

# **National infrastructure plan**

**By Jon Bryan**

## **What if we could solve almost all of our problems in the next ten years? Well now we can!**

This paper provides plans on how to bring Australia well into the 21<sup>st</sup> century and become more productive, provide faster services and lower operating costs for businesses. The cost of doing this would be massive and would take almost twenty years to complete, but is recoverable through increased revenues, and is completely possible if we spend the taxes we receive from the mining boom efficiently. It is recommended we use all of the revenue from the new mining taxes to fund massive infrastructure right across Australia which will benefit everyone. We now have a chance to completely revolutionise the way we live, travel and do business. Australia has fallen way behind in infrastructure and competitiveness, but this would bring us to the forefront of infrastructure and competition, provide all the services the people of Australia deserve and create new jobs in all kinds of new and existing sectors. The way we can achieve this is by doing it once and doing it right. By building more than one project at the same time, we can save billions of dollars. The flow on effects of a project like the one outlined in this paper would have a massive effect on our economy and guarantee growth for at least 20 years, change our lifestyles and the very way we do business today. Australia is losing its edge and is suffering from decades of underinvestment in multiple areas. This has led to much less developed countries having large technological and infrastructure advantages over Australia. This is a project we cannot afford not to do if we want to enjoy sustained economic growth in areas other than mining, reduce the effects of our two speed economy and continue on the path of success we not only enjoy but expect. Instead of being the victim of natural disasters where there is a lot of rainfall, we can use the water to our advantage by using it for power generation, water security for the southern states or water storage in case we suffer from another prolonged drought. On the completion of a project like this, we would be the envy of the world and be a much more enjoyable place to travel around or immigrate to. It is estimated that it would take roughly as long to build the project as it would to recoup the costs of building this massive project. The exact amount of positive effects of a project like this are too wide and numerous to know at this stage. At the very least, people will enjoy cleaner, cheaper travel. Our cities, roads and airports would be less congested and the government will be able to generate ways to stimulate the economy by building great new businesses and generate much higher revenues. It is expected that we can achieve all of these by carrying out the project outlined in this paper:

- **Less congestion on urban roads**
- **More, faster, cheaper travel methods**
- **A drought proof country**
- **Flood proofing areas that are prone to flooding**
- **Decreased water waste through grey water recycling**
- **Dramatically increased population growth abilities**
- **Less people in the cities until infrastructure catches up**
- **Incentives for people to live in rural areas**
- **Dramatically increased transport capabilities**
- **High speed rail to every major city in Australia**
- **Two completely new modes of transport**
- **Enhanced defence and policing capabilities**
- **More education opportunities for Aborigines and rural areas**
- **More job opportunities for Aborigines and rural areas**
- **Increased life expectancy for Aborigines**
- **Increased police presence in remote areas**
- **New, Green, Hydroelectric power**
- **Less greenhouse emissions**
- **New business opportunities for entrepreneurs**
- **An opportunity for businesses to be more competitive**
- **Land affordability for low income families**
- **Sustained economic growth for the next 20 years**
- **Increased water efficiency**
- **Lower unemployment rate**
- **New tourism opportunities**
- **A dramatically higher GDP**
- **More tax revenues**
- **Less burden on the social welfare system due to an abundance of jobs**
- **Dramatically increased farming capabilities**
- **Lower power and water bills**
- **The ability to take in more immigrants**
- **Less burden on our busy hospitals by providing more adequate hospitals in regional areas supported by high population growth**
- **Less impact of the two speed economy**
- **Help save native species of endangered wildlife**
- **Reduced salinity levels in our water reserves and inland**

## **Mining taxes – a chance to make a difference:**

With the new mining tax delivering more money to the federal government's coffers than ever before, we now have the opportunity to deliver all of the services the people of Australia deserve. By utilising the mining super profits for major infrastructure, we are able to solve or alleviate the major problems Australia faces today. Over a ten year period, Australia is set to gain an extra 400 billion dollars if the economy is healthy. The project outlined in this paper would ensure our economy remains healthy for the next 20 years thus ensuring we can pay for it. It would be enough to solve or alleviate almost all of our major problems. It includes building a new 6,000km national highway, 6,000 km of national high speed railway, a 5,000km national canal project capable of holding enough water to finish the drought, increase defence and policing capabilities, produce clean electricity for atleast half a million homes thereby lowering our reliance on dirty coal plants and reach our emission targets by dramatically lowering our greenhouse emissions, and put an end to the major infrastructure shortfalls we are experiencing today.

## **Our infrastructure project in more detail:**

This paper outlines five main projects. High speed rail, a national highway, the largest tunnel in the world, a new city and a canal which can be used for water storage and transport. By building all of these projects side by side and all at once, each project can compliment the other and we can save the country billions of dollars in waste. The plan also includes ways to make sure we a more secure source of power and water while leading the way in green technologies while improving the lives of Australians living both in the city and in the country.

