Signals of the Future: An Issues Paper to inform the NPSP Social Development Framework

presented to

City of Norwood Payneham & St Peters

by

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Background - the City of Norwood Payneham & St Peters Social Development Framework

The City of Norwood Payneham & St Peters (NPSP) is formulating a *Social Development Framework* as a major planning priority. With a 10 year outlook, the Framework will provide important content for the next City of Norwood Payneham & St Peters Strategic Plan (which is in the early stages of development) and for a range of other NPSP planning processes. The Framework is being prepared with the assistance of the Australian Institute for Social Research at the University of Adelaide.

The key elements of the Social Development Framework project are:

- (1) To conduct a comprehensive contextual analysis of **local** dynamics and policy influences impacting on the City of Norwood Payneham & St Peters;
- (2) To identify the key issues and forces in the **broader** social and political environment that provide opportunities and challenges for the future social development of the City;
- (3) To develop a set of principles and policy directions which will set the social and community services agenda **going forward**, and to indicate how the Council could integrate these principles and policy directions with organisational planning and management processes. These processes include statutory & strategic planning, environmental planning and corporate planning (financial and asset management).

This Discussion Paper addresses the **second** element of the *Social Development Framework* project.

Why a Framework?

Policy frameworks are useful for establishing an overall perspective on complex policy issues and help determine the course of action that is most appropriate. They provide a common basis for policy makers to identify shared aims and priorities. Frameworks are also useful for getting new ideas into the public domain for discussion. Consequently, the process by which a framework is developed is crucial to its effectiveness.

A Framework provides a mechanism for cross-sector strategic development. In recent years, the importance of bridging the divisions between different policy and program areas has become more apparent and is now a key direction of government planning and policy development. This trend is often referred to as a 'joined-up' or a 'whole-of-government' approach. Without this integration, resources can be duplicated across different areas and substantial gaps can also occur. It is important for different policy areas – social, economic, environmental and so on – to work together, yet this is usually a challenge.

As a first step, it is important to develop an over-arching framework that provides broad directions and reflects a set of shared values and principles to guide specific action by different policy areas. This is the basic purpose of the NPSP *Social Development Framework*.

1 Capturing the signals of the future

The future doesn't arrive unannounced; it sends signals along the way. 1

1.1 Introduction

There are a number of organisations established to monitor current social trends in a systematic way and to use this information as markers of future trends. Their information has been synthesised for this Issues Paper and appears throughout, either in the text boxes or as part of the discussion. In common, these futurists make a clear statement about not simply reacting to change as it happens, but being proactive in setting in place actions that anticipate that change. The NPSP *Social Development Framework* needs to be a tool that enables a proactive response to social change, enabling Council to take the signals being sent about what the future is likely to bring and developing a coherent response to them.

Futures thinking does not attempt to eliminate all uncertainty. Rather, its purpose is to enable you to make better decisions in the face of that uncertainty.

Applied Futures International (2001) www.futureswatch.org

Consequently, this Future Issues Paper is the outcome of an 'environmental scanning' process. This is a key forecasting tool that helps to identify trends, events, emerging issues and the unexpected in order to discern the signals sent by the future. It provides an 'antenna for tuning into future possibilities'.² The Paper does not attempt to cover all possible trends, but is designed to highlight major trends and to stimulate thinking at a broader level prior to the development of specific policy and action within individual NPSP Departments. The trends presented here are focused on social change but it is clear that a range of factors need to be accounted for because of their interdependence – particular examples of this being the combined impact of technological and social change, or of economic and social change.

What the future holds for us depends on what we hold for the future. Richard Neville, Footprints of the Future, 2002

1.2 The pace of change

A key challenge for people living in this century is not just the amount of change shaping daily lives but the speed with which it is occurring. The pace of change, particularly in Western societies, has been significant and is **accelerating**. John Peterson, the founder of the Arlington Institute (a Washington think tank that specialises in studying the future) believes that the scale and speed of change we are now experiencing is so unequalled, that it is intrinsically out of control and demands that we actively anticipate our future.

¹ Creating Preferred Futures - www.cpfonline.org

² Creating Preferred Futures, www.cpfonline.org

.. humankind is looking at a set of fundamentals that are unlike anything that we have seen before. There are things like the ... population explosion, global environmental degradation, extraordinary scientific discoveries, and powerful technological inventions that present us with the possibility of literally changing 'nature' as we have known it It is no longer reasonable ... to just sit back and let the future happen....³

Consider the following -

- ♦ The array of technological knowledge available today represents about 1% of the knowledge that will be available in 50 years time. 4
- ♦ 50 years ago we could identify 2 galaxies. Since then we have identified 2 billion galaxies and 24 solar systems. 6
- ♦ Siemens is among the top 10 electro-engineering companies in the world. 75% of its revenue come from products that are less than 5 years old. ⁷
- ♦ For some Japanese companies, the amount of time allowed from the birth of a new product to the introduction of its replacements is 4 months. 8

Implication for the City of Norwood Payneham and St Peters

There is a need for a process to keep abreast of broader changes and to reflect this knowledge in strategic planning. There is an accompanying need for flexibility and responsiveness to change.

2 Broader social change

There are a range of factors that shape choice of lifestyle and most reflect changes in the way people live and their expectations of how they want to live. This section of the Future Issues Paper focuses on five aspects of change –

changes in employment and people's working lives
environmental change
demographic change, particularly population ageing
technological change
combined technological and social change.
5

³ Peterson, J 'Change Your World', CEO Agenda Series, Arlington Institute, Sept 2000

⁴ Richard Neville (2002) Footprints of the Future, Richmond Ventures Pty Ltd., Sydney

⁵ Applied Futures International (2001) <u>www.futureswatch.org</u>

⁶ Richard Neville (2002) Footprints of the Future, Richmond Ventures Pty Ltd., Sydney

⁷ Richard Neville (2002) *Footprints of the Future*, Richmond Ventures Pty Ltd., Sydney

⁸ Richard Neville (2002) *Footprints of the Future*, Richmond Ventures Pty Ltd., Sydney

2.1 Changes in employment and working lives

Two of the most significant changes in the **labour market** in the past few decades have been the increased involvement of women in the paid workforce and a restructuring away from full time and permanent employment to increased casual and part time employment. These changes affect housing consumption, with **casualisation** creating difficulties for first home buyers and for existing home buyers who lose full time jobs and can find only part time or casual work. Casualisation also means that engagement with the labour market is very different for today's younger people than it was for their parents, perhaps accounting for the tendency of Generation X and Y to move in and out of the workforce and to change jobs more frequently than was the usual pattern for the Baby Boomer and previous generations.

