

Strength in Diversity:

Diversification, Innovation and Jobs

Commonwealth Review of SA Economy and Impact of GMH Closure

January 2014

WISeR
Informing Decisions



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Economy and Impact of GMH Closure***

The Australian Workplace Innovation and Social Research Centre (WISeR) focuses on work and socio-economic change. WISeR is particularly interested in how organisational structure and practices, technology and economic systems, policy and institutions, environment and culture interact to influence the performance of workplaces and the wellbeing of individuals, households and communities.

WISeR also specialises in socio-economic impact assessment including the distributional impacts and human dimensions of change on different population groups and localities. Our research plays a key role in informing policy and strategy development at a national, local and international level.

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ISSUES AT A GLANCE

- This submission has been developed by the City of Playford and the City of Salisbury in collaboration with the Australian Workplace Innovation and Social Research Centre (WiSeR). We have looked and learned from past Australian responses to major plant closures and see the need for a more comprehensive response. We have also looked at successful responses internationally and seek to apply some of those lessons to our current position.
- The two Councils are prepared to participate fully in a taskforce with the Commonwealth and state governments, or other collaborative agency intended to provide leadership, direction and steerage to the process of industrial diversification and rejuvenation in northern Adelaide. The two councils will leverage northern Adelaide business leaders and union and community representatives through open forums and existing networks.
- Local government, in partnership with industry and other levels of government, is well-positioned to deliver regionally appropriate solutions through use of its service and infrastructure capabilities. In particular it is able to offer high value business extension and outreach services delivered through community centres, business support arms and learning networks.
- Well-coordinated, well informed and decisive action must be taken over the next ten years to diversify the economic base of northern Adelaide and generate new employment pathways to high quality jobs. While the closure of GMH in 2017 is a major blow to the region and the State it must galvanise rather than demoralise us.
 - Unless action is taken, GMH's withdrawal from South Australia could cause the loss of more than \$1.2 billion pa in economic activity, and 13,200 jobs in the state.
- Employment growth on the back of smart industrial diversification is the principal challenge. The Greater Adelaide Plan identifies northern Adelaide as an area where significant population growth will be accommodated through to 2036. Provision is made for an additional 79000 jobs associated with non-residential land availability. The means for achieving this outcome must be the focus of concerted effort.
- A focus of early action must be on retaining key engineering and manufacturing capabilities developed through automotive manufacturing, with accelerated transition of firms into new and growing manufacturing product and market opportunities.
 - Changes in technology and international supply chains, together with innovative business organisation, have opened up new opportunities for internationally competitive manufacturing by SMEs. This transition is feasible.
- A comprehensive strategy should be deployed to diversify the industrial base of northern Adelaide, boost employment and minimise the adverse impacts of further losses in key areas of mass manufacturing. The package needs to be geared to short-, medium- and long-term exigencies and requirements. A 10-year commitment is needed not only from local government but also the state government and Commonwealth.
- A targeted strategy supporting industrial diversification – one that generates high skilled, secure and well-paid jobs in 'new manufacturing' – is necessary. Past efforts have generally not been of sufficient duration or scale to bring about transformational change, so well-resourced projects led by active champions will be necessary to make a fundamental difference to the fortunes of the region.
- Opportunities exist for diversification of northern Adelaide's manufacturing SMEs into such areas as high technology inputs to the resources and energy industry, selected defence



areas, medical devices, assistive technologies for the aged and people with a disability, and clean technology, to name a few. Retention of at least some high-end manufacturing capabilities is a vital platform for growth into the future.

- Other diversification and expansion opportunities are identified in horticulture and safe and secure food.
- To support this diversification and to capture new opportunities, a focused and early emphasis on improving management capabilities of SMEs will be undertaken including value chain mapping and market identification, tools for high performance workplaces digital economy training, mentoring, innovation transfer and entrepreneurship programs.
- Another part of this demand-led approach is to include infrastructure and urban renewal as part of *Strength in Diversity*. This draws on international experience of the positive impacts of urban renewal on areas experiencing industrial decline, and includes:
 - Redevelopment of the Elizabeth and Salisbury city centres
 - Development of dedicated precincts across the region for digital infrastructure, sports, intermodal facilities and logistics, health and wellbeing, mining and resources, defence industries and expanded ADF presence, etc.
 - An industry and employment focus on services for health, aging and well-being.
- As these projects create economic value they must also generate social value by helping more people in the region to gain access to rewarding education, training and employment opportunities.
- A key will be an ambitious approach to public procurement and local industry participation, ensuring that demand is leveraged to employ local workers and firms, and to build new industries and enterprises for the future.
- The approach must harness the region's great strengths to, firstly, mitigate adverse impacts from any economic shocks that the region experiences, and secondly, to lay the foundations for longer term growth.
- The active involvement of business leaders in developing and progressing this approach will lead to a greater shared vision for the economic transformation of the region and build local capacity and resilience.
- Finally, success requires a new institutional architecture that instils deep and purposeful collaboration on high value projects, both economic and community based. We are committed to collaboration and partnership to create this architecture over time. A regional economic workplace and workforce development partnership between the Stretton Centre and the Polaris Centre in the delivery of sophisticated industry intelligence and extension services is envisaged. Support is sought to expand significantly the activities of these centres to help build greater capacity and capability to pursue new industry and employment growth initiatives. These Centres are partnership vehicles for bringing together innovation and applied business development.
- We understand the depth and breadth of the challenge. We are committed fully to collaboration with each other, with the state and Commonwealth, and with others, to build the future that northern Adelaide deserves.

1 ABOUT STRENGTH IN DIVERSITY

Strength in Diversity opens a discussion about the need to more vigorously pursue a comprehensive and integrated approach to industry, urban and workforce development in northern Adelaide. The coming closure of GMH manufacturing operations, the consequent direct effect on jobs, the supply chain and broader long-term impact on northern Adelaide's small businesses, all make this an urgent challenge requiring a very substantial and sustained strategic response over the next decade and beyond. This paper has been prepared as a foundation for a wider discussion and action on strategy development in the region.

The impact of the GMH withdrawal from South Australia has been estimated at

- Over \$1.2 billion pa loss to economic activity
- A loss of 13,200 jobs, and
- A loss of \$72 million pa to South Australia's taxation base.

