



## From the Chairman

April 2019



We continue to see some great Companies joining EMICoL, who show continuous participation. It's thanks to you the members and your continued commitment, that we see continued growth. As you will also note from further information sent out and in this newsletter, we have now formed an EMICoL committee. Members with a broad range of skills have volunteered their time to assist the EMICoL Board, so we can all benefit from growth in membership and work in collaboration on potential contracts. If your Company would like to be involved on the committee, please let us know.

Last month our partners at ECU Joondalup kindly hosted a function for us in their engineering department and this was very well attended.

Our members Routers Australia presented at the event. The Owner and Director Graham van Zuilecom of Routers Australia gave us a wonderful overview of the business. One of the highlights of the night was the following on the Sopwith Triplane. This is testimony of the talent from the businesses that are now in the EMICoL Cooperative.

To find out more on Routers Australia visit their website : [www.cncroutersaustralia.com.au](http://www.cncroutersaustralia.com.au)

### BUILDING A 1916 SOPWITH TRIPLANE USING A CNC ROUTER



Routers Australia is currently working on a very exciting project, CNC Machining the components for the construction of a 1916 Sopwith Triplane, which is one of the most famous planes in aviation history & widely used during WWI.

All measurements are from original Blueprints & components, which are then 3-D modelled in Solidworks, & toolpaths created in CAMWorks. This data is transferred

into a Routers Australia CNC Router, & the components cut with speed & precision.

#### A note or two about the Motor :

The original Clerget 9B rotary engine is a a nine-cylinder rotary aircraft motor designed by Pierre Clerget & used extensively by the British & French during the World War I era. It was used on aircraft such as the Sopwith Camel & Sopwith Triplane.

An interesting fact about the Clerget 9B is that the propellor is fixed to the motor, with the entire engine spinning.

This motor is one of approximately 18 originals left in the world. The photo shows both the size & beauty of this 1916 engineering masterpiece!

After it's arrival, the motor's eagerly anticipated first test run, was conducted & it ran beautifully. <https://www.youtube.com/watch?v=5Y6PsDfeFJ4>



*Here it is; one of the few original Clerget 9B rotary engines still in existence, ready to be installed in the Sopwith Triplane!*



CNC Routed wooden wing parts glued & assembled

#### Regarding the Wooden Components :

Top-quality wood was required for this project, matching the specifications needed for the aircraft: primarily, extremely light, while at the same time very strong.

Therefore, some components are being cut from 16 mm-thick Californian Aircraft Spruce, while Birch-Face Poplar is being used for thinner pieces. As expected, this wood comes at a large expense & accuracy is imperative.. Herein lies one of the beauties of 3-D Modelling together with CNC machining.

Working from original blueprints, we are using some of the best industry-standard programs (SOLIDWORKS/CAMWorks) to create 3-D Models, & from these creating DXF Files, along with 2D & 3D toolpaths for the machine.

Here at Routers Australia we are proud to be a part of this exciting project! Stay tuned for more about the wood & metal components along with updates & photos as the building of the Sopwith progresses!



Graham's presentation was a great lead into the exciting advances that ECU Joondalup school of engineering are making in their world class engineering facilities.

Professor Alexander Rassau and his team gave an overview of their ECU Joondalup engineering facility and their advances in additive manufacturing, followed by the tour.

During the tour, we got to see first-hand the quality of equipment built by students using the latest engineering technology including additive manufacturing.

Alex and his team advised that they were looking for further investment partners/ sponsors so they could enhance their equipment for additive manufacturing and the equipment would then be available for their partners/ sponsors use, within the engineering campus.