Under-employment and **over-employment** are also features of the changing labour market. While part time and casual work suit some workers, it cannot be assumed that this applies universally. Similarly, the number of people working more hours than is their preference is increasing. Average weekly hours for full-time employees in Australia lengthened by 4.3 hours for men and 3 hours for women between 1982 and 2000⁹. This trend is unique to Australia and a small number of other countries, in opposition to prevalent world patterns.

The experience of for most Baby Boomers has been one of stable employment and income, enabling a high rate of home ownership that, together with increasing wage levels over time, has provided them with an increased wealth base. As younger generations are unlikely to share in this experience, (because of contraction in housing affordability and less access to stable employment) there is a **generation-based divide** between wealth and income, and lifestyles, the social and economic consequences of which are not yet known.¹⁰

The involvement of **women in paid employment** assists couples to meet financial, career and lifestyle goals, but over time has seen a reduction in the availability of full-time carers of older people (and others needing ongoing care and support). This is a trend which will continue and is paralleled by a shift in policy for the deinstitutionalised care of older people, those with a disability and people with mental illness. The impact of both trends will see increasing pressure on the provision of community-based care.

As more women have entered the workforce and expectations about gender-specific roles has become less fixed, the demand for 'family-friendly' workplaces that enable parenting and working responsibilities to be combined more smoothly has grown. At a broader level, there is increasing demand across different age groups in the community for flexibility in the workplace that enables a better 'work-life balance'. Working arrangements that promote this balance are increasingly recognised as an indicator of best practice in employment.

¹⁰ National Centre for Social and Economic Modelling 2003, *Generation Xcluded*, Canberra http://www.amp.com.au/

⁹ Charlesworth, S., Campbell, I, Probert, B., Allan, J & Morgan, L (2002) *Balancing work and family responsibilities: policy implementation options – a report for the Victorian Department of Premier and Cabinet and Department of Innovation, Industry and Regional Development*, Centre for Applied Social Research, RMIT University, Melbourne

South Australia's ageing workforce is one of the major challenges facing policymakers and employers over the next decade. Growth in Australia's working population is projected to decline dramatically from about 170,000 people per annum, to just 12,500 per annum during the 2020s. Australia will rely on the 45-plus age group for 85 per cent of growth in workforce numbers from 2002-2012, according to a recent Australian National Training Authority study. The study concluded that "the retention and skilling of the 3.5 million Australian workers currently aged over 45 and the further expansion of the mature-age workforce (will be) more important than ever before".

South Australia already has the oldest population and workforce in Australia, so the prospect of acute labour shortages looms large. After steadily increasing, the working age population (15 – 64 year olds) in South Australia is projected to decline at the beginning of the next decade. Around one third of South Australia's current workforce will be approaching the age of retirement over the next decade¹¹.

Skill shortages arising from the ageing of the workforce could limit the capacity of organisations to deliver particular services and produce goods. As a major provider of services local government faces its own workforce development and planning challenges in the face of an ageing workforce.

The need to address demographically driven skill shortages has been recognised as a high priority by the Australian and South Australian governments. The SA Government has released a number of policies that focus attention on the strategic challenges ahead, including the *Better Skills*, *Better Work*, *Better State* statement and skills action plan and the *Skills for South Australia* budget statement.

Implication for the City of Norwood Payneham and St Peters

There are a range of implications in these changes in working lives that are significant for the City of NPSP both as an employer (creating the opportunity to lead by example in employment practices) and as a provider of community based services (placing increasing pressure on resources for service provision, and on negotiation with families regarding shared care responsibilities).

Regional workforce development strategies will be required to engage employers in a collaborative process of better positioning the State and the region to respond to the challenges of an ageing workforce.

The City of NPSP will need to identify its own workforce development imperatives and design a workforce development strategy that complements its overall strategic plan and service delivery objectives.

2.2 Environmental change

There is an increasing awareness of the need to protect the **environment** and to conserve natural resources as pressures on that environment grow. The effects of global warming are now being understood more widely, as is the impact of reduced

¹¹ TASC (2005) *Population Ageing and Workforce Supply*, South Australian Government.

water availability. The impact of this on housing design and choice is already being felt and is likely to increase over time. 12

Related to this trend and also shaped by dwindling supplies of carbon based fuels, is the growing demand for 'alternative' energy supplies. There are signs that global oil production may be nearing its peak, signalling the end of a long era of carbon fuel dependency. There is a growth in wind power, and in solar and biomass¹³, while nuclear power is receiving renewed consideration. Alternative energy is growing at a rate of 30% each year, backed with widespread community support and strong corporate investment. As oil prices rise and the cost of alternatives keeps falling with further technical advances, it seems likely that carbon fuels will no longer be the main energy source. ¹⁴

Wind and tidal power will grow considerably in the next five years.... Worldwide, the offshore wind market will grow to \$3 billion a year by 2008.

World Future Society, Top 10 Forecasts from Outlook 2006, www.wfs.org/forecasts.htm

Look out for a job boom in solar industries, with some 42,000 new U.S. jobs by 2015. ... Solar power could displace 6 trillion cubic feet of natural gas by 2025, saving U.S consumers approximately \$64 billion.

World Future Society, Top 10 Forecasts from Outlook 2006, www.wfs.org/forecasts.htm

Analysis of trends in Australia by the CSIRO¹⁵ finds that current water use is projected to double by 2050 and the location of new cities will be critical by 2050 when large urban concentrations look like outgrowing regional water availability. With the correct mix of technology and policy, the CSIRO expects that Australia can maintain water quality, particularly if the integrity of city water catchments and their ecosystem services are improved.