Burgan and Spoeher, The Contribution of the Closure of GMH's Elizabeth Operations to the South Australian Economy and Potential Impacts of Closure. Updated Assessment, November 2013.

The scale of the job creation and industry diversification challenge is immense. Already, northern Adelaide experiences higher than average unemployment rates. The contraction of the automotive sector and the broader manufacturing base have already resulted in significant losses of manufacturing jobs and skills that has traditionally underpinned northern Adelaide's economy. The Greater Adelaide Plan identifies northern Adelaide as an area where significant population growth will be accommodated though to 2036. Provision is made for an additional 79,000 jobs associated with non-residential land availability. The means for achieving this outcome – with a focus on retaining and building knowledge-intensive industries - must be the focus of concerted effort over the years to come.

The challenges facing the northern Adelaide region are those facing South Australia and the Nation generally, in the post-mining boom environment. While concern about the future of GMH weighs heavily on the community, the region has significant economic strengths upon which to build. They include:

- High end engineering capabilities (flowing in part from the presence of the auto industry but also the defence sector) with application to growing areas and sectors such as defence, resources and energy, medical devices, assistive technologies and clean technologies
- Hubs of defence technology and engineering excellence
- A growing horticultural, food processing and distribution sector with significant value adding potential
- Capabilities in clean tech and renewable energy
- Strong and strategically valuable freight transport infrastructure
- Centres of research excellence
- A large pool of under-utilised labour
- Local government that is proactive and capable in delivering appropriate solutions, utilising their high service and infrastructure capability.

Successful outcomes will require the best possible collaborative response, with the objectives of industrial diversification and urban regeneration at the core of any effective strategy, and addressing squarely four inter-connected areas:

- Demand led industrial diversification: building on the capabilities of existing manufacturers to develop new products and unlock new markets
- Urban regeneration and infrastructure: constructing robust, connected, job intensive communities as well as the hard and soft infrastructure required to support that growth
- Entrepreneurship and small business: sustaining and building the region's small business sector through programs designed to encourage entrepreneurship, innovation, market expansion and to improve management capabilities, and
- Exploiting research capabilities: Unlocking expertise within institutions to build existing sectors and open up new industry opportunities.

These approaches build upon northern Adelaide's strengths, reflect international best practice in regional adjustment and are consistent with the key policy directions and statements of the South Australian and Australian Governments.

Northern Adelaide cannot meet the challenge of diversification alone. That can only be done through a partnership between the Local, State and Commonwealth governments and strong collaborative relationships with industry, universities and the wider community. Geographical and institutional boundaries must be bridged to address the need for networked and integrated problem solving, strategy development and implementation. A culture of innovation must be fostered and supported by agile institutions that provide intellectual and practical support.

This paper is a first step in the development of *Strength in Diversity* as a comprehensive and strategic approach to northern Adelaide's future. It has been developed by the Playford and Salisbury Councils, with the Australian Workplace Innovation and Social Research Centre (WiSeR), to open up dialogue with key stakeholders, the community and state and Commonwealth governments on developing a comprehensive approach to northern Adelaide's future. We need to build understanding of just what is at stake and what needs to be done. Then we must act.

COMMITMENTS AND RESPONSES TO DATE

The Commonwealth and SA governments have responded with separate policy announcements to the GMH closure.

From the Commonwealth, the present reviews of the SA and Victorian economies (to which this paper is a contribution) will inform the design (and the direction of funds flowing from) *the “\$100 million growth fund to support economically responsible initiatives in regions facing pressure in their manufacturing sectors”* (PM’s 18th December statement). The fund would be applied to the diversification of auto components producers to new value chains and markets, supporting expansion of existing, or the attraction of new manufacturing firms, and accelerated commercialization of R&D. The statement also refers to support for infrastructure investment, the priority of naval shipbuilding, and training and redeployment of displaced workers.

The Commonwealth statement also flags a National Industry Investment and Competitiveness Agenda for future development.

On 21st January, the SA government released *Our Jobs Plan*, committing \$60 million in state funds and seeking \$333 million from the Commonwealth. It includes initiatives and seeks funding for

- Assistance for displaced workers and their reskilling
- Support for the affected communities through urban regeneration and local projects
- An Automotive Diversification Program to help companies diversify into new markets and products, and setting targets to diversify 200 firms
- Accelerating advanced manufacturing to provide industry roadmaps, support for clustering and accelerated business transformation (e.g., vouchers)
- A Jobs Acceleration Fund to be applied to new plant and equipment, investment attraction, retraining, and business improvement
- Accelerated Infrastructure projects, such as the North South Corridor, the Northern Connector, fast-tracking of the NBN, and regional initiatives.

Both statements share clear priorities concerning the importance of industrial diversification and workforce transition, together with infrastructure and urban development. These same priorities are reflected in the present submission. We seek a substantial commitment from the Commonwealth, building on its initial contribution, to meet the challenge and its requirements.

The City of Playford and the City of Salisbury look forward to working with both governments to ensure delivery of a comprehensive, effective package.

2 A PACKAGE FOR NORTHERN ADELAIDE: WHAT DOES “GOOD” LOOK LIKE?

This paper calls for a strategic and sustained response to regional adjustment and employment growth in northern Adelaide. What are the tools that should be used for a comprehensive diversification strategy? How do we sequence its various elements for maximum positive effect? In other words, what does a good comprehensive approach for Northern Adelaide look like?

An integrated package of short-, medium-, and long-term measures is needed. Some of the proposed programs need to be implemented immediately to generate rapid positive outcomes, while other programs will only accrue substantial benefits in the medium (three to five years) and longer term terms (five to ten years).

In responding to the closure of GMH, the medium and long term outcomes will be much less favourable if the immediate impacts are not attended to.

The short term focus should be on urban regeneration and construction of infrastructure. Such initiatives should include transport infrastructure, city centre developments at Elizabeth and Salisbury and accelerated civic and commercial building development. These projects provide for the sustainment of key skills that might otherwise be lost, as well as putting a floor under household demand in the region. This short-term sustainment of skills and activity could include upgrades to areas of aging housing stock in in northern Adelaide, neighbourhood infrastructure and environmental improvement.