#### Why? – Turboprop Engine

Combustor test schedule reduced from 12 months to 6 months

**5% WEIGHT REDUCTION**

**20% LOWER MISSION FUEL BURN**

**855 to 12 PARTS**

#### Why? – Supply Chain Disruption

Assemblies to Components

Existing Mid-Frame Assembly

Mid-Frame Super Structure

Supply Chain Disruption

**7 to 1 ASSEMBLIES**

**50 to 1 SOURCES**

**300 to 1 PARTS**

Performance Factors

**30% WEIGHT**

**60% COST**

#### Proposed Services

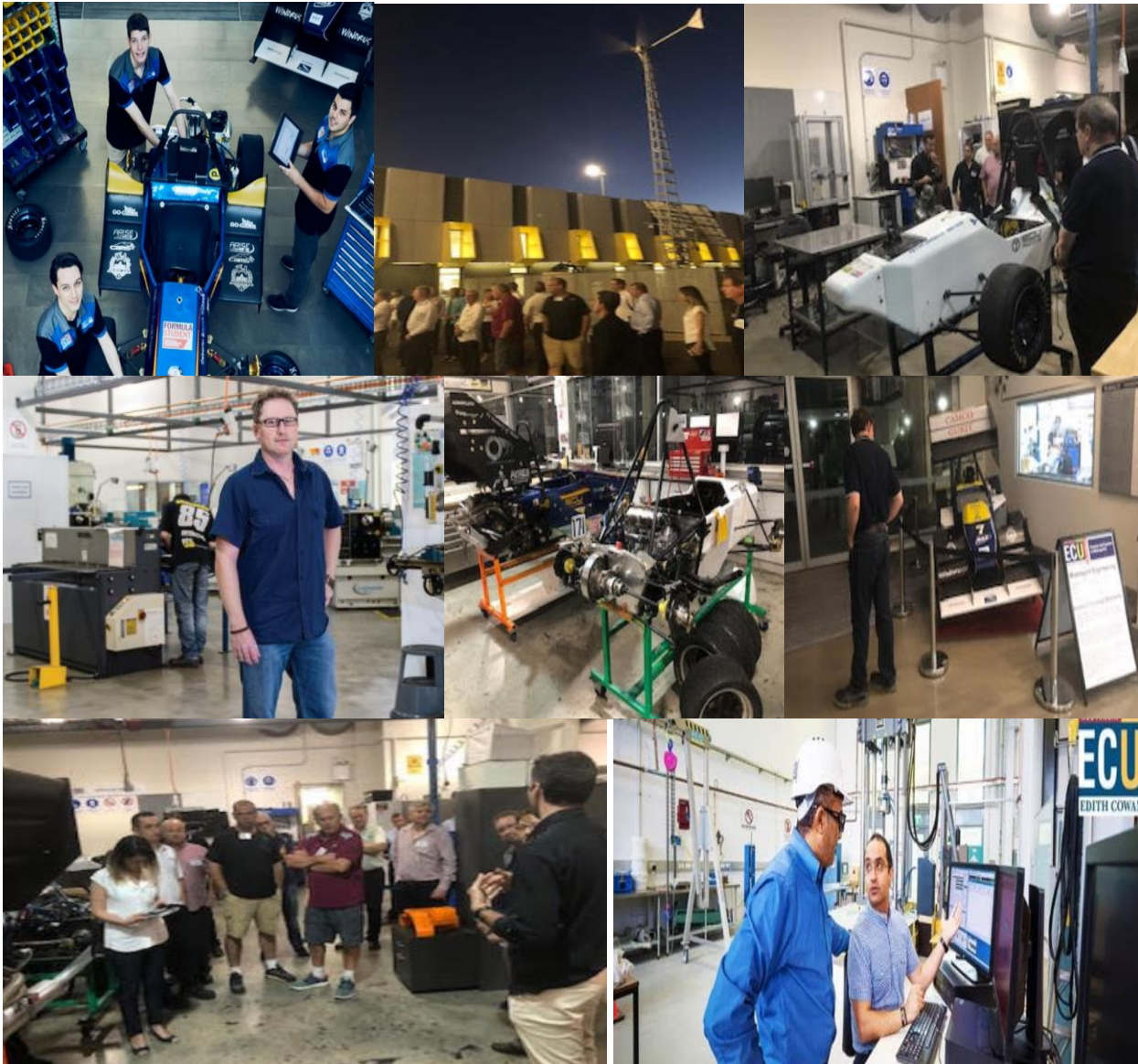
- Range of state-of-the-art additive manufacturing capability from global leaders (potential partners include GE, HP, Titomic)
- 3D metal printing of titanium alloys, steels and super-alloys
- Advanced polymer printing with HP Jet Fusion technology
- Other technologies based on industry need and funding

#### Making this a Reality

- To make this vision a reality we need your support
- We have University and government support for the concept, but need to secure industry partners to demonstrate the need
- A number of foundation partners are sought to assist with co-funding the initial start-up costs of the Centre – this funding will be leveraged with significant contributions from the University and government funding

If you are keen to discuss more on the above please contact Alex on email: [a.rassau@ecu.edu.au](mailto:a.rassau@ecu.edu.au)





The students at ECU and their lecturers are always looking for good engineering Companies to work with for the completion of student practicums. If you believe you can assist in this area, please contact Kudzai via email: [k.chipongo@ecu.edu.au](mailto:k.chipongo@ecu.edu.au)

On behalf of all at EMICoL I would like to thank the team at ECU Joondalup for providing their facility and refreshments on the night. Their time and generosity is very much appreciated and I hope that our members will be able to support their up and coming engineers in the future.

