

Joining the Dots

Sometimes it's great fun just to ponder and join some dots...

Of recent times, huge progress has been made in removing some of the technical objections to electricity as a modern and flexible transport fuel; especially in New Zealand with its strong base of renewable generation and an abundance of opportunity to develop more. I am 60(ish) and am now confident that in my remaining lifetime we will reach the point where for an electric vehicle will again (yes, again) be first choice for most car and truck buyers.

Interestingly, in the very early 20th century there was a wide range of electric cars and light commercial vehicles available. In spite of the fact that they cost up to 5 times as much as equivalent gasoline powered vehicles they outsold gasoline vehicles world-wide until 1912 as the rich and famous opted for the **more 'genteel' of the new technologies**. **The world land speed record as we currently know it was initially set and then broken twice by electric vehicles before gasoline got a look in.**

At that time people were not using cars or trucks for long trips because the lack of a good rural roading infrastructure kept trips short with rail as the choice for longer trips. Fuel storage and the advantage gasoline power provided in this was not a major factor. In fact, it **was not this advantage which first pushed gasoline ahead of electricity**. **It was Cadillac's invention of the electric self-starter in 1912 which did the trick by removing the 'hit and miss' element from starting with a crank. And the rest, as they say, is history.**

Electric power might have returned to the fore more quickly but for the combined might of the automotive and oil industries with their ability to, in particular, buy battery technologies and bury them while they harvested existing gasoline technologies. Then they **reluctantly moved into the technically complex 'hybrid' which nods at but does not fully embrace the advantages of electric power**. Electric traction power has always been very cool but this has largely been ignored in a gasoline culture. With maximum torque at **standstill, it powers the world's most powerful and fastest railway locomotives**. **Performance designed electric cars out accelerate their gasoline counterparts readily**. In motorcycling the Isle of Man TT has a well-established electric class with these motorcycles now lapping at over 160 kph average speed and expected to be faster than the gasoline machines in 2 years.

With many fewer moving parts there's not much to go wrong. You don't need a gearbox, differentials or clutch and the wheels and axles could form the basic components of the traction motors. Brakes would be for emergency use only with reverse polarity providing much of the retardation. Servicing requirements would be sparse and the need to dispose of used lubricating oils would be virtually eliminated.

Well where are we going with this? For the Pickering lecture series this year, IPENZ toured Professor John Boys from Auckland University through New Zealand. John spoke on recent developments in practical inductive power transfer at Auckland University and joined a lot of dots around how New Zealand can not only lead the world in its development but also in its practical deployment as an alternative long distance transport solution.

Inductive power transfer in the roading context involves embedding elements in the road surface connected to an appropriate power source to create a strong local magnetic field. Power is transferred to corresponding elements on the vehicle as it passes through the field to recharge its batteries. The field is activated by the approaching vehicle. The elements could be set up in lanes at strategic locations and largely eliminate the constraints around battery capacity and range. Vehicles using the lanes would be charged for the power they pick up. IPT opens up huge opportunities; particularly for the heavy motor vehicle fleet currently powered by imported gasoline. It could effectively switch to a zero emission renewable energy resource which is intrinsically better suited to heavy haulage than the gasoline/diesel alternative.

Thinking one step further, this technology might hold the key to taking much of our heavy vehicle fleet off the highway onto the rail corridor which could be converted into a IPT high speed truck-way in regions where rail is uneconomic.

This technology holds such a wide range of potential advantages for New Zealand that it should be starting to exercise the minds of our national and regional transport planners to ensure that we have the capacity to deploy it when the time comes. However, it does require a leap of faith.



"An early electric land speed record holder. The lady fell off as the speed approached 20 kph."



Not an energiser bunny! A serious electric racer.

written by the Editor.

Two perspectives from the Auckland Procurement Forum.

On 16 November 2012 the **Productivity Partnership's second** Auckland Pipeline Forum report was launched at a well-attended function in Auckland.

Constructing Excellence has been managing the project on behalf of the Productivity partnership and Tim Warren, project manager, was delighted with the turnout and especially the presence of the Hon Maurice Williamson, Minister for Building and Construction and Ian Maxwell, acting COO for Auckland City.



Hon. Maurice Williamson,
Minister for Building & Construction

The Minister's perspective

In the opening address at the forum, the Minister noted that the Pipeline report detailed some \$2 billion worth of pending project work with another \$6 billion to be committed over the next 3 years.

"This is important information for the industry which is also resourcing a national response to the Christchurch Earthquakes".