¹² Refer also to CSIRO (2002) *Future Dilemmas: Options to 2050 for Australia's Population, Technology, Resources and Environment*, Canberra. http://www.cse.csiro.au/research/Program5/futuredilemmas/

Biomass refers to living and recently living <u>biological material</u> which can be used as fuel or for industrial production. Most commonly biomass refers to plant matter grown for use as <u>biofuel</u>, but also includes plant or animal matter used for production of fibres, <u>chemicals</u> or heat. It excludes <u>organic material</u> which has been <u>transformed by geological processes</u> into substances such as <u>coal</u> or <u>petroleum</u>. Biofuels include <u>bioethanol</u>, <u>biobutanol</u> and <u>biodiesel</u>. Biomass is grown from several plants, including <u>switchgrass</u>, <u>hemp</u>, <u>corn</u>, and <u>sugarcane</u>. Biomass may also include <u>animal waste</u>, which may be burnt as fuel.

 ¹⁴ TechCast - A Virtual Think Tank Tracking the Technology Revolution - www.techcast.org
 ¹⁵ CSIRO (2002) Future Dilemmas - Options to 2050 for Australia's population, technology, resources and environment Department of Immigration and Multicultural & Indigenous Affairs, Canberra, Working Paper Series 02/01

The CSIRO also expects that growth and development will continue without the impediment of a shortage of natural resources due to technological innovation and substitution of materials (eg ceramics for metals).

The confluence of biotechnology, nanotechnology, information technology and new materials has the potential to radically transform the way cities are run. (2002: 75)

Local government can play a key role in promoting and enabling access to information and resources for best practice sustainability initiatives. This is exemplified in the role delineated for the City of NPSP in its *Parade and Magill Road Strategic Plan*, 2006. This Plan acknowledges the importance of 'triple bottom line' accountability (integrating social, economic and environmental issues) and has the expectation that business and community activities will promote environmental sustainability.

Implication for the City of Norwood Payneham and St Peters

The City of NPSP has a number of roles to play in promoting environmental sustainability. These include information, awareness raising and community education, careful attention to planning approvals, encouragement of appropriate housing and garden design, and leading by example in its own use of natural resources.

Council can also negotiate with state and federal government environmental agencies for support and funding for to pilot innovative approaches to natural resource management.

2.3 Demographic change and population ageing

Another key change about which there is significant awareness is the **ageing of the population.** This is due to the combined impact of lowered fertility rates and lower infant mortality as well as the large number of births in the post World War II period (producing the cohort known as the Baby Boomers).

In the City of NPSP, this trend will see the proportion of the population aged fourteen and under decrease by 14.5% between 2005 and 2020, while the proportion aged 45 years or more increases – for example, a 40.9% increase is projected for those aged between 65 and 74 years, and those aged 85 or more will increase by 26.2%. ¹⁶

There are many gloomy predictions made about the impact of this change in our population structure (*see Section 2.3.1 below*) but it is worth remembering that an ageing population is also a reflection of Australia's success in achieving greater life expectancy and means that our living standards have improved. It is an indicator of progress. It is also important to avoid generalisation. The older population is by no means homogeneous, with great individual differences between and within age groups. There is no comparison between a healthy sixty year old, working part time, participating in a range of social and community activities and a chronically ill eighty year old, with no independent means of financial support who lives an isolated and restricted life.

¹⁶ See accompanying report from the Public Health Information Development Unit, Australian Institute for Social Research (2006) *Population health profile of Norwood Payneham St Peters*

It is also important to look at what older people contribute as well as what they might need. Older Australians contribute to their society in more ways than through their paid labour, particularly as carers, volunteers and community members. Community development policy at the local level has a critical role to play in enabling older people to make this contribution.

One of the outcomes of the changes resulting from population ageing, and changing expectations about how people live their lives is a blurring of the boundary between the end of paid workforce participation and the beginning of **retirement**. At the turn of the 20th century, many older Australian males worked until near death, enjoying a relatively brief retirement. Therefore, workforce ageing had minimal impact on the total labour supply. In the next century, Australians gained about 20 years of extra life expectancy and earned nearly five times more income per capita, which has fundamentally altered expectations about leisure and work.

Older people are likely to continue working, but with a reduced number of hours and with flexible work hours. This is indicated by the trend for people to live longer and with better health, bringing with it an increase in expectations about active lifestyles, as well as an increased capacity and need to keep working.

The future older population will be asset rich, with some 50% of the nation's family wealth projected to be held by those aged 65 and over by 2031 (compared with their current share of 22% of aggregate wealth). Much of this wealth derives from owner-occupied housing and superannuation assets. However, their lifestyle expectations and government policy are likely to see a continued involvement in paid work and retirement will not necessarily equate to a cessation of paid employment.

Recent Australian government policy is setting in place a framework to discourage earlier trends to retire from 55 years onwards, and to encourage prolonged participation in paid employment. While this trend can be expected to continue, and will be supported by many Baby Boomers themselves, it will require significant change in occupational and health and safety regulations (which discourage the employment of people over 65), in employer and community attitudes, and inflexible employment practices.

2.3.1 The ageing of Australia's population - crisis or reflection of progress?

It is well understood that the ageing of the Baby Boomers will present Australia, like other countries, with the largest number of older people, and the largest proportion of older people ever, and there have been many negative interpretations of the implications of this demographic pattern. Some of these reflect the realities of functional deterioration as part of the ageing process, while others reflect ageist and negative beliefs about growing old.