The first part of the project involves building a 50 metre wide canal along our main inland borders. An area that is mostly crown land and would be relatively cheap and easy to develop. The canal should have a deep section in order to make it possible to develop a water-based transport industry. This can be achieved by digging the centre of the canal down to 40 metres. At 20 metres wide, this would allow large vessels to pass through with ease. The outer 30 metres (15 metres on each side) could be dug at 20 metres. If the canal is only filled up to 30 metres, this provides us with the capability of catching astronomical amounts of water (over 7 billion square metres of water) and storing it with ease while having a deep canal which can form part of our transportation backbone. It should run from our two northern borders (or alternatively, just one of them) where there is more rainfall and we are able to access the canal by sea. The canal should split somewhere along the border between Western Australia/Northern Territory/South Australia. This area is quite

mountainous which would provide a lot of water when it rains due to runoff. The infrastructure may be able to be located between the mountains in the Northern Territory or alternatively go around the mountains on the Western Australian side where less people reside. From there it should run to the eastern corner of the South Australian/Queensland border where the canal feeds into a big lake next to a new regional city to be built. At this location, it would be possible to build a privately funded hydro electric project. After leaving the lake area, the canal would run down to the border area on the Murray river and from Cameron corner to the Moree area. The high speed rail and national highway could run beside the canal in these areas which would provide a 30 metre wall next to the canal in case of extreme flooding. This would not extend past the Nullabor Plain, the area on the Western Australian border with the Northern Territory adjacent to Broome or the Moree area on the Queensland/New South Wales border.

Because the main infrastructure would be located in the country on crown land, it is possible to do a massive project like this while keeping costs much lower than we usually experience. The most difficult part of the project would be linking high speed rail in the city areas with the national grid. But this is no reason to stop this project. At some point we need to build the infrastructure anyway. By receiving 2 billion dollars off the state governments for the cost of building the infrastructure per year, it ensures that all of the states are pulling their own weight as well. The mining boom is generally thought to last for atleast another 10 years. **The people of Australia are going to be in serious trouble if we don't spend the money from the mining boom properly. If we come out of it with substandard infrastructure, we will lose our edge and fall even further behind second and third world countries that are already ahead of us in a number of areas.**

Another facet of the project involves building a national fast rail line to several areas around Australia. The federal government should build the main inland infrastructure and the state/territory could be built by local companies. The states would be required to build a high speed rail line and road connection to their main population centres. In **Victoria**, this would require two rail lines from **Melbourne**. One to **Bendigo/Ballarat** and then on to **Mildura** where it will connect to the national high speed rail grid. **Adelaide** would also join up at this point. Another from Melbourne to **Albury/Woodonga**. New South Wales and the ACT would build a line from **Albury/Woodonga to Canberra** and then on to **Sydney**. And another line from Sydney to a new centre to built on the **Queensland/New South Wales border around the Moree area** where it

will link up with the national grid. In **Queensland**, from around the **Moree** area to **Brisbane**. And another from an area on **the Northern Territory/Queensland border adjacent to Mount Isa** through to **Mount Isa** and onto **Cairns**. **Western Australia** would have a line from the **Nullabor plain to Perth** and another from the border area adjacent to **Halls Creek to Broome** and another line up to **Katherine** and then on to **Darwin**. In return, each state will be able to recoup the costs of funding the project through new revenues from the high speed rail operating in their own state.

Another exciting part of the project is the National highway between the area adjacent to Halls creek in Western Australia all the way down to the Nullabor plain. It would then run along the border area along the Northern Territory/South Australian area to the new regional city to be built. From there it would run to Cameron Corner where one would follow through to Moree and the other to the Mildura area. It would be a great idea to name roadways that pass through a state to be named after the current premier or chief minister of the state or territory. 10-15 new bridges would be needed to connect existing roads and make it possible for traffic on existing roads to continue travelling unhindered by this project.

Perhaps the most exciting part of the project would be a 250km tunnel from Wilson's promontory to Devonport. The project would require three tunnels. One for high speed rail, and two for the national highway. This would make it possible for people to travel the Melbourne-Devonport by fast rail in around 1 ½ hours and around 2 hours by car. This would form another integral part of the project aimed at providing Australians with a reliable, high speed, land based transport system that well and truly brings our infrastructure up to date. It would then be possible to travel to every corner of Australia by national high speed rail and brand new national highway. This would also make it possible to easily commute between Tasmania and Victoria for work. It would also attract new tourists to Wilson's Promontory and Tasmania. Currently, a large amount of tourists count out travelling to Tasmania due to the relatively high cost of travelling and the large amount of time it takes to get there. This would also apply to Wilson's Promontory.