Concurrently, initiatives need to be put in place to sustain and grow small business in the region. These will be important in preparing businesses to cope with the downturn in demand that will follow GMH’s closure (as well as potential contraction in the defence sector); ensuring businesses survive and are able to participate in the proposed program of infrastructure development, and providing a jobs buffer to the losses in the corporate sector.

Northern Adelaide cannot afford the simultaneous coincidence of certain widespread job losses in the corporate sector with a possible (but avoidable) shock to the small business sector.

The infrastructure and small business initiatives can help sustain jobs and growth during the downturn, and provide time to commence the medium and long term diversification strategy and provide a breathing space for that strategy to take effect.

Key initiatives include building on the capabilities of manufacturers to transition into higher growth value chains. These could include medical devices, assistive technologies for the aged and disabled, high technology inputs into the resources and energy industries, clean technologies and defence.

The region contains significant research expertise within the DSTO and at the University of South Australia, and the Roseworthy campus of the University of Adelaide. There is also significant expertise within the other campuses of the University of Adelaide and Flinders University that could help accelerate new industry opportunities. For example, within the University of South Australia’s Mawson Lakes Campus are research institutes with specialties in mineral processing, telecommunications, manufacturing, environmental remediation, defence and systems, cell therapy manufacturing, environmental remediation, telecommunications and water management. The University of Adelaide contains a high level of expertise on workplace and business innovation, photonics and sensing, minerals and energy, agriculture and horticulture, engineering and nanotechnology.

Similarly, the region has, or is developing, expertise in business development and innovation, such as the Polaris Business and Innovation Centre in Salisbury and the Stretton Centre in Playford. *Strength in Diversity* seeks to build these two entities to become key deliverers of sophisticated business services and advice in the region.

These and other sources of expertise should be used to work on identifying and developing new higher value industry opportunities over the coming decade. They can be marshalled to address immediate problems, as well as to look over the horizon on a 10-year timeframe to prepare for future opportunities and innovations.

This differs from previous approaches to economic shocks. The approach adopted in response to events such as the closure of Mitsubishi or Electrolux was to provide job placement services to retrenched workers (rather than retraining), often into positions that were short term or casual. Although over a limited time it could be reported that a reasonable proportion of displaced workers had found employment, it is likely that in the new arrangements many did not maintain the same level of working hours, or prior earnings, with implications for the region's economy overall.

As a stimulus to employment, a program of company grants was operated. These tended to be dispersed quickly, on an individual company basis. The program and funding cycle was short to medium term, at around three years. Results were also measured over a reasonably short timeframe. It did not, on the whole, result in industrial diversification. Whilst there was an employment adjustment scheme, there was no 'enterprise adjustment' emphasis, neither in the directly affected sectors nor the broader regional business community.

The proposed approach of *Strength in Diversity* stands apart from this by:

- Integrating the short, medium and long-term imperatives into a 10-year plan;
- Focusing on the requirements of diversification and enterprise adjustment to new growth areas; and
- Including infrastructure and urban renewal as integral elements of economic rejuvenation.

3 SHAPING OUR FUTURE

A different and better future for northern Adelaide is possible. Successful industry transformation and stronger regional growth require key principles to be observed and for sustained effort directed at defined priorities. The principles below draw upon examples from international experience on successfully reversing industrial decline and creating prosperous cities.

3.1 THE CENTRALITY OF MANUFACTURING

The problems of the automotive industry attest to the difficulties that Australia, as a small high cost economy, faces in competing on the model of mass scale-based manufacturing. Today, Australia cannot be a competitive manufacturer where the basis of competition is scale and unit cost. However, changes in technology and international supply chains, together with innovative business organisation, have opened up new opportunities for internationally competitive manufacturing based on short runs, high variability, rapidity to market, and high value products exhibiting medium to high 'complexity'. In so doing, it has opened up opportunities for small and medium enterprises (SMEs) and clusters of SMEs in global supply chains.

Recent international comparative and long-run research has confirmed that 'economic complexity' (meaning an ever-deepening division of labour and specialisation, and the applications of knowledge required) is what explains differences in countries'

performance and prosperity. Further, the study underlines that advanced manufacturing is central to achieving this complexity¹.

Closure of GMH without a strong response would see important and irreplaceable industrial capabilities lost to northern Adelaide and South Australia. A diversification approach seeks to maximise retention of those capabilities by encouraging SMEs particularly to apply them to growth opportunities in other product markets.

The capability level of an industry and a region is path-dependent. Going from a relatively underdeveloped set of capabilities to very advanced ones is not realistic. Leap-frogging is not possible. Once these complex manufacturing capabilities are lost, they are gone forever.

But by building on existing capabilities, new capabilities may be created. This means targeting alternative product opportunities close to the current set ('near-by' products), and targeting gaps to move up the value chain progressively. A transition from old to new is viable by building on existing capabilities – translating and transforming what it already has. This is vital for northern Adelaide, which needs to find replacement activities for declining industries, and is in danger of permanent loss of significant capability.

Northern Adelaide's dependency on automotive manufacturing is a vulnerability. However, the capabilities acquired to carry out complex manufacturing associated with it provide a possible basis for transition into new, higher growth value chains, often with a significant SME presence. These could include assistive technologies (in the health, aged and disability sectors), medical devices, inputs to the resources and energy industries, clean tech and selected defence, as discussed below.

3.2 DIVERSIFICATION STRATEGY

There is a pressing need to diversify the northern Adelaide industrial and employment base in the face of intense competitive pressures on manufacturing and the need to accelerate the transition to a knowledge intensive, high value adding economy. A united response involving the deliberate application of strategy and resources to diversify the region's economic and industry base and build its portfolio of economic assets is needed. This means building and extending on existing capabilities, and applying them to new growth opportunities.