The ageing of the NPSP community will see an increase in the number of people with chronic disease, dementia or acquired disability. There are currently 7,100 people with a disability, equating to 22.1% of the population. The number of people with dementia is estimated to be 616, increasing by some 25% to 772 in 2020. Apart from the influence of ageing, the prevalence of chronic disease in NPSP is estimated to be lower than

metropolitan rates in Adelaide, based on known risk factors (being overweight but not obese, obesity, smoking, high risk alcohol use and lack of exercise).¹⁷

Much of the 'doom and gloom' interpretations of population ageing are based on simplistic assumptions about the relationship between the number of people working and the number who are retired. As Roszak comments –

*If that were true, the best place on earth to retire would be Somalia, where there are 40 working people for everyone over 65!*¹⁸

However, it is important to place this change in its context, as there are other equally important factors that need to be taken into account. A detailed analysis of the implications of the ageing of Australia was undertaken by the Australian Productivity Commission¹⁹, and concluded that we don't have a crisis but we do face major policy challenges, mainly because of the large emerging *fiscal gap* that will need financing. By 2044-45, governments (Australian, State/Territory and local) are projected to have a combined ageing-related fiscal gap of some 7% of GDP. Most of this pressure will affect the Australian (Commonwealth) government, mainly because of its responsibilities for health care. The Productivity Commission believes that the 'fiscal gap' can be financed because of other changes that reflect our high levels of productivity. These in turn reflect broader social and economic gains.

- o Labour force participation is currently at its highest since prior to World War I. The proportion of the population in employment is the highest on record for Australia, and even with the projected decline in participation with the ageing trend, the ratio of employees to population will be higher in 2050 than at any time in the century preceding 1990.
- o Because reforms to superannuation have been made, Australia will be relatively successful (compared to other OECD countries) in avoiding large future liabilities associated with age pension payments. These reforms also mean that many older people will have a degree of financial independence when they retire that was not possible with reliance on the Age Pension. This is already evident.
- O Despite the substantial growth in health expenditure, provided it is well directed, this will promote community well being and may reduce the need for other age-related expenditure such as, residential nursing home care. It will also provide a key source of employment, with shortages already being experienced for this part of the workforce.
- o Australia will be a wealthier country when the impact of the ageing population is felt with average per capita incomes in 2044-45 projected to be about 90%

¹⁷ See accompanying report from the Public Health Information Development Unit, Australian Institute for Social Research (2006) *Population health profile of Norwood Payneham St Peters*¹⁸ Theodore Roszak *The Longevity Revolution: How aging will change the values of a generation*, Interview for *Great Age*, the Newsletter of the Marin County Commission on Aging, Spring 2004

¹⁹ The Australian Productivity Commission (2004) *Economic Implications of an Ageing Australia*. This Draft Research Report has reported on the economic implications of the ageing of Australia's population. The report updates (and significantly improves) the Australian Treasury's *Intergenerational Report* (2002–03 Budget Paper No 5, Commonwealth of Australia). There have been numerous previous reports, many by economic analysts (and just as many in the popular press) that refer to population ageing as a 'crisis' and a 'burden' to future growth

greater than today. This translates into approximately \$35 000 per capita compared with 2002-03, and a need to find about \$5 000 per person to meet the fiscal gap.

This is regarded as very manageable by the Productivity Commission because the dividends of economic growth will leave Australians, on average, better off by about \$600 000 per capita. With rising productivity, the gap could be financed without increasing marginal tax rates at given levels of real income.

Because the role of local government has expanded beyond property-related services to include human services provision, population ageing is likely to place increasing demands on local government resources. In addition, there will be growing pressure to upgrade or modify infrastructure to meet the needs of frail older citizens. The extent to which councils are affected by ageing trends also depends on the proportion of age pensioners who are rate payers, and who are eligible for pensioner concessions on municipal rates. At present, just under half of all Australian local councils provide these concessions and this varies considerably across States and Territories, and in the size of the concession.

The Productivity Commission estimates that nationally the number of people in low and high residential aged care is likely to increase by 66% by 2024-25 and by 178% by 2044-45. On the assumption that people will want this care in the region where they live, local government will be challenged in designating sufficient land for new developments in a timely fashion, and in ensuring that new facilities are integrated with existing service delivery.

Australian ageing policy now reflects the heterogeneity of the experience of growing older. Where once policy was restricted to making provision for the care and support of frail and dependent people and their carers, in recent years increased emphasis has been placed on 'positive ageing'. In turn, the needs of a group sometimes described as the 'young-old' have been highlighted, with programs supporting healthy lifestyles, lifelong learning, the development of IT-related skills, and the promotion of the contribution made by older people. The importance of early intervention is evident, ensuring that people have the information and connections needed to reduce dependency and to manage functional loss effectively.

²⁰ Aust Local Government Association (2003) State of the Regions Report 2003

Implication for the City of Norwood Payneham and St Peters

Local government plays a key role in providing programs that address positive ageing goals as well as services for frail and more dependent older people and their carers. This role will expand as the local community grows older. However, there is value in an early intervention approach that is designed to ensure that prior to reaching old age, people are well informed and have ready access to lifelong learning programs, as well as to health promotion information and services. Community development programs coordinated by Council will also play an important role in achieving this outcome.

There is also an important role to be played in providing information to local employers to enable them to provide conditions that encourage people over the age of sixty to continue in employment. Some of this information can also be provided by leading by example.

2.3.2 Population change reflected in housing and urban planning

The State Government has set ambitious population growth targets as part of the State *Strategic Plan,* to 2050. Allied to this is the establishment of urban growth boundaries designed to limit urban sprawl and its associated infrastructure demands. The reality of urban growth boundaries means that the majority of the target population growth – if achieved – would need to come from urban infill, including an increase in medium-density and high-density living. This brings with it a whole set of opportunities and challenges for some Councils in terms of urban planning, social mix and community attitudes towards higher populations, especially of overseas migrants and students.

At the same time, it is clear that demand for new housing will continue. The City of NPSP *Residential Strategy*, while recognising the lack of precision in forecasting, believes that some **5,500** new dwellings will be needed for NPSP through to 2026.²¹

The NPSP *Parade and Magill Road Strategic Plan, 2006* identifies as a future trend the concept of an 'urban village' that combines apartments, businesses and cark parks into one precinct. These provide smaller residential dwellings and give direct access to shopping and social activities. The increasing number of single households, and of older people, are seen as driving a preference for this form of living which is expected to be evident over the next 15 years.