### **A safer, more secure future:**

After the bushfires in Victoria and the floods in Queensland, we need to realise that when a bad natural disaster hits in the future, we are very vulnerable due to the lack of infrastructure in this country. By building this project, we can ensure that the country has a more secure electricity

grid and a way to get rid of flood waters very quickly. By having more water, we will be able to save the country billions of dollars through lost revenue. It will also help us increase food security for Australia and the world. It also gives us the chance to take in more immigrants due to the amount of jobs that will be generated by this project and the ability to handle a fast growing population.

### **National infrastructure co.:**

It would be very difficult to oversee a project of this size. Perhaps the best way would be to plan the project and let the National infrastructure co. handle it. Through power sales, a fee every time a person uses the high speed rail, national highway or enters the special economic zone a fee of around \$10 can be paid to the infrastructure co in order to pay for this huge investment. Combined with land packages, it would take around 20 years to pay back the amount of money invested through revenues and savings. Since the infrastructure would pay for itself, the money may then be reinvested into new infrastructure projects thus creating a new economy which is only tasked with making sure our infrastructure remains at the forefront after the completion of this project.

### **National high speed rail network:**

The problem with our infrastructure at the moment is the amount of growth restraints we have. A standard HSR can carry 1,200 passengers per hour which is double the amount of an Airbus A380. HSR requires less land, consumes less energy and is more environmentally friendly. A typical capacity is 15 trains per hour and 800 passengers per train. A single lane of highway has a maximum capacity of 2,250 passenger cars per hour. Given these statistics, a standard twin track railway has a capacity to handle 13% more traffic while requiring 40% less land. A good HSR system should have good connectivity with other transport systems and should be designed to be fast, convenient, clean, reliable (as opposed to weather reliant travel such as air travel) and comfortable. This would provide our HSR system with all the things it needs to make it successful.

There are a few different HSR systems. The best system for Australia is the Tgv system. It allows us to build a truly high speed rail system in the outback and slowly upgrade our urban tracks. This will give us the opportunity to bring high speed trains into our cities without many upgrades at the beginning.

This project involves around 6,000km of national high speed rail followed by another 5,000km in the states and territories as we can afford to. Each state would need to pay \$2 billion a year for 10 years. Alternatively, they could opt to pay 1 billion over 20 years. It would be too much of a burden on the territories and Tasmania, so they would need to pay \$1 billion a year over 10 years. This could also be stretched out to 20 years if it is too difficult to pay off in that time. This would be recovered by state and territory rail revenues. It would allow us to cut our carbon emissions dramatically by taking the burden off our roads and using planes less. A station would be needed in at least 23 different cities. Including Melbourne, Bendigo, Mildura, Albury, Wilson's Promontory, Adelaide, Canberra, Sydney, Moree, Brisbane, Haddon's corner, Mount Isa, Cairns, Alice Springs, The Nullabor plain, Kalgoorlie, Perth, Broome, Katherine, Darwin, Devonport, Launceston and Hobart. This would open up the country, increase our GDP, competitiveness and bring our infrastructure system to the forefront.

The Sydney-Melbourne air route is currently the third to fourth busiest in the world. By building a high speed rail network, we can deliver essential services in much less time and for a more competitive rate whilst cutting down on greenhouse emissions. Most areas would only need one track on in each direction. It would be beneficial to leave enough room to add a second track in each direction at a later time. Victoria should have a rail link from Melbourne onto Bendigo and then onto Mildura where it meets the national rail line. Another should run to Shepparton and onto Albury/Wodonga. New South Wales would run the line onto Canberra and then onto Sydney. Sydney would run a line onto Moree where it would link back up with the national fast rail line. Queensland would run a line from Moree to Brisbane and possibly the gold coast. And another from a new national railway on the Queensland border directly inland from Mt Isa to Mt Isa and onto Cairns or Townsville. The northern Territory would have one rail to Alice Springs and another from the Northern Territory border to Katherine and then onto Darwin. Western Australia would join up with the national rail on the Northern Territory border onto Broome and another from a new national rail service on the Nullabor plain onto Kalgoorlie and then onto Perth. South Australia would have one line from Adelaide to the South Australia/Victoria border from the national rail link and possibly one from the national rail line on the Nullabor plain to another city in South Australia.

The most exciting part of the project is the Melbourne to Hobart link via a tunnel in the Bass Strait. This would cover around 500km but would pass two capital cities and bypass two other regional cities and significantly

lower the travelling time between Melbourne and Tasmania. The closest point to Devonport is Wilson's Promontory. One tunnel (of three possible tunnels) would be needed for high speed rail which would continue on to Hobart. The complete trip would take around 3 hours.

It would also be possible to join the national high speed rail network to existing networks by providing an area large enough to add an extra track for future private investment. This would be possible by having one main high speed rail line in each direction at the start and space for an additional high speed rail line in the future. This would make sure we are planning adequately for future growth.

Once a network of this scale is completed, it is estimated that we would need to buy at least 100 high speed trains in order to run a regular network. This would give each state 10 of their own to operate and recoup their costs and the federal government 20 to fill in any gaps there are in schedules and have one or two available for exclusive government use. If one replaced the Prime Minister's private jet for interstate travel, it would lower the emissions produced by our prime minister and send a signal to the Australian public that the government is serious about cutting greenhouse emissions and show that high speed rail is for everyone.