The Auckland Procurement forum has emerged as one of the major initiatives of the Productivity Partnership which is a joint project between central government, local

government and the Building and Construction sector charged with increasing sector productivity across New Zealand by 20% by 2020. This represents a GDP increase of 2% representing savings or additional opportunity worth approximately \$3.6 billion per annum.

Procurement practices were identified in the 2009 Sector productivity Taskforce as key productivity drivers. The Auckland Forum is seen by the minister as *"a great opportunity for widespread engagement of government and private construction procurers beyond the forward expenditure pipelines set out in the report into areas such as geobuild and and the creation of a Construction Procurement Centre of Expertise"*.

The Minister is confident of the success of the Forum concept and announced that a similar programme is being looked at for Christchurch. *"With the re-build momentum picking up the Government remains absolutely committed to ensuring hold-ups will be minimise and that resources can be applied in the right quantities at the right time to achieve this. On November 1, 45 of Canterbury 45 leaders and key stakeholders in the rebuild, who were aware that there may be benefit in working collaboratively and coordinating resource requirements across the city met and were enthusiastic about the procurement forum concept. Further planning around its establishment is currently underway."*

Looking ahead the Minister devoted some time to the development of Geobuild as a key component in moving the sector into the digital age.

"GeoBuild, in essence, is an interoperability strategy designed to ensure that value can be realised from Online Consenting, Building Information Modelling and Geospatial Information Systems being able to "talk" to each other.

It is central to the success of the Productivity Partnership's work to increase the uptake of Building Information Modelling Systems (BIM) in New Zealand."

The Minister's final message was clear.

"This Auckland Procurement programme not only sets a new way for the sector in Auckland, but also sets the prototype for similar programmes in Christchurch to help speed up the rebuild and also a national programme which will permanently aid productivity in New Zealand. All that is needed now is for you, the sector, to get behind the initiative and take advantage of all the programme has to offer."





Ian Maxwell, Auckland Council

The Auckland City perspective

Ian Maxwell, acting Chief operating Officer of Auckland City, gave a very informative address setting out what the procurement forum means for the City as a client and how they see their involvement developing.

“Aucklanders are working toward ensuring that our city is the most liveable. However, it will not be liveable for both residents and business unless it is also affordable. Affordability has never been as important as it is today. New Zealand firms compete on a difficult world stage. Auckland is home to 35% of our Gross Domestic Product and growing.

Auckland’s population is 1.5 million people. Another million will be added over the next 30 years needing another 10,000 homes a year. Every five years we need to add a city the size of Hamilton including commercial and industrial buildings, schools, water treatment plants and roads. The Auckland Procurement Pipeline is important. Auckland City see it as an initiative which will lift the productivity of our building and construction sector; a key component in ensuring our city is affordable and that we meet the

growing population’s needs.

Auckland City is contributing to the Auckland procurement Forum in three ways.

- *The provision of information*
- *Changing the way we purchase services*
- *The deployment of efficient technology*

Today Auckland Council can provide information about our future work program – the nature and value of projects together with when they are scheduled to occur. Over time this information will improve as we further analyse our spend and break it down into specialist supply chain categories.

With this information we will publish a long term procurement plan. This will include multiyear, multi project procurement using a panel of suppliers. We are piloted this approach now. We have a ten year development program for artificial sports surfaces and sports field development. This pilot is already showing good gains compared to previous approaches.

*Auckland Council is also investing in new technology. The Building Consents team will be among the first to use GeoBuild – the integrated information system described by the Minister. We are enthusiastic about our unitary plan and the productivity gains this will provide. It is a single District Plan or set of rules concerning property development across Auckland. It will replace Plans established by **the previous eight Council’s in Auckland.** For the first time consistent rules will apply across the city. As a developer or builder it will be simpler to operate in different suburbs. Integrated with*

this is our consent processing.

In Auckland a small number of firms undertake a large proportion of building. They are experienced. They know what they are doing. For both Resource Consents and Building Consents, teams are being established to speed them through the progress. Today 70% of our non-notified consents are out the door in a month. This will improve.

Auckland Council is also working on technology including hand held mobile devices to permit inspectors on site to issue consents and systems that will bring property information from eight Council systems into one. This will permit the establishment of fewer and more productive centres to process consents and communicate with applicants.

*The performance of the building and construction sector is key. Auckland Council is part of this sector and we will play an active role in the Auckland Procurement **Forum”***



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Making a real difference - The evidence!