2.3.3 The changing cultural profile of Australia's population

The sustained program of immigration pursued by the Australian Government in the post World War II period, brought people here from both English and non English speaking countries, and this has had a profound and positive impact on the nation's cultural profile. The City of NPSP has been especially affected by this policy, and has significant numbers of people born in Italy (nearly 7% of the local population), Greece (1.2%), Germany (0.8%), and Poland (0.4%). Although people from these countries are

²¹ City of Norwood Payneham & St Peters (April 2004) *Residential strategy - Spatial Development Framework.* Consultation Draft

ageing (and more rapidly than those born in Australia) the cultural influence they bring has an inter-generational and long term impact.

More recently, immigration policy has seen an emphasis on skilled migration from a range of countries. The City of NPSP has a growing number of people, many of whom are students, from Asian countries. People from Malaysia now comprise 0.7% of the local population, those from China and India each comprise 0.4%. Department of Immigration and Multicultural Affairs data for the period 2001-2006 for NPSP identify that people settling came from these countries (in order of numbers) – China, the UK, Malaysia, Sudan, India, USA, Iran, Kenya, Singapore and South Korea. This indicates a changing profile away from an emphasis on European culture.

The population policy implemented by the South Australian government in 2004 promotes this State increasing its share of overall migration to Australia, with an emphasis on attracting skilled people. Significantly, the majority of these recent settlers have arrived as skilled migrants (rather than for humanitarian reasons), and they are predominantly aged between 20 and 40. By the end of June 2005 t his had resulted in an increase of 57% over the previous year (equating to 6,714 people). Most came from the UK and the new growing markets of China, India and South Africa.

More than 41 per cent of new migrants to Australia were once overseas students. Department of Immigration and Multicultural Affairs data show that nearly 16,500 former international students migrated to Australia in 2004-2005, an increase of 25% from the previous year. Adelaide is the only mainland state capital offering five bonus migration points to overseas students and is positioning itself to attract increasing numbers of them. The proximity of NPSP to the city and its university campuses is a significant advantage. The relatively high numbers of students from a range of countries who live in NPSP makes for a mixture of both cultural diversity and significant levels of skill and education – a resource that should be nurtured.

Implication for the City of NPSP

The City of NPSP can play a key role in educating the local community about these new cultures and promoting community arts and other activities that encourage integration by new settlers. Partnerships with key groups like the Migrant Resource Centre will be increasingly important to ensure both local understanding of new cultures and the provision of or linkage to appropriate supports. Integration of students from overseas countries who may be future local business owners is an additional strategy that could bring additional benefits to the local community.

2.4 The impact of technological change

The World Future Society (WFS) has established a process to track and forecast emerging technologies, initiated in 1990 when their members observed what is now known as the 'Technology Revolution'. The process began by selecting 5 – 10 technologies in each of 12 designated fields that were considered to exert the greatest social and economic impact

²² See accompanying report from the Public Health Information Development Unit, Australian Institute for Social Research (2006) *Population health profile of Norwood Payneham St Peters*

while introducing powerful new concepts. In the past decade, the WFS has had five Delphi survey rounds for the 100 or so technologies tracked. An estimate is made of the time when strategic technologies will enter the mainstream, plus or minus an average of three years. This variation has held over the ten years of the project.

The key finding from this research was an across the board trend for breakthroughs in all fields. Although they defined this as the *Technology Revolution*, it encompassed all fields, not just those focused on technology. William Halal from the WFS attributes this cross-sector trend to the combined impact of new knowledge and the accompanying across the board trend known as the *Information Revolution*. This is advancing the rate of accumulated knowledge across all fields. The information revolution is thus seen as creating the broader Technology Revolution.²³ This means that the way people live is subject to ongoing and rapid change. One of the most apparent changes has involved the widespread use of computers and associated with this, the development of electronic communication and information storage and exchange.

The impact of email on the speed and nature of how people communicate, in both their private and working lives, is substantial but the ability of social policy to keep pace with this and other forms of technological change appears to be less responsive. New communications technologies are instruments of accelerated social change that also contribute to the pace of that change.

A lot of conflict in the world has to do with this disjuncture between the rapid pace of change in modernity and the inability of older institutions to change to keep up with the pace. The pace of change if anything is accelerating by the fact of the cell phone revolution and the fact that the Internet is moving onto the mobile telephone. (www.openp2p.com/pub/a/p2p/2003/03/13/howard.html)

The World Future Society predicts that optical computers will have a spectacular impact on our lives. These are computers that operate by light waves rather than electricity and are expected to be available by 2015. The components needed are in place – lasers for coding information, fibre optics for carrying light waves, and CDs for storing information. Optical systems are expected to replace current computer technology within 20 years.

World Future Society, Futurist Interviews, www.wfs.org/inthalal.htm

The move to a global society has been much discussed and is enhanced by ever changing information and communications technologies. The impact of the Internet has been substantial and will continue to be so, and one of the most interesting projected directions for the World Wide Web involves significant cultural change. The Institute for the Future notes that as Asia emerges as the leading centre of the manufacturing economy, of innovation in select arenas of science and technology, and of new markets for companies worldwide, this will also affect the global Internet. The Institute notes that in China alone, Internet usage has grown by over 300% in the last five years, which means that more than 100 million Chinese people are –

... creating their own Virtual China. This 'other Internet' is founded on linguistic, visual, cultural, and regulatory features that differ from today's dominant English

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²³ World Future Society, *Futurist Interviews*, <u>www.wfs.org/inthalal.htm</u>

language Internet. And as it grows over the next decade, the Chinese Internet will rival what most people in the West think of monolithically as the Internet.

In the process, the outlook brought by this change will be -

.... neither Western nor traditionally Eastern, but something entirely new. 24

Social change commentators rarely overlook the impact of the Baby Boomer generation on social norms and more recently, on expectations of how older people should live their lives. However, as Howard Rheingold observes, the younger generations growing up with new information and communication technologies are also shaping new social norms. He makes a telling prediction about this as the new generation gap.