Of central importance is the identification of new opportunities for demand led growth. What are the potential sources of demand? These are elaborated throughout this paper, but in summary they come from:

- Industry diversification: seeing where we have capabilities acquired through the automotive (or other) industry that could be applied to making things in product and market segments where we can be competitive, and where our being small is not a disadvantage. This means aligning capabilities to areas of identified demand, and then assessing credible options for local industry development. It involves looking closely at the existing and potential new capabilities of SMEs particularly.
 - The starting point of this approach is capabilities (rather than discrete products) and how these could translate to new opportunities in new product markets.
 - Northern Adelaide's automotive manufacturing dependence is both a vulnerability and strength. Automotive manufacturing involves highly complex and interdependent value chains. Surviving Australian component suppliers have achieved excellence and major capabilities ranging from process engineering, materials science and engineering, to miniaturisation. These capabilities provide a possible basis for transition of existing

¹ Cesar A. Hidalgo and Ricardo Hausmann et al, *The Atlas of Economic Complexity: Mapping Paths to Prosperity*, Cambridge MA, Puritan Press, 2011

businesses into higher growth value chains. These could include medical devices, assistive technologies for the aged and disabled, high technology inputs to the resources and energy industries, selected clean technologies and selected defence, considered below.

- Other industry diversification and value adding opportunities are identified in horticulture, food production and distribution and 'safe and secure food' – a major strength of the region.
- Urban regeneration: The redevelopment of the Elizabeth and Salisbury City Centres, and a possible program to upgrade the region's ageing housing stock and develop greenfields areas (with associated upgrades to neighbourhood infrastructure and environmental improvement), with a strong focus on leveraging government and private sector procurement for local benefit.
- Development of industry precincts and transport and communications, again with an emphasis on leveraging procurement for local industry development.
- Utilisation of expertise and capabilities within organisations and research institutions to develop new industry opportunities.
- An industry and employment focus on health, ageing and well-being.

3.3 DEMAND LED APPROACH

A demand led strategy provides a sound foundation for industry and employment growth. It means having strategic awareness of current and future areas of demand and potential growth against existing industry capability and key industry economics parameters for efficient local production. This results in 'demand, supply, and capability' matrices for potential product and diversification opportunities, of particular relevance to SMEs.

This approach is already starting to be used. The Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) has recently established the Mining Industry Participation Office (MIPO) and PACE Manufacturing to define opportunities for local manufacturers to supply to the resources and energy sector through value chain mapping. This approach can be applied for Northern Adelaide to *prima facie* opportunities identified in key areas including:

- Selected defence (armed vehicles fit-out and through-life support; the Future Submarine project, amongst others)
- Selected resources and energy areas (copper and complex combined ore bodies; unconventional gas)
- Assistive technologies for the aged and disabled
- Medical devices, and
- Clean technologies.

These opportunities are elaborated throughout this discussion paper. The project on assistive technologies for the aged and disabled has been commenced through a partnership between the Stretton Centre and DMITRE. The overall approach is further explained in 4.3 'Diversified Manufacturing'.

3.4 BUILDING SUSTAINABLE NETWORKED CITIES

International experience attests to the power of urban renewal and a focus on city revitalization as a driver of industrial rejuvenation. Such revitalization can drive development of the regional innovation system. New public buildings and new urban form can help build connectivity and collaboration, e.g., better linking the city's businesses to high quality customized training. They come with new digital technologies and communications. They can bring people who create and make together with investors. They can help modernize education and training. They make a city more attractive as a place to live to mobile knowledge workers, who bring expertise and high spending power.

High quality urban form and infrastructure is essential to the participation of a city or region in the global knowledge economy. They bring closer alignment of education and applied research to innovation based clusters and precincts, finding solutions to problems close to the source. Cultural and educational activities that build community participation, vibrancy and amenity add to the resilience of the city's inhabitants. They help change and rebalance the demography of the area.

3.5. A BUSINESS LED APPROACH

Internationally, successful regional industrial regeneration has generally featured the strong and active involvement of business leaders working with government to develop appropriate strategies and partner in the implementation of initiatives. Such roles have included providing practical advice and intelligence to inform and shape broader strategies, acting as champions and advocates, driving changes through supply chains and giving enterprise-level feedback on programs. Business groups exist in northern Adelaide will be actively involved in shaping and informing the initiatives proposed in this submission. Such involvement builds a shared vision for the economic transformation and local capacity and resilience.

3.5 PROCUREMENT AS INDUSTRY POLICY

There must be stronger use of procurement by public authorities to maximise longer-term public benefit. This is not only to provide demand that will help sustain businesses and households in the region in the face of challenging economic and social conditions, but also to create an environment in which innovation can be captured, and new industry capabilities created. Contrary to much commentary in Australia, the use of public procurement as an industry development lever is not synonymous with subsidization or protectionism. It does not offend principles of competitive tendering. It is not something limited to developing countries, where their use is frequently viewed as evidence of cronyism and lack of transparency.

Many advanced and developed countries make explicit use of public procurement to stimulate local industrial activity and innovation. They do this typically with an emphasis on sectors with potential to yield technological advantage and spill overs: communications technology, electronics and software, aerospace, medical technologies, and especially defence.

The principle at play in the application of such policies in the US and European Community is: to use the massive purchasing power of states to create and capture national economies of scale, as well as to use that purchasing power as a demanding lead customer, able to drive technical improvement along the value chain². As a recent official EU publication 'Enterprise and Industry' states:

Improved public procurement practices can help foster market uptake of innovative products and services, whilst raising the quality of public services in markets where the public sector is a significant purchaser. Mobilising public authorities to act as 'launching customers' by promoting the use of innovation-friendly procurement practices is therefore an important measure in action plans, taking into account risks and regulatory limitations. Member states are encouraged to take specific measures to stimulate innovation and research through improved public procurement practices. To do this requires changes in the administrative processes typically used by national, regional and local public procurement offices in preparing calls for tenders.

² The most comprehensive analysis of these practices in Europe is Gunnar Eliasson, 'Advanced Public Procurement as Industrial Policy: The aircraft industry as a technical university', Springer, 2010.

Much is done to give effect to these policies. For example, whole of life costs are privileged over direct capital costs in making procurement decisions. This tends to favour local activity, as well as local innovation, as it takes account of cheaper maintenance and modification close to source.

The smaller size of South Australia and Northern Adelaide does not make these approaches inapplicable or inappropriate. Rather, we need to learn from best of breed and leaders in innovation in applying these principles to our own challenges.