Tim Manning, Industries and Paving Exec Divisional Manager for Fulton Hogan arrived on the ACE course with a comprehensive project management background. He left with his sleeves rolled up ready to make a real difference. By nature, he was not going to die wondering if it was possible! Here are his thoughts 18 months later.

I had the pleasure of being part of Cohort 6 for the Dip of MEEC. We finished in June 2011, and when I look back now I think of a great bunch of people, some good laughs, challenging times, some great ideas and of course really good lunches.

I came out with some idealistic ideas and set straight into my Project – *‘How to double the profits of an Asphalt Paving Supply Chain’*. While we achieved our goal in the following year and I’m extremely proud of the great team that was formed, it was really just due to them doing the basics right.

My project involved the following four steps:

1. We created a team – we brought 9 internal supply chain departments together to focus on the goals and outputs of a combined group.
2. We created a Vision and path together and made sure it was customer driven.
3. We introduced the principles of Lean – where foremen and supervisors became the focus and we used them to plan and review.
4. Finally we introduced measures that we reviewed weekly as a team and set actions so we could continually improve.



When I ask myself did it need to take me a year to figure out such a simple plan?

The answer is no, I actually needed two years to figure it out. The challenge that we all face in business is how to connect to our staff and especially the job level? How do we inspire them and get them to believe in what they are doing or what they are being taught. My lesson was things will never go exactly the way you thought they would. Teams need to take a life of their own and experience the value of new approaches themselves. The challenge was providing the leadership to keep them on their journey.

On a positive side, the journey has provided a lot of satisfaction. Some highlights for me include:

- Seeing a foreman develop from a liability into an asset.
- Having a Traffic Control STMS (leader) that would be listened to and actually treated as part of the team, rather than being blamed and criticised all the time.
- Seeing a Department Manager develop and take the lead role.
- Experiencing the commitment and desire of so many support businesses.

The future is equally exciting as the opportunities are just as large. The results we’re striving to achieve across our whole business are:

1. Having inspired and motivated foremen (and teams beneath them) leading all of our Supply Chains.
2. Maintaining self driven continual improvement.
3. Having competition between Supply Chains to be the best in the Industry.
4. **Jobs only go ahead if they’re planned to** maximise efficiency.

In summary, I love the diversity we have in our industry and the potential we have to make a huge difference.



Conventional wisdom is sometimes a contradiction in terms!



Jim Harland

Jim Harland has a wide ranging experience base. He is currently Regional Director Southern with NZTA having **completed 11 years as Dunedin City Council's Chief Executive**. He is planner by profession and prior to going south was Director of Planning for North Shore City. He was a tourism consultant for a number of years while his understanding of community leadership has been used by the World Health Organisation. Not surprisingly, Jim gave a wide ranging Industry **leader's address to ACE cohorts 8 and 12 in Christchurch recently** ahead of the business strategy module.

Within the business strategy module, some time is spent comparing the common rational approach to planning and the formulation of scenarios as a first step. *'Thinking first'* versus *'seeing first'*. Jim very neatly put this into the context of institutional planning processes. Too often plans reflect strongly the historical patterns of community interaction, transport and commerce. At best we get incremental change sufficient to meet immediate challenges.

In Jim's view, planning most usefully starts with a vision of what kind of community or organisation current stakeholders would like to hand over to their successors and a clear definition of what success would look like a decade or more into the future. From there it is important to work backwards picking up on future challenges and assessing resilience against these.

Jim cites ground breaking work he was able to do in North Shore City as a good example of this approach. He was given permission to undertake a very comprehensive 20 year planning exercise which took two years to complete. It started from community expectations, examined the global and local social, vocational and migratory trends and built a service profile around them. It required a 45% rate increase over 5 years, but one which Council backed and worked with to gain community acceptance.

Conventional planning approaches have their place in providing a good reality test, but only if they are backed by sound evidence. Challenging current knowledge is vital because often we build our view of the current environment to justify how we currently operate. Jim recalled a project he undertook for the Auckland Regional Council looking to bring together a long term plan around tourism. There was a strongly held view that historically, the average tourist stay in Auckland was two nights. Tourism promotion and development planning was based on this. Robust research quite quickly showed this view to be anecdotal and uncovered an entirely different picture with a 4.5 day average stay. Jim believes that Clients, whether they be from the public or private sector, are generally poor at briefing and it is an area in which professional service providers can usefully make their most potent contributions to the success of a project. Again the



questions around legacy and long term success need to be given a lot more air time than the perceived shortfalls in what we currently have. Jim spent some time providing an insight into the delivery of the new covered Dunedin stadium in a relatively hostile community environment. The project had an interesting conception centred on the inability of the Otago Rugby Football Union (the owner) to raise or service the funding necessary to further upgrade Carisbrook to meet NZRFU test standards.