We thought that the Baby Boom generation was influential because they had a shared experience that came up from growing up with television. But TV is a medium that the consumer can't influence. These kids are growing up with mobile phones that also connect to the social network, to get information they need, to broadcast information that they want to broadcast. It's empowering for them. Over the next 10 years, as they grow up and enter the workforce, these technologies are going to become much more powerful and I think that we're going to see a real generational cohort, who will have a shared Zeitgeist that will be shaped by this always-on world. They talked about a generation gap in the '60s; this may be a greater one.

(www.openp2p.com/pub/a/p2p/2003/03/13/howard.html)

Among the different changes being brought by new technologies, one of the most significant will come from the field of **nano-technology**. The 'nanosphere' consists of objects measured in one billionth of an inch and is undergoing its own revolution as research gains increasing control of this tiny world. Objects behave differently at the nano level, for example, electricity flows more easily and materials change properties. The imminent possibility of creating more powerful computers, medical treatments and any type of item has resulted in billions of dollars being devoted to research that is producing daily breakthroughs. 3,000 nanotech patents have been filed since 1996 and there are 1,200 known nanotech ventures around the globe. Futurist organisation TechCast predicts that nanotechnology will reach mainstream use by 2015. It is expected to make up 40% of all data storage devices by 2011. Already, Samsung has announced its release of nano TVs for 2006 and medical scientists predict that cancer will be detected earlier due to nanotech.²⁵

Scientists say they will design fabrics which maintain our body heat regardless of weather, build a jet at $1/50^{th}$ of its present weight, develop a drug that can kill cancer cells before they strike. Richard Neville, *Footprints of the Future*, 2002

If nature can arrange the atoms in coal to produce a diamond, then so can nanotechnologists. This applies to the replication of bones, the spinal cord, even the human heart. Richard Neville, *Footprints of the Future*, 2002

Nanobots in toothpaste will eradicate plaque. Richard Neville, *Footprints of the Future*, 2002

²⁵ TechCast - A Virtual Think Tank Tracking the Technology Revolution - www.techcast.org

²⁴ Institute for the Future, *Ten Year Forecast: Asia Focus*, www.iftf.org

Nanotechnology will be used for everything from monitoring the health of soldiers in the battlefield to transforming waste into edible material. Medical therapies based on nanotechnology will be reach clinical use before 2025.

World Future Society, Top 10 Forecasts from Outlook 2006, www.wfs.org/forecasts.htm

The effect of technological change affects all domains of lives, and one area where its impact is most noticeable is in the **provision of health care**. This affects how medical records are kept, how diagnosis is made, and how treatment is applied, with improvements in all three areas expected. TechCast predicts that the combined impact of more powerful IT systems and the impact of spiralling health costs will drive the widespread growth of telemedicine. IT systems already are being used 30% of the time to diagnose illness, order medication and laboratory tests, monitor patients, and maintain medical records. Interactive video systems allow physicians to examine and treat patients at a distance and evaluation shows that quality of care is not compromised. Patients with chronic illness can be monitored at home and computerised diagnosis has been found to be more accurate.²⁶

Computerised health care will be available by 2009, but is happening now. About five years ago a company called Healtheon merged with a Microsoft venture called Web MD and this is bringing all medical transactions and information online.

World Future Society, Futurist Interviews, www.wfs.org/inthalal.htm

In Italy, a robot performed the first long distance surgery. After being programmed with the experiences of 10,000 patients, the robot conducted heart surgery from a Milan hospital on a patient in Boston. Use of the Da Vinci robotic operating system has increased from 1,500 operations in 2000 to 20,000 in 2004. Small remotely controlled robots are being placed inside the human body to perform operations more precisely and with less trauma. TechCast - A Virtual Think Tank Tracking the Technology Revolution - www.techcast.org

More doctors and hospitals will use wireless technologies such as wearable computers and mattresses embedded with sensors to help care for patients. This technology will allow for more constant and reliable monitoring of patients' vital signs ... [and] has already been used in Finland

World Future Society, Top 10 Forecasts from Outlook 2006, www.wfs.org/forecasts.htm

As computer capability, artificial intelligence and other enabling technologies mature, **smart robots** are expected to create a new era of affordable robotic helpers. Already simple versions of mass produced mobile robots are being used for routine tasks and

²⁶ TechCast - A Virtual Think Tank Tracking the Technology Revolution - www.techcast.org

more intelligent versions are rapidly being developed that walk and climb stairs, speak with humans and perform complex tasks.

Various experts believe that from 2010 onwards the boundary between humans and machines will become increasingly blurred and TechCast predicts that mainstream impact will be felt by about 2020, and that by 2025 the robot market will be bigger than the automobile market. The world leader in robot technology is Japan. Following the lead of Honda, Toyota plans to sell robots that meet the needs of families and old people by 2010 – addressing the need that arises from an ageing population and a reduced availability of family caregivers. Denmark has developed a robot that locates and destroys weeds, eliminating the use of herbicides. The aeronautics and military industries are already using robots for a range of tasks and their use is increasingly rapidly.²⁷

Implication for the City of NPSP

While social policy rarely takes into account the future impact of technological change, the City of NPSP has the opportunity to do this through its Social Development Framework. This will be structured so that social policy directions are designed with the lens of technological change applied to them. Sustaining this will require the establishment of a process that enables the City to keep up to date with this change. That process may include establishing a team of advisors who are experts in different aspects of technological change, and are drawn from different generations in order to capture different levels of knowledge and experience of technological change. It would also include having partnerships and strategic alliances with individuals and organisations who are leading this change.

By having access to such guidance, the City of NPSP can seek to provide, or encourage the provision of, the infrastructure that is necessary for business and the local community to benefit from technological change – for example, wireless communication. It can also play a key role in informing and educating the local community so that they can keep pace with and benefit from this change.

2.5 Collaboration and co-operation arising from technological change

Technology has also had a major impact in facilitating collaboration and cooperation, and some futurists believe that this will overtake competition as a definer of global politics and economics.