4 DRIVERS OF PROSPERITY: SOURCES OF DEMAND

As emphasised previously, the key strategic aim is to identify replacement sources of demand and business and employment sustainment for northern Adelaide, as well as the foundations for its growth over time. Sources identified cover the short-term and the medium-and-long-terms. They cover industry diversification into new value chains, urban regeneration, precinct and transport and communication infrastructure; and an industry and employment focus on health, ageing and well-being. It involves building industry capability to take on new opportunities, through use of public procurement and tailored enterprise development. And it involves building the confidence and capacity of the community, and its workforce.

4.1 PLACE-BASED PROJECTS

4.1.1 CITY CENTRE REGENERATION

The Cities of Playford and Salisbury have identified the need for regeneration of their respective city centres. These regeneration projects would provide employment opportunities and lay a foundation for future growth. International evidence reinforces the part that can be played by major urban development (including cultural infrastructure) in economic and industrial transformation. The mechanisms by which this occurs include:

- Making the area more attractive to mobile knowledge workers who are so much a part of the economic future
- Creating closer integration of education and applied research with the development of innovation based industry clusters and precincts as centres of growth, and
- Building community participation, vibrancy and amenity through cultural and education activities that add to the resilience of the region's residents.

These regeneration projects are entirely consistent with the direction outlined in the 30 Year Plan for Greater Adelaide. They would be a public-private partnership to improve amenity and build highly productive infrastructure for economic growth, and would include:

- Increased and upgraded retail space and office accommodation (with potential for consolidation of Federal, State and Local government services into a one stop local shop)
- Increased public entertainment and cultural spaces, including an annex of the South Australian Art Gallery
- A pilot Defence Hub providing services to defence families, outside of Edinburgh to encourage socialisation of defence families living in the region
- Five Star green buildings from four to ten storeys, including apartments for private purchase and long or short term leasing, to service needs of local professional, medical and defence personnel, located near the retail areas and transport interchanges

- Adelaide's first metropolitan six star boutique hotel, incorporating hi-tech, multi-purpose convention and business meeting facilities (including video-conferencing), and a digital hub with fully serviced offices
- Full servicing by free WI-FI with all buildings linked with optical fibre as one of the first NBN roll out projects
- Development of transport infrastructure including multi-storey car parking, road realignments and upgrade of public transport interchanges, and
- Conversion of street lighting to LED, controlled by broadband fibre and WI-FI connections.

The City Centre Regeneration Projects would both help to stimulate the local economy during construction, and complement other initiatives to provide a platform for the region's sustained growth in the future.

These regeneration projects need to be complemented by transport and connectivity proposals of longstanding, such as the extension and upgrade of Elder Smith Drive.

The need for stimulus is underscored not only by the GMH decision, but the projected decline of major projects in the region, which will coincide with the ending of automotive manufacture in 2017. An analysis of the impact of the current major infrastructure projects on Playford, northern Adelaide and the state shows that over the period 2013-22, they will have a value just in excess of \$5 billion. 2013 is the year in which these have their peak impact on employment and regional output, after which the decline in their stimulatory effect is sharp. The impact on Playford Gross Regional Product (GRP) is \$120.5 million in 2013, falling to \$101.3 million in 2017, and then falling further to \$45.4 million in 2018 and staying at around this level for the remainder of the period. In line with this, the number of full-time jobs supported by these projects falls from 778 in 2013 to 293 in 2018³.

Unless something is done, this decline will coincide with the GMH closure, amplifying its contractionary effect.

There would be strict adherence to agreements and plans for local industry participation in the City Centre Regeneration projects, to maximize (on a competitive basis) opportunities for supply of goods and services by Northern Adelaide firms. This would include a priority on adding value to local and South Australian materials. This would create demand for suppliers of relatively standardised products. But in addition, the demand created by City Centre Regeneration has potential to bring new products and enterprises into being. For example, work is presently occurring on diversification of the state's south eastern forestry industry (Cellulose Fibre Chain project) and, in particular, new low carbon-impact application in building materials. Applying 'lead customer' principles, new innovations and opportunities can be captured.

4.1.2 PRECINCT BASED DEVELOPMENT

International evidence is that industry clusters and co-location of firms support higher growth, productivity and employment and innovation and help overcome issues of small scale. Industries and activities agglomerate. An observable element of successful industry growth is often the use of industry precincts and centres of competence. *Strength in Diversity* would seek to develop high value industry precincts to accelerate growth of new industries and to better service the community. As in the City Centres Regeneration projects, there would be strict adherence, in the development of precincts, to local industry participation principles to maximize benefits to Northern Adelaide businesses and residents.

Outside the city centres, the greatest potential for precinct based development in northern Adelaide is undoubtedly Greater Edinburgh Parks, with significance for

³ *Economic Impact Assessment of Major Infrastructure Projects in Playford, Stretton Centre, 2013.*

industries from defence, to transport and logistics, to food, horticulture and distribution, to mining and resources, to general manufacturing. Its full potential will require development of an integrated Economic and Employment Strategy by the councils, government and industry, incorporating investment attraction and complementary skills development. This is being worked on at present.

Key elements of the precinct based approach follow.

INTERMODAL AND LOGISTICS PRECINCT

The **Intermodal and Logistics Precinct** is located in Greater Edinburgh Parks and includes the recently constructed Specialized Container Transport (SCT) intermodal freight terminal. The intermodal terminal services Darwin, Melbourne, Sydney, Brisbane and Perth, and links to the Port of Adelaide. The development of the SCT terminal would spur development of over 300ha of Greater Edinburgh Parks, and is estimated to deliver over 10,000 jobs over the next 15 years. A vital element for further development would be a clear commitment to construction of the Northern Connector – Road and Rail Corridor, linking the Northern Expressway to the South Road Superway.

The Australian freight industry is expected to double by 2020 and triple by 2050. The precinct can grow as a strategic, productivity enhancing transit hub servicing horticulture, food processing, mining and energy, and manufacturing. The arrival of the 7RAR Battalion to the Edinburgh Defence Base and potential further growth opens up opportunities for army deployment of the precinct for equipment, vehicles and personnel across Australia.