During time of war or a natural disaster, a national high speed rail network would enable the government to send much needed supplies and personnel within a matter of a few hours.

### **National canal project:**

By building a series of canals with ports along our borders, Australia would have a more secure water supply and a completely new way of transporting goods. To be economically viable, a canal would need to be a width of 50 meters in order to make it big enough for transport vessels to pass through easily. However, it should be wider at all of the junctions in order to allow larger vessels to pass each other easily. If the canal is filled to an average of 30 meters and dug down to 40 meters in the middle, it will be at less than 50% capacity (approximately 2.75 billion square metres of water). By building the rail infrastructure directly next to the canal adding another 20 meters of wall directly next to it, it would be capable of handling extremely large amounts of water (over 4 billion square metres of additional water).

This would greatly increase our ability to handle any flood waters in the future with relative ease. By having waters feeding into a central dam we can also use hydro electricity. The canal would be able to take flood

waters from all of the major rivers, enter it into a national water system where the water can be used instead of being lost. It would give us the ability to catch a lot of the northern rains and convert it into electricity and provide an abundance of water and cheap green electricity thus finishing our water availability and expensive, dirty electricity woes once and for all. This provides us with an opportunity to make money out of what would normally be wasted or considered a natural disaster. It would also be possible to eventually add all grey water to the canal rather than wasting it by pumping it out to sea.

This project would help us manage our water storages more effectively. It would link up almost all of our major river systems and give us more control over the water levels in them. It would give us a chance to move large amounts of water from areas that suffer flooding during the wet season to other areas in Australia that suffer from low rainfall and rely on water for their economy to survive. This would be achieved by holding water in the winter months when the dryer, more populated areas receive most of their annual rainfall. During the summer months when areas in the north or around South Western Australia receive large amounts of rainfall, the water can be diverted to the dryer areas.

By adding fish to the canal, we can help save endangered fish such as the Murray Cod and Trout Cod. In addition, by adding saltgrow trees on the side of the project, it would be possible to keep salinity levels down in order to sustain a healthy new canal system.

### **National highway project:**

By providing a national highway along the borders, Australians would be able to enjoy a truly national highway and a more direct route to their destination. Three lanes in each direction would be ample at the start with the option to add more in the future. The name of the main highway could be an aboriginal name to honour the traditional owners of our country. Every state-side part of the highway should be named after the current premier of the state.

By adding the Bass Strait tunnel, it would be possible to continue the national highway from Mildura to the east of the city and then down to Wilson's promontory where it would meet up with a small highway travelling through the Bass Strait tunnel.

One way to link the national highway to the Bass Straight tunnel would be to take over existing roads by buying them out or paying a dividend to the shareholders for the exclusive use of the road. This would require the

federal government upgrading them and taking on the responsibility of upkeep and upgrades in the future or by sharing the burden of future costs.

### **National electricity grid:**

During the devastating bushfires in Victoria, the need for a more stable electricity grid was made even more painfully obvious when we almost lost our connection to the national grid. Given the amount of taxes we pay, this is unbelievable. By having a hydroelectric scheme bolstered by wind turbines, we can make Australia a world leader in green energy and provide enhanced electrical security in the future for all Australians. By having a national high speed rail network, we would already have basic electrical infrastructure and would not need to spend as much money upgrading it to carry electricity directly into every corner of Australia.

### **Australia airport:**

A very exciting part of the plan outlined in this paper is a new, centrally located airport with high speed rail and a canal connecting it to all major cities and some rural cities in Australia. This would create a new transport hub in Australia, taking the stress on the airports in our cities and contributing to a revolution in our transport system.

### **Endangered species belt - Steve Irwin National Park:**

To build an effective hydro electric plant, a large reservoir would need to be made while also allowing boats to travel past. By building a triangular system, it provides the opportunity for water storage and hydro electricity in the corner . This leaves a piece of land (roughly 45km square) in the centre which can be used to house critically endangered, endangered, threatened (and extinct in the wild) species of wildlife which can be free from being impacted upon by humans. This could include threatened species of birds, frogs, insects, reptiles and more. This would provide the country with a new insurance population of threatened species. By building a separate canal between the haddons corner area of the canal and the new airport, it also provides us with a place to add threatened fish species to. Once the fish have successfully produced a large number of offspring, we can release the fish into the larger canal area. This would need to include fresh water plants during the construction phase along with shrimp, yabbies and crayfish in order to supply enough food for a population of fish. The possibility of adding endangered fresh water dolphins from Southern Asia or Africa would make a very exciting addition and a great tourist attraction.