Technology is enabling new forms of human and machine interactions and relationships that present a range of possibilities for communication in the public and private spheres of life. While traditional business strategy has been organised around competition, cooperation and collaboration are trends that are becoming more widespread. The Institute for the Future argues that new discoveries across fields – mathematics, biology, psychology, sociology, technology, law and economics - and

²⁷ TechCast - A Virtual Think Tank Tracking the Technology Revolution - www.techcast.org

connections across them suggest a 'convergence around cooperation and collective action' and that 'responding intelligently to this new world will require a much more sophisticated understanding of cooperation and cooperative strategy'. ²⁸

Open technical standards for connectivity (for example, HTML, XML, WAP) lay the foundation for broad cooperation across organisations, markets, and human activities, in the process fostering new levels of connection between people. For example, the mobile phone is 'in the process of morphing into a wirelessly networked supercomputer distributed in a billion pockets worldwide.'

Enduring success stories from the 'dotcom era' are companies like Amazon and Google who built businesses that found the balance between cooperative and competitive behaviours – 'the right blend of commons and private goods'. Workplace organisation is seen as evolving, reflecting new ways of organising work to reflect an increasingly interdependent local and global production network.²⁹

... we are approaching a domain beyond knowledge. Infotechnology is going to mature in the next 10 to 20 years. The systems will be up, the earth will be wired, and we will be able to do everything we want with information. We will then enter an era of spirit. You can see it starting today as people embrace values, beliefs and vision – all of those things that are essential to navigate through the mass of information, to find meaning and purpose. ... In about 10 years, certainly no more than 20 years, we will talk about a spiritual age the way we talk about the information age. (World Future Society, Interview with William Halal, Director of the George Washington University Forecast of Emerging Technologies³⁰, Conducted in 2000, posted in May 2001 at www.wfs.org/inthalal.htm)

Implication for the City of NPSP

Local government is ideally placed to facilitate the range of partnerships and collaborations that will be essential to working productively with technological change. The City of NPSP has an important role in this, both in the partnerships it develops and those which it fosters for the benefit of local business and the local community.

2.5.1 Collaboration and the impact of techno-social change

One of the most interesting forms of change involves the combined impact of technological with social change – or *techno-social* change. One futurist who understands the significance of this form of change is Howard Rheingold (the person who coined the term 'virtual community'). In his book '*Smart Mobs*', he has explored the ways in which large groups of strangers are using mobile Internet access to act collectively, often resulting in scientific, social and political breakthroughs.

²⁸ Institute for the Future (June 2004) *Towards a New Literacy of Cooperation in Business: Managing Dilemmas in the 21st Century,* Technology Horizons Program – www.itft.org
²⁹ Institute for the Future (June 2004) *Towards a New Literacy of Cooperation in Business: Managing Dilemmas in the 21st Century,* Technology Horizons Program – www.itft.org
³⁰ Forecast details from the GWU Forecast of Emerging Technologies can be found at www.techcast.org

'Smart Mobs' is the term Rheingold uses to describe the impact of the convergence of technological innovations that include mobile phones, wireless Internet connecting neighbourhoods and businesses, SMS messaging, microchips, computers linked to share music, and real-time blogging. Such technologies enable people to cooperate in new ways because they carry devices that can both communicate and compute, resulting in a third computing revolution after the PC and Internet. Smart Mobs use this technology to become part of collectives of their own choosing – key examples being the Seattle WTO protests and the anti-Estrada movement in the Philippines – both being collective action that was coordinated by mobile phone text messages and resulted in significant impact. Much antiwar action now relies on sophisticated mobile communication technology.

Rheingold points to new knowledge collectives, such as Wikipedia, Amazon, and Slashdot. Web logs have created a bottom-up collaborative knowledge base of a new kind. He cites Google as an example of collective action because the page ranking is a reflection of individual choices people make when they make links.³¹

Rheingold hopes that cooperative uses of technology will be fostered, encouraging productive smart mob behaviour, building an 'innovation commons' in which consumers are also producers – one of the conditions that has made the Internet possible. (www.pifmagazine.com/SID/297/)

10 years ago the image of freedom was someone at the beach with their laptop and their cell phone. And now that's an image of slavery. Howard Rheingold during an interview for the O'Reilly Network – www.openp2p.com/pub/a/p2p/2003/03/13/howard.html

2.6 Changing economic conditions - the South Australian context

The broad changes described in the previous sections have influenced and been influenced by changing economic conditions globally as well as locally. This section outlines key economic drivers in South Australia whose impact is of relevance to the City of NPSP and to its relationship with the State government.

Viewed on a State or Territory basis, the Australian economy is somewhat dichotomous, involving a co-existing resource-rich component and a relatively stagnant component. The first is riding on the wave of the mining boom and consists of the resource-rich States of Western Australia and Queensland. These States have rapidly growing economies, and are experiencing skill shortages, capacity constraints and historically low rates of unemployment. A consequence of this is that their working-age population is increasing significantly. The mining boom has resulted in substantial Government royalties, which allow the Governments of these States to fund essential services and major infrastructure projects.

Side-by-side to these booming economies are the relatively stagnant economies of the other States, including South Australia, which tend to be over-represented in slower-growing sectors like manufacturing. These States are also suffering from the appreciation in the value of the Australian dollar caused by the strength in mining. This appreciation of the dollar causes exports of manufactured goods to be less

³¹ Institute for the Future (2004) *Towards a New Literacy of Cooperation in Business: Managing Dilemmas in the 21st Century,* Technology Horizons Program – www.itft.org

competitive. However, South Australia is increasing its share of national mining and already faces skill shortages associated with this new economic direction.

The loss of working-age population to Western Australia and Queensland also has an adverse effect on skill retention and workforce development as well as leading to an ageing of the population. In fact, South Australia has the oldest median age of all the mainland States. While the ageing of the population brings with it some advantages, it also places significant financial pressures on Government in terms of service delivery in areas like health and aged care. As well, it means that with baby boomers retiring over the next 10 years, labour demand will outstrip labour supply.