In addition there are significant nodes of distribution and logistics activity, in and around such areas as Pooraka, Direk, Edinburgh and Salisbury South, that could be developed further with appropriate transport planning and infrastructure.

HEALTH AND WELLBEING

A **Health and Wellbeing Precinct** in and around the recently upgraded Lyell McEwin Hospital, which has potential to leverage growing demand to attract investment in new areas including:

- Expanding medical and clinical training and research close to Lyell McEwin, including potential for projects servicing the ADF and the Edinburgh base, with a focus on returnees from recent overseas operations;
- Attracting allied health enterprises covering potential regional services from repatriation institutions and support services to defence personnel, dentistry, paediatrics, physiotherapy etc.; and
- Establishment of a privately operated hospital and day surgery centre.

An expansion of the focus on health and wellbeing, complemented by an education and training thrust, would provide needed entry level jobs for northern Adelaide's population, as well as furthering higher end clinical training and research.

E-Health is revolutionising delivery of health services. With that comes also the potential for local innovation and local industry participation in new manufacturing technologies. As noted previously, manufacturing opportunities in medical devices and assistive technologies for the aged and disabled will be investigated as economic opportunities for the region.

DEFENCE INDUSTRIES

As for South Australia, the **defence industries** provide northern Adelaide with some of its brightest industry development opportunities. Northern Adelaide already has established **defence precincts** in Technology Park, DSTO and around the Edinburgh Defence Super Base. The relocation from Darwin of the 7RAR Battalion is a statement of confidence in Northern Adelaide, as Edinburgh was chosen because of its strategically important ease of access to transport infrastructure and deep engineering and maintenance capabilities.

Building on these strengths, *Strength in Diversity* will develop a comprehensive strategy to expand northern Adelaide as a super base for the Australian Defence Forces (ADF). The potential benefits to the ADF from consolidation come in the form of improved efficiencies and economies of scale and scope, and it is following a path of consolidation. Northern Adelaide offers the ADF the room for such expanded presence, operations and support (including accommodation), high quality infrastructure and connectivity, and proximity to leading defence technology firms and the DSTO, as well as other relevant industrial capabilities, including manufacturing and engineering of transport equipment. It provides potential for greater 'interoperability' between parts of the three defence forces.

For northern Adelaide, the benefits of increased ADF presence would be experienced in increased demand for goods and services from housing to health, education to food, etc., and in the sustainment and growth of key high end value adding industries that cluster around such sites.

Northern Adelaide's capabilities are also of strategic importance to a vital opportunity close in time: the Army's programs to replace and to extend the life of some of the Army's special purpose military vehicles. The most important of these is the plan for the Land 400 Combat Vehicle System. Described as the '*Army's largest, most expensive and most complex major capability equipment project to date*' (Defence White Paper 2013), it has an estimated \$10 billion purchase price. Much of this is the cost of importing the units. Although with a high import component, these vehicles require high levels of local assembly, fit out and testing. Beyond this, they require maintenance and through-life support and capability updates over their projected 30-year lifespan. Through-life support for Land 400 vehicles is estimated at five times the purchase cost.

Skills and engineering capabilities and infrastructure used in the automotive assembly and components supplier industry will be demanded by these military vehicle programs. Elizabeth and Salisbury have existing automotive suppliers with potential to be integrated by a lead customer into the Army military vehicles supply chain.

First pass approvals for the project occur in 2014-15, with a decision expected between 2018-19 and 2020-21. A requirement would exist for businesses to retool existing facilities, with an urgent need for assistance for such 'enterprise adjustment'. For employee adjustment, funding from programs such as Skilling Australia's Defence Industry (SADI) fund could assist with retraining and re-skilling of our existing workforce to undertake this critical work for the Australian Army.

A defence focused TAFE within northern Adelaide could provide further skills training and education for a future military vehicles workforce, as the project grows. TAFE could also be linked in to provide selected training required of defence RAAF, Army and DSTO personnel working within the Edinburgh Defence Precinct.

The South Australian Government has substantial land holdings within Technology Park. It is important that a renewed effort be put into attracting defence-related organisations into this precinct and that industry development, as opposed to asset management, becomes an underlying principle for its future development. Clear targets and accountabilities should be established within government to accelerate its further development.

The Future Submarine project centred on the Australian Submarine Corporation in Adelaide is the largest defence capital program in Australia's history. It is a program to replace the Collins class submarines with a new fleet of 12, valued at \$36 billion. It will involve a highly complex supply chain with strong opportunities for local industry participation. Nevertheless, the capabilities required of suppliers to provide goods, services and technology to the project will be very high, and will challenge many Northern Adelaide firms. A program of accelerated enterprise and technology improvement aimed at rapidly lifting firms to defence-ready levels of capability is urgently called for.

MINING AND ENERGY VALUE CHAIN

Northern Adelaide has significant expertise in **mining and resource services**. The Ian Wark Institute is a leading centre of expertise in mineral processing; firms like Ausco Modular, Osmoflo and Jumbo Vision are supplying products as diverse as temporary accommodation, desalination plants and control rooms into resource major projects.

Even with the deferral of the Olympic Dam expansion, South Australia has a portfolio of diverse high value resource and energy projects that could provide diversification opportunities for manufacturers in Northern Adelaide. These projects provide South Australia and the region with some of its brightest manufacturing diversification opportunities.

The state government seeks to help companies capture activity from resource projects through negotiated industry participation arrangements, aimed at ensuring local companies have adequate opportunities to bid for supply to major mining and resource projects (as distinct from allowing mining majors to default to imports).

The second task is to ensure as many companies as possible have the capabilities to meet the exacting standards required to supply to the resources and energy industries.

To these ends the state government has established the Mining Industry Participation Office to forecast areas of demand, and PACE Manufacturing to assist company pre-qualification and capability development, promote clustering, etc.

Mining and energy projects are manufacturing-hungry, requiring highly sophisticated technological inputs. Like the defence industry, exacting standards are required of companies supplying to the resources and energy industry and, as for the defence industry, a program of accelerated enterprise and technology improvement is needed to give Northern Adelaide companies the chance to compete effectively.