The City understood that if Carisbrook was upgraded or a new facility built it was likely to be the ultimate owner. It was therefore keen to ensure that the right long term solution was developed. The new stadium concept on the edge of the current University precinct and a partnership with the University came out on top. It was understood from the outset that process would be tested at every turn and the Stadium Trust developed a risk-centric approach. The gestation period was extended through the need for transparent process and even so, final funding decisions were unsuccessfully tested in the High Court.

On the one hand the process compressed decision-making timelines to sub-optimal but it did allow planning to proceed in spite of this. About 20% of the total project timeline was spent on planning which paid dividends in delivery against the RWC deadlines. Jim is an advocate of the need to draw breath and plan at the beginning to assure an optimal completion.

What did the Dunedin stadium project confirm for Jim?

Problem definition, option identification and evaluation needs to be clear, transparent and in the public sector capable of legal scrutiny

- A focus on drawing together the best commercial, project management and community skills is essential.
- Good design and methodology planning, comprehensive peer review, and market testing of major work parcels before signing a construction contract were important risk mitigation steps.
- Independent verification of the procurement process provided important public confidence.

Jim did leave us with some thoughts around the concept of **'customer' in local authorities**. In his experience Councillors focus on the ratepayer while the Executive is more likely to take the view that anybody using any service is almost certainly part of a value chain which includes a rate payer. Under this model the entire population is the customer base; an important concept to understand in the planning and consultation environments.

Boiler suit to Business suit

While forward planning for most of us means thinking about next month or maybe even next year, Paul Withers, a member of ACE cohort 8, is looking decades into the future.

As the Gore District Council's district assets general manager Paul is only too aware that the decisions and investments his team makes today will **impact on the district's residents across generations.**

If he needs any vindication for this philosophy he only needs to look to the past.

"I am in awe of my predecessors and their foresight, there's stuff in the ground over 50, 60 years old that we are still using today."

A local lad, Paul's path to the Council's doorstep four years ago wasn't straight forward. In fact, if you had asked him all those years ago what he wanted to be when he left school, the answer would have been *"an electrician"*.

As luck would have it there were no electrical apprenticeships going when he was ready to leave St Peter's College. So it was off to one of the best trades' training grounds in the south at the time – NZFP's paper mill at Mataura – and an apprenticeship as a fitter and turner.

Looking back, Paul admits he was happy for a long time, just cruising along being a fitter and turner and was *"a late starter"* in the professional development game.

Even after all these years Paul can pinpoint the exact time he realised he wanted to do more with his life. It was watching a colleague, who was nearing retirement, crawl out from a particularly dirty, confined space after carrying out some maintenance work.

"I thought 'I don't want to be doing that when I'm old'."

So Paul up skilled, first tackling his Advanced Trade Certificate before focusing on a New Zealand Certificate in **Engineering and First Class Engine Drivers' Certificate.** At the same time he was working his way up the paper mill ladder and was relieving shift engineer when the next big opportunity came his way in the form of an enforced layoff with a wrecked knee ligament.

"I had three months off work so decided to put my foot down and finish by engineering certificate."

As part of that he had to write a CV and make a phantom application for a job, an assignment that earned him a B+.

"I was sure it was better than that. I was so annoyed I sent the job application away." The application had been for a shift engineer at the Edendale milk processing plant.



While Paul didn't get that job he did land one as a fitter and turner.

It was a step back and meant a pay cut but Paul was happy to accept the job, his eyes firmly set on the long term. As it turned out his timing couldn't have been better with Fonterra being formed and the plant launching into a time of unprecedented growth, while the paper

mill was mothballed within five years.

Paul was with the company for 13 and a half years, some of those experiencing significant restructuring and expansion. There was an 18 month period that he describes as one of the biggest growth phases of his life.

He embraced the strong corporate culture, revelled in the challenges but as was his nature, there came a time when he was ready for the next step up.

Enter the Gore District Council.

Moving from the corporate culture of Fonterra to local government was a learning curve and Paul says he took a while to get his head around the sheer scope of the role.



"I've been everything from being the calming influence when recovering a dog to sitting on talks with members of Parliament."

He sees his role today as managing people as much as managing infrastructural assets. Working in local government means working for your community now and **what it will be in the future, he said.** Right now that's a role he is very content with. However, at 48 he knows there is still more he wants to achieve – *"I just don't know what it is yet"*.