Our next event will be at SMS Group Services at their premises in Welshpool and we will be in touch soon with full details.

Thanks for your continued support.

**Doug Ennis – Chairman**

## Steve Delfos (Director of Avtech Engineering & EMICoL) Funding for innovation

Below is a program that appears to be a potential source of funding, members. Please let me know if you would like to discuss how we can assist with this and other types of funding programs. Link to the program is here: <https://www.imcrc.org/apply-now/>



### Innovative Manufacturing CRC (IMCRC) Research Project Funding

#### Overview

IMCRC Research Project Funding (RFP) aims to catalyse the transformation of Australian manufacturing through collaborative investment into industry-led projects aiming to develop innovative new products and services in Australia's manufacturing sector.

Examples of targeted project areas include **3D printing, automated technologies, high value product development** and improving the **uptake Manufacturing 4.0** technology and innovation practices.

#### Available Funding

- Funding requests can range from a minimum of **\$250K**, up to a maximum of **\$3M**
- A total funding pool of **\$40M** will be available from 2015-22, with **\$30M** allocated to **industry-led** research projects
- Industry participants must contribute **50%** of project cost

#### Eligibility

Eligible applicants include manufacturing businesses that wish to research **innovative manufacturing technologies and processes**. Projects will seek to resolve an **industry identified problem** through **genuine collaboration** between SME's, Growth Centres and CRC's, as well as include **high quality research** with universities, CSIRO and other research organisations.

**Eligible costs** for industry participants may include:

- Project management
- Travel
- Marketing
- Communications

#### Timing

For new project plan applications to be considered, all relevant documentation needs to be submitted to IMCRC Management by 20 May 2019.

**Steve Delfos - Director**

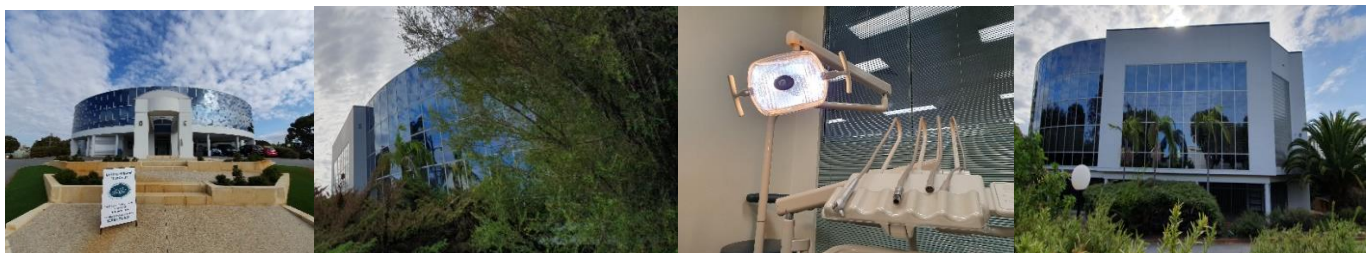
## Susan Lawton (Director of DNA Kingston Training & EMICoL) Training / Workshop Visits

Dear members, I just wanted to let you all know that we have now moved into a beautiful refurbished premises in Belmont, fitted with the latest equipment for the training of our students. Please see photos below.

Once we are a bit more settled, we will have our profile updated on the EMICoL website and you will be able to share all details.

Your ongoing support for visits by our students to your workshops has been very much appreciated.

DNA Kingston Training will be looking to organise workshop site visit for their next intake of students. If they're any further EMICoL members who would be happy to let our students take a short tour of their premises, we would welcome the opportunity and be pleased to hear from them.



**Thanks for your ongoing support**

**Sue Lawton - Director**

## Kevin Davis (Director of EMICoL)

### EMICOL Tender Committee

As discussed for some time now we have established a committee to oversee the development of a tender process which will enable members to actively participate in projects that they would not generally be able to.