It is essential to take a portfolio approach to the resources expansion to fully leverage demand and opportunity. This means taking a 10-year perspective on demand to come from projects in the state, rather than dealing with each separately. It also means understanding the industry's complex supply chain and targeting high value opportunities within it, where we have the capability or can develop it.

The Resources and Engineering Skills Alliance (RESA) has recently published findings of future demand for resources related skills in South Australia⁴. Under its 'likely' scenario (16 of about 40 projects go ahead), it believes 27,442 new jobs will be created in the combined construction and production phases, with the highest demand coming from copper and iron ore mines, and for skilled production and process operators and technicians.

The beneficial impacts of this expansion could be so much higher and enduring, were the state to carefully target selected upstream manufactured inputs and technologies through the approaches described above.

HORTICULTURE, FOOD PRODUCTION, PROCESSING AND DISTRIBUTION

Northern Adelaide possesses significant strength in **food production, processing and distribution**. The **Virginia horticultural area** is one of Australia's premier horticultural districts, with annual farm gate production of \$250 million, and potential for growth. To achieve this, greater consistency of quality and output is needed. A new representative body is also needed to overcome fragmentation amongst growers. Long term sustainability requires a progressive movement to chemical free production and a major

⁴ RESA, Future Mining Workforce Report 2014-2030.

regional clean-up of farms – ‘pride in product, pride in place’. Better approaches to waste management and recycling are needed. Within the region major food processors are clustered in Salisbury South, Pooraka and Edinburgh North, while Pooraka is home to South Australia’s largest wholesale produce market, and significant cold store and distribution facilities exist in Pooraka, Direk and Penfield.

Establishing a Horticultural Innovation Centre would link producers with training and R&D and business improvement, taking a whole of value chain approach involving sorting and packing, quality control, marketing and branding, collaboration and relationship building with buyers and markets. The centre would utilize the NBN to create a technology portal presenting live market prices, export opportunities and emerging markets information, enabling growers to act on market trends to secure highest returns for their product. New technologies would be piloted (e.g., communication with buyers via videoconferencing). As well, the centre would collaborate with research institutions and participate with demonstration farms. The centre would target increasing production and facilitating entry into new interstate markets. Establishment of a Virginia TAFE and secondary Horticultural Technical School is also aimed for.

This initiative has strong institutional support from the Wakefield Group, which is a collaboration comprising all councils or council areas making up the federal seat of Wakefield, and which is well-positioned to lead and oversee the advancement of many of these projects, in collaboration with the Stretton Centre.

It is also a priority to identify and use the opportunities provided by the sector’s growth to expand value adding by the industry, and for sourcing of locally produced manufactured inputs and services.

4.2 SMALL BUSINESS DEVELOPMENT

The bulk of businesses in northern Adelaide are small businesses. The loss of GMH’s economic contribution to the region in wages and salaries will be felt keenly by this group of businesses. The avoidable possibility of a collapse of the small business sector, coinciding with major corporate closures, would place additional labour market pressures on a region already experiencing high unemployment.

This would mean a generation of greater disadvantage for the region. It would not only mean drastically-reduced direct employment within the small business sector, but would also remove vital first job opportunities for school students, school leavers and already unemployed people. The range of programs required includes:

- Improving the resilience and job creating capacity of existing small businesses through a focussed business mentoring and coaching program
- Assisting small businesses to identify new opportunities through a focused market expansion program
- Developing a digitally literate business community, using new technologies to create business opportunities and improve practices, and
- Supporting businesses to improve their processes and develop new products through a university-linked business innovation program.

At the same time there is a need to encourage new business formation in the region. This focus will create jobs, not only for entrepreneurs, but also for the people they will eventually employ. It also embeds business decision making and management skills and capabilities within the region, building flexibility and resilience. This would require:

- Significant expansion of the existing business intender programs run through the Polaris Centre; and
- Establishment of a business incubator and an allied business acceleration program.

4.3 DIVERSIFIED MANUFACTURING

Diversifying Northern Adelaide's manufacturing base is imperative. This means the translation of capabilities associated with the automotive industry in particular, to demand in other manufacturing value chains. Identified targets include selected defence, selected resources and energy, medical devices, selected clean technology and assistive devices for the aged and people with a disability.

Further detail on assistive technologies is provided below. However, opportunities in other value chains are likely to exist within:

- Defence – armed vehicles fit-out, integration and through-life support; the Future Submarine project; Joint Strike Fighter; others
- Resources and energy – copper and complex combined ore bodies; unconventional gas; others
- Medical devices
- Clean technologies – renewable energy including niche solar technology; water and environmental technologies.

Many of these opportunities align to the 'new manufacturing' mentioned earlier. This is manufacturing where being small is not a disadvantage, where agility and innovative business organisation is key. Changes in technology and international supply chains, together with innovative business organisation, have opened up new opportunities for highly innovative SMEs, targeting short runs, high variability, rapidity to market, and high value products, exhibiting medium to high 'complexity'.

These are the manufacturing capabilities targeted in South Australia's *Manufacturing Works*, which is the leading policy statement of its kind in Australia, and of the announcement of the *Our Jobs Plan* initiative of the SA government. These require additional funds to achieve requisite scale.

There is a common approach to identifying opportunities and maximising industry participation for local businesses as follows:

- Mapping the demand (current size, rate of growth, expected size) for key goods and services for the different product/market segments over the coming 10 years (opportunity mapping). Understanding and leveraging this demand to build scale, capability and new industry opportunities
- Compiling a schedule of high value credible opportunities for local industry development and possibly foreign direct investment attraction
- Mapping the current capacity and capabilities of existing South Australian industries against these opportunities, and
- Identifying capacity and capability gaps needing to be addressed.

This gives us a schedule of high value credible opportunities and a Supply/Demand/Capability matrix for each of the targeted product/market segments.

EXAMPLE: ASSISTIVE TECHNOLOGIES – AGEING AND DISABILITY

In partnership with DMITRE and the Stretton Centre, WISer is applying this approach to opportunities for diversification into Assistive Technologies for the aged and people with disabilities. Assistive Technologies are defined as devices that enable individuals to perform tasks they would otherwise be unable to, on account of age or disability, or that increases the ease and safety with which tasks can be performed. There are opportunities to carefully target and lead local industry and business development to this demand growth along selected parts of the Assistive Technologies value chain.