Paul is a well known face in speedway racing punting cars with many hundreds of horsepower around a clay surfaced track but latterly taking a n organisational role as **time permits. He doesn't dismiss the possibility of a return to the track– "it's a disease, it gets in your blood"** – and as a self-confessed petrol head, he would love to build a replica of an AC Cobra.

Whatever path Paul takes, it will be with his end game in mind.



International Deployments shape the thinking of new CCG Chair.



Lt. Col Warren Parke

In the last issue of CE News we featured Joe Hollander, the founding Chair of the New Zealand Construction Clients' Group. Joe had a comprehensive military career before moving into a civilian ranks.

Recently, Joe handed the reins over to Lt Col. Warren Parke from the New Zealand defence force.

Warren is currently the National Facilities Manager for the New Zealand Defence Force.

He has 21 years' experience in the NZDF; which can be classified as a multi-functional, operationally focused organisation. During this period, he has held a number of postings where he honed his managerial and leadership skills.

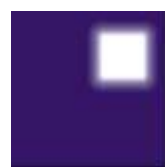
Two operational deployments; one to Africa working on land mine clearance and the other in East Timor providing logistical support engineering, were particularly challenging and required very different leadership styles while working with the PNG Defence Force to assist with the commercialisation of their non-operational/non-core functions has been directly relevant to Warren's current role.



Warren is passionate about raising the professionalism of the entire property industry. While officially a Military Engineer, he has taken a specific interest in Facilities Management and in doing so, has engaged extensively with the private and public sector. Warren has been active in promoting collaboration and continuous improvement in the Facilities Management industry. He sees that arguably the biggest gains in high level built environment productivity come from quality long term management and development of estate assets. ***"The build might have been efficient, but did we build the right thing?"***

Warren was pivotal in the conversion of the Waiouru Military Camp coal fired 8MW boiler heating system to using wood pellets, which recently achieved ***'Highly Commended finalist'*** status at the 2012 EECA awards for sustainability.

Warren has been active in the CCG for some time. As chair his aim is to ensure that the group remains committed to ***"improving the behaviours and business performance of our members by focusing on innovation, best practice and knowledge sharing in enhanced collaborative working and supply chain integration"***.



**Construction
Clients' Group**
CONSTRUCTING EXCELLENCE

2013 Coming Events...

27th February 2013 - AUCKLAND

6th March 2013 - WELLINGTON

Asset Mgt. & Facilities Mgt.



FEBRUARY 2013 Cohort 14
AUCKLAND

TERM 1 2013											
27 th Feb		28 th Feb & 1 st Mar		21 st & 22 nd Mar		15 th & 16 th Apr		30 th & 31 st May			
Course Outline	Excellence	Supply Chain Mgt		Lean Construction		Collaborative Working		Negotiation			
Excellence	MBTI	Supply Chain Mgt		Continuous Improvement In the Supply Chain		Integrated Teams		Team Building			

TERM 2 2013											
27 th & 28 th June		25 th & 26 th July		29 th & 30 th Aug		19 th & 20 th Sep		24 th & 25 th Oct		21 st & 22 nd Nov	
Leadership		BIM	Finance	Performance Measurement		Customer Relationship Management (CRM)		Risk Assessment (Integrated Teams)		Project Review	
Communication Skills	Proj. Feedback	Business Strategy		Perf. Meas.	Managing Change	Customer Relationship Management (CRM)		Risk Management		Project Review	

AUGUST 2013 Cohort 15
CHRISTCHURCH

TERM 1 2013											
21 st & 22 nd Mar		18 th & 19 th Apr		23 rd & 24 th May		20 th & 21 st June		18 th & 19 th July			
Course Outline	Excellence	Collaborative Working		Customer Relationship Management (CRM)		Performance Measurement		Leadership			
Excellence	MBTI	Integrated Teams		Customer Relationship Management (CRM)		Perf. Meas.	Managing Change	Communication Skills			

TERM 2 2013 - 2014											
22 nd & 23 rd Aug		19 th & 20 th Sep		17 th & 18 th Oct		21 st & 22 nd Nov		20 th & 21 st Feb		20 th & 21 st Mar	
Business Strategy		Supply Chain Mgt		Risk Assessment (Integrated Teams)		Lean Construction		Conflict Negotiation		Project Review	
Finance	BIM	Supply Chain Mgt		Risk Management		Continuous Improvement In the Supply Chain		Pro. Feedback	Team Building	Project Review	

Note: Modules and dates are subject to confirmation.

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