The "EMICoL Tender Committee is meeting fortnightly to consider how we as a group can set up a process that will open up opportunities for work through a group tender process that will transparently engage with members of EMICoL and organisations seeking engineering expertise for projects.

The committee is considering potential contracts that would best suit the expertise and capability of the group with the current focus being the application of processes and procedures that will ensure good corporate governance and engagement with members in an equitable way.

You will have been contacted by John Morris to supply your individual organisations capabilities with a view to creating a Capability Register. This information is of the utmost importance in providing the committee with a clear account of your capabilities so we can demonstrate the individual and collective capability of the group. We will then be able to best represent the group to organisations seeking engineering expertise and services.

Please make this a priority and make sure your information is updated on a regular basis.

We will keep working in the background to get some runs on the board but if you are looking for assistance to win a tender or expand your business into other areas please consider consulting with our committee or other EMICoL Members.

This is an exciting time to be involved with the group and I look forward to catching up with you at the next EMICoL Event

**Kevin Davis – Director**



## Danny Briant (Director of EMICoL and PSM)

### Grants

As noted in our last newsletter The EMICoL Board is continually looking for opportunities we can share with you on grants. Our members at the Apprenticeship Community would like to share the following for which they are the exclusive provider of this initiative for Western Australian Participants,



### Skills Checkpoint for Older Workers

Skills Checkpoint for Older Workers (SCOW) is federal initiative supporting individual workers to access career advice delivered by qualified careers advisors. This initiative is targeted at employees over the age of 45 years requiring reskilling, upskilling, training, re-ticketing, requalifying, RPL, relicensing or similar. The program leaves the participant with a career plan and development recommendations. Actioning these recommendations will qualify the participant for up to \$2,200 (inc GST) in matched funding.

The criteria requires the individual participant be:

1. Over 45 and under 70 years of age 2. An Australian Permanent Resident or Citizen 3. Requiring further development, skills, licenses etc. to ensure long term sustainable employment is maintained and they are able to meet the ongoing changes and demands of their role and industry o There is no evidence requested or required however, during the application and eligibility phase, the Career Development Advisor will ask you to complete a sentence similar to the above in your application form

The process:

Eligibility check followed by application form to be completed either online, via email or in first advisory meeting (5 mins) Collection of I.D will also be required (certified copy sent or original shown to Career Advisor in person) 2. Our Career Advisor will meet with the potential participant to complete an initial advisory interview (over ZOOM, in person, at their workplace or our office – 1 hour) o The participant and employer are encouraged to voice the training requirements in these meetings which will inform the final plan (i.e. predetermined training already agreed by employer, individual and RTO) 3. The Career Advisor will give participant access to a scientifically validated career assessment tool (online – up to 30 mins max) 4. The Advisory meeting is booked and attended to discuss the career assessment results, career plan, applicable training and associated financial incentives. Employer can be included with consent from participant. (30-45 mins over ZOOM or via Phone) o Any and all training that is to be accessed and undertaken MUST be in this plan for the funding to be applied, i.e. you can't come back to amend a few months later and add additional courses or reapply 5. The Career Advisor emails and posts a copy of this career development plan to the participant.

The invoicing:

BUSY receives the invoice from the Training Organisation/s for the total amount of the training 2. BUSY raises an invoice for the Co-contribution amount and forwards to the Co-Contributor (Participant or Employer as indicated on the Skills and Training Incentive Agreement) 3. Co-contribution amount is received in the BUSY Bank Account 4. BUSY pays the RTO/s the full amount for each course/ticket/training invoiced



Further:

- The training must be delivered by an RTO or Higher Education Provider
- If the participant (and employer) know what training is required, aspects of the 'process' can be done in a group to streamline logistics and be completed in full in as little as two weeks depending on group size
- Training can and should commence at the next availability of the course/s after point 4 in 'the process' is completed. Naturally where more than one course or ticket is required, these can be prioritised and completed sequentially as is manageable and realistic for the participant and business
- The Apprenticeship Community (BUSY) should be notified of intent to train and engaged to sign up any traineeships for qualifications that will be accessed via the traineeship or apprenticeship system – we will advise of any further funding or incentives that may be available in addition to the SCOW funding
- The funding is per individual, for one or many courses, up to \$2,200 inc GST co-contribution and the program is currently in place until December 2020
- The funding can be used with any and all other funding and incentives and is designed to reduce any final out of pocket expenses for training regardless of what other reductions have already been applied
- Current wait times are very short (as at March 2019) however demand will increase as awareness of initiative increases
- The Apprenticeship Community is the exclusive provider of this initiative for Western Australian Participants