Demand for Assistive Technologies will grow in tandem with population ageing and rising disability rates, in turn related to greater life expectancy and population ageing. Key technologies applicable to assisting the aged and people with a disability include

modifications to homes, advances in diagnosis and treatment through telehealth etc., and a suite of technologies, both traditional and emerging cutting edge.

In Europe and the UK particularly, there is an evident emphasis on the growing importance of technology applications in meeting these challenges. Moreover, there is an explicit focus on the leveraging of this demand to create domestic advanced manufacturing for economic and industry development opportunities. But this emphasis on the industry development opportunity is less evident in Australia.

Assistive Technologies include segments that are precisely the type of advanced manufacturing activity that should be targeted for achievement of positions of sustainable competitive advantage. They have the characteristic of high income elasticity of demand, meaning that the demand for them grows proportionally as national income grows. Demand for them is less sensitive to increases in price, and they embody competitive strengths beyond solely cost-price based models. They are *prima facie* suited to high-wage, high cost economies such as Australia.

Furthermore, the technical characteristics of production of many segments within assistive technologies do not necessarily require immense scale to achieve competitiveness. Many new technological applications, such as subtractive and additive manufacturing, will reinforce the ability of smaller firms and clusters of firms, to be competitive internationally.

The intent is to promote the transition of firms and workers with adaptable capabilities from declining sectors such as auto manufacturing into this new growth area. These common, translatable capabilities include high process engineering skills, expertise in materials science and technology, computer controlled processes, etc.

The study of opportunities in this area will use international specialists from German technology and industry development body Fraunhofer Gesellschaft as strategic adviser. Company interviews on the potential for diversification into this area have commenced. Activities including industry engagement are staged to September 2014.

5 AN INFORMED AND COLLABORATIVE APPROACH

Success in economic rejuvenation goes to those regions that build and institutionalise collaboration and purposeful cooperation between key players and decision makers. The international experience is unequivocal on this.

They bring together government, industry, unions, academia and the community in practical ways, on projects that are of high and demonstrable value to the economy and community. They are not exclusive convocations of experts, but they do connect specialists to citizens and the participating communities to ensure mutual understanding and strong information flows and feedbacks. They recognise that a strong economy depends on having a resilient and participative community. They value both expertise and local knowledge.

They build strong institutions recognised externally as highly competent and strategic, and they ensure those institutions are internationally networked and contain highly skilled and proficient leaders and staff.

There is no end point at which even the most successful regions can say 'enough has been done'; they are always learning, building new skills and striving for better results.

There exist several bodies in Northern Adelaide with roles in business and social development. There is a need, in recognition of the scale of the challenges ahead, to augment the skills and capabilities of regional institutions, as well as to ensure they form an efficient, well-led network into the future. Different organisations need to

complement, not duplicate, the work of others. There needs to be clear accountability for outcomes.

The most fundamental point is that all need to work to a **common plan**. That is what *Strength in Diversity* is all about. And it must be recognised that Northern Adelaide cannot do it all by itself. The collaboration and its institutional form need to embody commitments from regional institutions, industry, the state government, and the Commonwealth.

To implement this common plan, there is a need for a simpler and more integrated approach, with a focus on the key economic challenges. The strength of this model is the diversity of participants and providing a focus for coordinated and complementary effort. Opportunities for improvement to enable a more robust and resilient innovation system will be pursued.

Finally, the Polaris Business and Innovation Centre (Salisbury) and Stretton Centre (Playford) are well-positioned to be the institutional foci for collaboration between governments, industry and the university sector in the areas of economic and industry development, as well as in program delivery to businesses in the region. They will become vehicles for the professionalization of the councils' economic development efforts, and should, over time, combine delivery of certain state and Commonwealth programs, offering proximity to the end users.

Polaris and Stretton will have different but complementary roles. The councils want to see both organisations built up to be highly professional industry and business extension agencies for economic development in northern Adelaide.

The Stretton Centre aims to be an expert industry and workplace innovation body relevant to the modern manufacturing and knowledge economies. It aims to be an integrative, leading and coordinating entity, learning from the best of breed internationally (e.g., Fraunhofer Gesellschaft in Germany).

The Stretton Centre seeks to combine practical local knowledge with understanding of international best practice in industry strategy, building a team of highly capable practitioners, networked to key decision makers and influencers at state and national levels. It will specialize in helping to build high performance workplaces that align with the new industrial opportunities – short runs, high variability, and high value products, and medium to high complexity. It will provide value chain expertise, business extension services, and highly valuable approaches to effective local industry participation practices. It will be an advanced business extension agency for manufacturing and knowledge-intensive service industries.

The Polaris Centre is actively building the capabilities and resilience of small and medium enterprises in northern Adelaide by bringing together innovation and applied business development programs. It does this by providing business coaching and mentoring, programs to improve small business digital literacy, programs to connect businesses to university expertise, creating commercial opportunities by linking small firms together to create greater scale, and running business intender and entrepreneurship programs. A further element of the Polaris Centre is to lift the aspirations of small business owners by profiling local success stories and highlighting emerging trends and opportunities. It acts as a bridge between businesses and councils to facilitate investment and re-investment in the region.

As an active partner, in the Polaris Centre, the University of South Australia is able to provide quick and easy access to leading knowledge and expertise. The Polaris Centre is well positioned to incubate and commercialise opportunities. . In partnership with the Stretton Centre, this will include providing expertise in design-based solutions for manufacturers and a strong gateway for businesses to benefit from the extensive

engineering, information technology, and business management expertise within the University of Adelaide and University of South Australia.

Both Stretton and Polaris could embed state and Commonwealth staff responding to plant closures and could host such staff brought on by the up-scaling of support programs, also delivering certain services under those augmented programs. They could also measure regional performance to measure progress against clear benchmarks and targets over time.

The contribution of GMH to the state and the region has been extremely significant over many years. We seek to work with the company to identify co-investment opportunities that help to underpin recovery from the impact of closure, including development of a leadership development program, a future leader's scholarship program and an innovation and design hub.