If roughly 10,000 saltgrow trees were planted inside the endangered species belt, this would prevent the air quality from dropping in the future, extract salt from the water thus improving overall water quality, help prevent soil erosion, provide a habitat and cover for many different species while providing koalas with a source of food. This area would be a great place to operate as a zoo after all of the animals have grown and a population has been established. This could be possible by way of an elevated platform. This would provide the operators with enough operating funds to maintain the health of the animals and future breeding programs.

### **Bass Strait tunnel:**

A tunnel linking Tasmania and mainland Australia would create new tourism opportunities for both domestic and international tourists. A tunnel in the Bass Strait would make it possible to travel from Melbourne to Devonport in around 1 hour by train and around 2 1/2 hours by car. Building a tunnel across the Bass Strait would not be easy and would be hard to recover the costs from in the immediate future. This project should be seen as a necessity. Not as a luxury. In order to be a truly advanced economy, we much have basic infrastructure. By paying for this project with the mining taxes, we don't have to put a timeline on when it should pay for itself. This project would also instigate a rail infrastructure upgrade in Tasmania which would see Tasmanians enjoy the basic services their mainland compatriots have had for decades. The estimated cost of this project is \$40 billion dollars. This includes \$5 billion for the rail link from Melbourne to Wilson's promontory, Devonport, Launceston and then on to Hobart. This would give Tasmanian producers the chance to pick their produce in the morning and have it at the Melbourne markets in the afternoon.

When building the tunnel, size is important. One tunnel would be needed for the high speed rail link and another two tunnels for traffic. In order to minimise the chances of a devastating accident in the middle of the tunnel, the tunnel should be fitted with a smoke reduction ceiling and cross passages around every 500m.

### **Water – the key to a stronger economy:**

Every year farmers are forced to leave their properties because there is no longer enough water to sustain a living. This created a big strain on the economy. By providing vast water storages, we revive areas where water is normally scarce thus generating more produce which in turn lowers the price of food for consumers, reduces the burden on our social welfare

services and increases the national GDP and tax revenues. By providing an abundance of water, we are able to receive a higher amount of skilled immigrants every year which is also likely to stimulate the economy.

### **Shipping industry:**

By providing a canal like the one suggested in this paper, the shipping industry would be able to be expanded beyond our capital and regional cities and revolutionise the shipping industry in Australia. By linking the canals with our northern seas, it would enable ships to transport goods into inland Australia and allow our rural areas to develop more jobs by creating infrastructure capable of handling water based transport vessels. This would reduce our reliance on our capital cities to take shipments and also our transport companies located in those cities. In the short term it enables new businesses to grow in rural areas and allows established businesses to invest in new forms of transport for those areas. It reduces our reliance on a few transport solutions and provides us with a very diverse and competition orientated industry.

In order to be viable, the middle of the canal should be quite deep to allow ocean going ships the space they need to move through the canal easily. The canal would need to be 50 metres wide along the border areas with a 20 metre wide 40 metre deep lane running through the middle. The remaining 15 metres on each side should be dug at 20 metres. The canal would need to be filled up to the 30 metre mark. It would leave another 10 metres of rain water and grey water before the canal would reach 50% of its capacity. This allows the canal to take in extremely large amounts of water and still have room for more.

### **Hydro electricity:**

It is recommended that the government build basic infrastructure for the project and then find private investment in order to build a massive scale hydro electric plant inland. When states suffer from floods or have excess water, the water can be sent to a centrally located dam where it can be used to generate electricity that can then be paid back to the state at a discounted rate. If Dam levels become too high, excess water can be let out to sea via the canal on either of the borders in northern Australia or through the Murray River in South Australia depending on the circumstances at the time. This requires continuing the canals to the sea at either or both of our northern borders. It also gives companies the chance to transport goods by water to the inland area from anywhere in Australia or overseas. By building a high speed rail network and electrical

infrastructure along the project, we have the ability to carry electricity to anywhere in Australia for a fraction of the cost of building a new grid.

### **New city:**

It has previously been suggested by experts that we need a new city in Australia. The most logical place for a new centrally located, inland city is east of Birdsville on the Queensland/South Australian border around Haddons corner in the Strzelecki Desert. By placing a new city here, it is possible to lower freight costs by transporting goods to a more central location for redistribution. Another capability we gain by adding a new city to this area is to use land which is currently unused and turning it into an area that can catch sustain a large population, catch and handle large amounts of water for hydroelectricity generation or for use in areas that receive relatively low rainfalls and are in need of water for agricultural purposes. Another area for a new city is on the Western Australian/Northern Territory/South Australian border. It is also well located given its central location.

When building a new city, a name and layout is needed. It would be possible for the government to have a competition for the name and layout. The winners can receive a large parcel of land in the area being named. In addition to the provision of cheap plots of land, this would encourage more people to move from crowded city areas and seek new opportunities and employment. By providing a brand new, well modelled city it is possible to add new areas to it as people require more land.

