international economic competitiveness by, for example:

- linking skills development more closely to industry needs
- facilitating transitions between employment and learning pathways
- enhancing provisions for recognition of prior learning
- encouraging lifelong investment in training by employers and students

Elements associated with Open Doors – promote higher levels of social inclusion and social welfare by, for example:

- higher workforce participation from disadvantaged and geographically remote group
- better population and labour force information to enable more targeted investment in education and training by government, employers and the community
- strengthened partnerships involving government, employers and training providers
- reducing the administrative burden of training to industry
- developing the skills needed by emerging 21st century businesses

Elements associated with Flags – ensuring continuing employment growth and adequate supply of highly skilled workers by, for example:

- attracting students and workers from other states
- gaining a bigger share of skilled immigration into Australia
- collaborating with (local) industry to develop competency-based skill sets as an alternative to full (nationally recognised) qualifications
- guaranteeing state residents government subsidised places in education and training institutions

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