The existence of this dual economy creates difficulty for policy makers at the national level. The capacity constraints and skill shortages evident in the resource-rich States have led to significant inflationary pressures, above the Reserve Bank's target band. This in turn means that the Reserve Bank is looking to contain these inflationary pressures through increasing interest rates, at a time when many parts of the nation are exhibiting sluggish growth.

Within States, regional disparities are emerging. For example, the major mining expansion at Olympic Dam over the next few years will generate significant demand for highly paid workers for construction-sector employees. The likely effect of this is to draw employees to the region from areas like metropolitan Adelaide and other regional areas, leading to skill shortages in these areas.

Location is becoming an increasingly important factor in corporate-decision making. Companies are taking the location or relocation decision very seriously, and have an array of information tools to guide their decision-making process. In times of low unemployment, finding a work location that is attractive to employees but also allows companies to tap into a supply of skilled staff is essential. From an employee point of view, amenity, centrality and accessibility are important factors. This places the Norwood, Payneham St Peters area in a strong position, in terms of its proximity to the CBD and its lifestyle advantages.

Implication for the City of NPSP

From a Council perspective, NPSP can position itself to benefit from the mining and defence expansion in the State by facilitating growth of companies that provide supporting services to firms in these sectors (eg legal, accounting, software development etc).

Home-based businesses are likely to become an increasingly bigger part of the economy (although the size of the sector is notoriously difficult to measure). Home-based businesses are evident in many sectors and their location often depends on the attractiveness of amenities (from a residential viewpoint) as well as the ability to access high-speed broadband and wireless networks. For example, the Department of Trade and Economic Development coordinated a major small business survey earlier this year (SA Small Business Survey 2006), canvassing views on a range of issues affecting South Australia's small business sector. The report made the following observation:

Several respondents suggested that they needed assistance with training, both the supply of training, but also with the system...It was suggested that the process of

finding overseas skilled employees needs to be facilitated, both in terms of bringing them to Australia, but also identifying the qualification equivalents in Australia.

Implication for the City of NPSP

The profile of the NPSP population and its proximity to the Adelaide CBD encourage home business development. The City of NPSP can play a key facilitating role in ensuring that home based businesses are linked to infrastructure and services that support them. Given the direction of current immigration policy and its emphasis on skill, together with the changing cultural profile of NPSP, the City could also play an important role in harnessing this potential for home–based business. The relatively high numbers of overseas students living in NPSP represents a further potential source of local business operation.

One of the significant drivers of economic growth in South Australia over recent years has been high levels of household consumption. This has been sustained by householders increasing their household debt. Household debt repayments now consume a large slice of household income in South Australia. According to the ANZ bank, South Australians are spending around seven per cent of their disposable income on mortgage payments and a further one per cent on consumer debt repayments. While increasing property values provide home owners with some comfort, interestrate hikes are making housing less affordable and debt servicing less sustainable for many.

One measure of the housing affordability crisis is the proportion of households in "housing stress" – that is, households paying 30 per cent or more of their income on housing costs. A recent study by Professor Judith Yates found that around 862,000 low-income and 164,000 moderate-income households in Australia were experiencing housing stress. Around 45,000 low- income and 7,000 moderate-income households were experiencing housing stress in South Australia.

According to the OECD, Australia's capital cities are now among the least affordable places to live in the world. The Paris-based think tank concluded that Australia had the most overvalued houses in the western world. The study of 15 countries showed that housing prices were 52 per cent higher than rental prices justified. The OECD says that the price of housing, relative to incomes, is 50 per cent higher in Australia compared to the other countries studied.

A recent international housing affordability survey undertaken by *Demographia* also found that Australia's capital cities are among the least affordable places to live in. The survey ranked the affordability of about 100 cities in Australia, Canada, New Zealand, the United States, Britain and the Republic of Ireland. While it concluded that the most severely unaffordable housing could be found in cities in the United States, it argued that Australia had "the most pervasive housing affordability crisis". Sydney, Hobart and Adelaide were ranked the most unaffordable housing markets. Sydney ranked number seven while Hobart ranked number 15 and Adelaide number 18. Each of these cities were characterised as severely unaffordable.

By reducing the share of households that can afford to buy homes, high (housing prices) inevitably lead to greater income disparity. Thus, to think of rising housing prices as a good thing, while ignoring the incomes that support them, is to miss the point completely. The reality is ... that the more-affordable markets are the better performers by virtue of the higher standard of living they facilitate for more households.

Compounding the housing affordability crisis is a 15 per cent decline in the availability of low-rental housing. One of the major contributors to this is the reduction in Australia's public housing stock, driven by the Australian governments' declining financial support for the sector. There are around 30,000 fewer houses in the public housing stock in Australia than a decade ago. The impact of this has been felt more profoundly in South Australia, which has historically enjoyed a higher share of public housing than other states. South Australia has used public housing development as a key instrument of economic and industry development, helping to ensure greater housing affordability in the state.

3 Conclusion

Future change is not just about the impact of new inventions on our way of life. It is as much about the way those changes affect our thinking, our expectations and our view of the world. To be effective and proactive, organisations must be alert to the signals of future change and reflect this knowledge in their planning and policy processes.

In recent years increased emphasis has been placed on bringing together different policy fields rather than developing policy in isolated and specialised fields. Greater awareness exists of the importance of services reflecting the fact that people's needs do not fall neatly into the divisions set by different government portfolios. Furthermore, without coordinated planning and policy development, there is a danger of both duplication of scarce resources and the creation of gaps in provision.

The NPSP *Social Development Framework* can provide a mechanism to integrate different policy and program portfolio areas while also reflecting anticipated future change.

Much government policy now emphasises 'sustainability', that is, the provision of services and programs that have a long term impact, and in some cases, encourage community services to be self-funding rather than government funded. What is a sustainable community? This is usually taken to mean one that is shaped by policy and planning designed to meet the needs of current and future generations and that links social, economic and environmental issues in an integrated way. It is an extremely relevant concept for local government, in fact, in the United Kingdom, local governments are now required to develop a Sustainable Development Framework (www.wlga.gov.uk). The NPSP Social Development Framework, because of its future change focus and provision for integration, can also encourage sustainability.