By building a new airstrip with cheap plots of land nearby, this would provide the building blocks of a future boom in transport area for the local community and form part of a transport revolution in the country. Birdsville already has a large airstrip which would be of a very big benefit to this project. This would also provide new jobs in an area that does not already have an abundance of jobs.

Effective planning of a new city is important. By doing this, it is possible to build a great city with state of the art infrastructure while keeping costs low at the start. This would be possible by starting small. By providing a high speed rail link to the city, it would be possible to plan for a new sports precinct, university, cathedral, city hall and many other exciting projects at a later date.

An additional 10,000 saltgrow trees could be allocated to the new city. They could be grown in the middle of the roads which would provide the

new city with a great way to get rid of harmful emissions from cars and other emitters.

### **Special economic zone:**

Another way to entice people out of the cities is by providing a GST free zone where a fee is made every time someone uses any of the services related to this project or enters the new regional cities. After the cities are built, large blocks of land can be sold for a very small price, encouraging lower income people and working families to move and take up work in the area after all of the projects set out in this paper are started. If the price was just \$10,000 a block, this would encourage more people to invest in the new areas and move from the city thus alleviating congestion. This would provide a great benefit to businesses who are trying to sell their products at a more competitive price, lower operating costs, create a lot of new investment and provide a great incentive for people to move out of the cities and look for new opportunities.

When building the new economic zones, medium scale ports can be built into the infrastructure. Along with high speed rail and a new canal, goods can be flown into the new city and distributed from a more central location. This will take the stress off the major cities and instigate a major transport revolution and create a shopping mecca for people out of land that is relatively unused right now.

### **How to go about such a large scale project:**

In order to be successful with the timing of such a large scale project, the lakes, canals, lochs, bridges and tunnel would need to be built first. This would give the canal a chance to collect water, cause minimal interference on people's day to day activities and allow the high speed railway to be built after all of the basic infrastructure is built first. The high speed railway, highway and green projects would not be able to be started for around 5 years due to the large amount of preparation involved. After ten years it would be likely to have the canal and all or most of the basic infrastructure ready or close to being ready for service.

### **NBN Co.:**

With the NBN co. already building the most expensive project in our country's history, the plans outlined in this paper would give the NBN co. the opportunity to create their own infrastructure without the cost of having to pay for land and the digging of thousands of kilometres of land in order to lay cables.

### **Enhanced policing and paramedic capabilities:**

After building two new regional cities, new police and paramedics will be needed. But there would be an easy way to solve this problem by integrating it into the infrastructure already being built. This includes several multi purpose buildings where locks are built (approximately 500 square metres) which can be shared by the police and medivac services. After building the high speed rail, national highway and canal, it gives our emergency services an amazing new capability. It would be very easy to include police and medivac capabilities. This can be reinforced by purchasing several high speed boats and using the canal for an alternative transport method. This adds up to one new amazing capability.

### **Opportunity for investment:**

Australia already has the infrastructure fund which could be incorporated into this project. Private investment is also a great idea. This would ensure that the project had ample operating funds in order to ensure the timely completion of projects.

### **Economic benefits:**

By creating a special economic zone, more companies will be able to cut costs and keep their businesses in Australia. This provides more jobs for Australians thus increasing our GDP in the long term. By building such a massive infrastructure project, Australia's economic progress will be massive and will reduce the effects of the two speed economy. Entrepreneurs will have a vast array of new opportunities to invest in which will provide the country with a series of great new business prospects, jobs and a lot more cash flow.

### **Cost cutting ideas:**

To build such a large scale project, it will require billions of dollars. It is recommended that the government can make a deal with the cement companies and other companies which will be needed for large parts of the project for a cheaper rate on their products or services. This would provide Australia a big saving on the whole project but will be great for local economies. When building trains for high speed rail, the price can vary quite a lot. It is recommended that the trains be built in South Korea or another country that has high speed rail but still enjoys relatively low labour costs.

Due to the fact that our trades are already busy finishing infrastructure projects already being built, we have the chance to employ foreign companies to complete limited numbers of projects by providing cheaper

labour. This is an area that has been discussed previously but was never needed. A project of this scale would render it not only necessary but possible as well. It would be possible to aid the population growth with skilled overseas workers already occupying new growth areas.

### **Addressing climate change:**

Although running high speed railway will get more people to abandon their car if the price of travelling is cheap enough, thus bringing down our greenhouse emissions, there are a lot of other ideas that could revolutionise the country as well. If one tree was planted every metre each side of the project, that will total over 20,000 trees. The perfect tree for this project would be the Saltgrow Eucalyptus Hybrid. These trees thrive on salt water, can produce high quality hardwood and can re-shoot from stumps. If an extra 80,000 were purchased, trees could be planted in areas where salinity is the worst. In the short term this could spark interest from the public in Saltgrow trees. In the long term, it may spark enough interest to pave the way for farmers to line their paddocks with them. This will ensure that Australia's salinity levels do not rise to a point where farming is no longer possible. Compared to the cost of the project, it would be easy to absorb the cost (less than \$1 per plant). A plan for thousands of wind turbines has also been factored in the budget. Combined with hydro electricity, we can drive electricity prices down which will lessen the burden on low income families and bring us to the forefront of clean energy production.

### **Natural disasters:**

As natural disasters become more prevalent, Australia needs to develop ways to deal with them. By having a large inland canal, we are able to absorb large amounts of flood waters with relative ease. The cost of inaction will be the lives of Australians and future costs of rebuilding after a natural disaster. If we spend our money wisely the first time, we can save lives and invest in infrastructure that is well planned and reaps maximum benefits. Rather than being spent out of necessity because people are without basic infrastructure or even a home. Other areas with less rainfall would undoubtedly be happy to help fill their dams with the extra water. It could also be argued that bushfires would have less impact if this project were to go ahead due to the large amount of water available and the decreased likelihood of the fire spreading from one state to another due to a 200 metre wide structure impeding the chances of the fire spreading.

### **Tourism/Shopping precinct:**

It has been pointed out that Australia's tourism industry is not diverse enough for the new kinds of tourist we see today. Not all people want to lay on a beach in Queensland or spend days travelling in a car. This is why we need to build a brand new tourist attraction. If we had a special economic zone which was made GST exempt, it would be a great place for international visitors to do some shopping either on their way in or out of the country. It would also be attractive for Australians as well. A brand new shopping mall which can house more big brands than we have ever seen before in Australia from businesses with lower operating costs and no burden of paying GST instalments would provide brands with a great incentive to set up shop. By building a world class city, we would be able to entice companies to set up shop there. With a budget of 50 billion dollars for two new regional cities, it would be easy to create new attractions that can attract tourists that are less interested in going to the beach or spending days travelling through the middle of the desert.

There are countries which have already enjoyed the benefits of high speed rail which are not considered an advanced economy. This has to create somewhat of a negative experience for overseas travellers when they see our much slower system. If we were able to add affordable high speed rail to our services for backpackers and overseas travellers, we can provide them with more attractions. This will give our tourism industry a much needed boost. Domestic tourism would increase too. The Sydney-Melbourne route would be possible in around 3 hours from city to city. People would be able to live further away from their work thus creating more job prospects.

### **New regional base hospital:**

Australia's health system is in dire straits right now. By adding a new city in the country which is centrally located, it will help other hospitals by reducing their patient numbers and reducing waiting times. Currently, some Australians have to travel up to a thousand kilometres to get the treatment they need. This would give people the treatment they need in a hospital closer to their home.

### **Policing and emergency services:**

After building new rural cities, it would give the police and ambulance services a new base to operate from. It would provide rural Australia with a great new policing and emergency services capability ready to help at any time. People in the outback would finally have the services they need and more people would be prepared to move to the outback with

their family. The cost of doing this would also be relatively cheap when already building such a large project compared to building something like this from scratch. It would also create new jobs and sow the seeds of a new community.

### **Concerns:**

**Environmental impact** – Australia is suffering more and more from natural disasters and the air quality is getting worse. We need to act now! The government has not upgraded the infrastructure enough to support the number of people now living in Australia and this adds to the impact of natural disasters. Now is the time to fix it. From cleaner energy sources, 100,000 new trees planted, more efficient and clean transport methods and better water infrastructure. This project will ensure water security and decrease salinity levels. Australia will finally be doing their bit for climate change. Also included in this project is a piece of land which could be dedicated to animals which are nearing extinction in Australia. The project would ensure we have a new population of endangered animals as an insurance against their extinction. The benefits to the environment far outweigh the negatives.

**Cost** – All of the ideas outlined in this paper are needed to improve the country and are related to the current concerns Australians have about the direction in which the country is headed. There are third world countries which are currently enjoying more up to date services than we are. One of the biggest problems we face today is ‘the tyranny of distance’. This project would overcome those problems as much as we are able to with the resources we currently have by using them to our full advantage. Perhaps the most important thing to consider is the fact that our infrastructure has been underfunded for such a long time. Can we afford not to do this? Would we want to fall even further behind third world countries?

### **Breakdown of costs:**

The project would require us to use all of the money from the new mining taxes over a ten year period. This equates to an investment of 40 billion dollars a year from the federal government. After receiving payments from our states, we can expect the federal government to spend around \$305 billion dollars and have another \$130 billion left for future infrastructure projects such as upgrades to some areas of this project, a hydro electricity project, more national highways, new schools, new roads, extensions to the national High Speed Rail e.t.c.

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\$240 billion for the construction of a national high speed rail system @  
\$18 million per km in rural areas and \$24 million in the cities  
\$5 billion on atleast 10 new bridges and related infrastructure  
\$2 billion for 2000 new federal police and related equipment  
\$42 billion on the construction of a national highway @ 7 million per km  
\$10 billion for electrical infrastructure upgrades  
\$1 billion for 15 thousand trees and thousands of wind turbines  
\$50 billion on river construction and compulsory acquisition  
\$10 billion to plan and start building two new regional cities including 2  
new airports, schools, hospitals e.t.c.  
\$40 billion on a tunnel from Victoria to Tasmania including HSR

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\$400 billion dollars

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\$20 billion from each state and \$10 billion from both territories and  
Tasmania over a ten-twenty year period for regional high speed rail and  
various other projects

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\$130 billion over a ten year period plus private investment

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The extra \$130 billion would help to develop an endangered species belt,  
build infrastructure in the new cities and make additional changes to other  
parts of the project.

**Improving the lives of the Aborigines** – The Aboriginal people  
have fought very hard for a very long time to get what they deserve and  
nothing should be taken away from them in order to complete new  
infrastructure projects. This project also aims to help our traditional land  
owners enjoy a more comfortable and healthy life while living the way.  
This would be achieved by adding building new regional centres with  
new schools and hospitals built closer to their communities. One problem  
would be the WA/NT/SA border area. There are several alternate routes  
that can be taken in order to save our indigenous population from  
suffering.

### **Population growth:**

More and more people are populating our main cities which creates a  
strain on our already busy infrastructure. This project would provide jobs  
in areas that traditionally suffer from high unemployment. This would not  
only provide an incentive for people in rural areas to stay, but provide  
opportunities for people to move into the area as well.

Immigration will have to be slowed down due to our inability to cope with larger numbers of people. This affects the economy and is contrary to the policy of the Australian government over the past 60 years.

### **Fish farming:**

Another exciting business opportunity would be to utilise the canal for fish farming. Due to the fact that the canal would be on crown land, it would be possible to sell areas of land for the purpose of adding businesses alongside the project. During construction it would only require the infrastructure to be slightly altered in order to make it possible in the future.

### **Alleviating the impact of the baby boomers retiring:**

It is predicted that all Australians will be faced with even higher taxes when the baby boomers retire. The impact of having less tax payers at work can be softened by adding more tax payers to society. This involves the large scale immigration of skilled workers. This is not possible with the current state of our water resources and other basic infrastructure. The project outlined in this paper will make it possible for skilled workers to move to Australia, take a job and contribute to our society without being a burden on our infrastructure which would currently be unable to cope with it.

### **Increasing superannuation contributions:**

By increasing superannuation contributions to 15%, we can save future generations from suffering due to the inability to live on the super funds they have been able to save. This would create a new way avenue of infrastructure investment and would decrease our reliance on social welfare in the future. Superannuation contributions are something the government may have to do in the future. It would be much easier to implement during an economic boom time.

### **Boat crashes/oil spills:**

One way to stop this from happening is to build a system that stops boats from crashing into the sides of the canal and causing the sides to split. This would be possible by having a shallow side which is not full to the cement sides. Due to the fact that locks will be located all the way along the canal, if there was an environmental disaster, the locks could be closed which would contain the problem to a small area where it could be cleaned up with relative ease.

## **Proposed infrastructure upgrades in Western Australia:**

Recently there were several projects announced in Western Australia. Including port, rail and road upgrades. This would only be enhanced by the plans outlined in this paper.

## **Contingency plans:**

### **What about land acquisition? How much will it cost?**

-Almost all of the infrastructure can be built along existing state lines in areas that are predominantly crown land. Some land may have to be acquired through compulsory acquisition. This cost has been considered when calculating the cost of each project. The figures come from past projects, but when coordinating such a large scale project, it should be expected that there will be some cost blowouts.

### **What about Aboriginal land?**

-Most of the infrastructure does not go through public/Aboriginal land which means that rather than displacing our indigenous population, we can help them by offering more essential services which are closer therefore closing the life expectancy gap and improving their education prospects.

### **How can we build the project where there are mountains?**

-The most mountainous area is around the NT/SA/WA border where it is expected that the infrastructure is able to bypass the mountains either further inland or in Western Australia.

## **Possible new types of business:**

High speed rail related businesses

Fish farming

Hydro electricity

Green technology

Cruise boating

Boat based transport

Boat building

Tourism which targets more people of middle eastern origin

New shopping opportunities

Water intensive cropping

Water taxis

Cheaper future road upgrades due to cheaper tunnelling technology

**Conclusion:**

In conclusion, this is a project the Australian people deserve and despite the high price, cannot afford not to do. It guarantees large growth for the country over the next twenty years and delivers a lot of essential services for people in the city and more importantly, in the country as well. It helps us deal with rising costs and the high populations around our cities by providing incentives for people to live in rural areas. The project would take around twenty years to complete but would easily be the most influential project we have ever done and improve the lives of everyone by revolutionising our transport and water systems. By not doing this project, we stand to lose money due to lost productivity, the cost of providing a clean water source, from natural disasters and many other problems we face. Australia is one of the highest taxed countries in the world. We can afford this project. It is one we need and deserve.