For Further information or to organise a visit to discuss this initiative, please contact:

Jodie Growden Industry Engagement Manager M: 0408 678 015 Jodie.Growden@apprenticeshipcommunity.com.au

Colleen Sturmfels Team Leader – AASN Support Services M: 0429 610 620 Colleen.Sturmfels@apprenticeshipcommunity.com.au

To commence the process with a participant in the program please directly contact:

Lisa Laing Shri Aiyer SCOW Career and Development Advisor SCOW Career and Development Advisor M: 0428 582 803 M: 0417 244 513

Lisa.Laing@apprenticeshipcommunity.com.au Shri.Aiyer@apprenticeshipcommunity.com.au

**Danny Briant – Director**

## **Jeff Hunter (Director of Primary Sales & EMICoL)**

### **Workshops**

In March this year a further workshop was run at Chess Engineering by Weld Australia for EMICoL members. Further demonstrations were provided of the Soldamatic Augmented Welding Machine by Medhi Tajfar, who's the welding consultant for Weld Australia.

CEO of Weld Australia, Geoff Crittenden also announced at a later meeting and in his newsletter that Weld Australia implemented a rigorous program of Government lobbying in 2018 in a bid to help alleviate Australia's significant shortage of qualified welders. As a result Weld Australia secured over \$4.3 million worth of State and Federal Government funding for the establishment of five Advanced Welder Training Centres (AWTCs), located in South Australia, Tasmania, Victoria and Queensland.

The AWTC's will use the augmented reality welding simulators to upskill qualified welders and train transitional workers to international welding certification ISO 9606-1 which is the minimum requirement for defence, rolling stock, and infrastructure projects.

Geoff Crittenden, further announced "without a doubt, the successful implantation of this innovative training initiative will revolutionise welder training in Australia, it will raise the standard of welder education in Australia exponentially, putting our welder training on a par with the best in Europe and America."

Those using the machine Soldamatic Augmented Welding Machine at Chess Engineering, including apprentices could see the benefits. This year South Metropolitan TAFE in Bentley have made the commitment to invest in this technology and tailored some of their courses to suit.

To find out more, please contact WA Weld Australia, representative, Medhi Tajfar on mobile no: 0417 044 370 or email: [m.tajfar@weldaustalia.com.au](mailto:m.tajfar@weldaustalia.com.au).

Thanks for your ongoing support

**Jeff Hunter – Director**



## Ian Mackay (Director of EMICoL & GM at Chess Engineering) & EMICoL Clusters / Collaboration

I recently attended a meeting at the CCI where I was given a bit of a lesson on cyber/ digital security. The speakers were from Stratum Global, a specialist security consulting group. A key takeaway from the meeting was the following, which I thought I would share with you.



Questions Directors Need to Ask Management About Digital Security

1. Do we have one corporate executive who is fully accountable for protecting all of our critical information?
2. What is the data security plan? And how is it implemented and monitored?
3. Are we using industry standards and best practices? How are we keeping them updated?
4. How do we evaluate the level of potential risk of certain data being compromised?
5. How do we evaluate the effectiveness of our corporate data risk and security programme?
6. How do we monitor our data systems to prevent breaches?
7. Do we use parallel risk assessment and mitigation paths (both Audit Committee and Risk Committee) for identified critical data?
8. Who assumes liability for data security when using cloud services? Is it in writing? Do we have cyber / data breach insurance?
9. What is our cyber incident response plan? How comprehensive is it? How often is it tested?
10. Do we have a company information confidentiality protection policy in place? Do we ask for signed agreements, protecting our data from our employees and outside contractors? Does our policy include social media use?
11. How do we know the exact systems and storage locations where our IP and crown jewels data is housed? How do we control and limit access?
12. What could an attacker steal, or destroy that would seriously harm our position in the market?
13. Do we have regular cycles, independent third party, cyber protection, effectiveness testing and penetration simulations conducted? If not, why not?
14. What are our top 5 security risk? What are our top 5 crown jewels needing our greatest attention on security?

Not all the above may apply to you, the questions certainly got me thinking. In the spirit of collaboration if you have any similar articles that you would like to share in our newsletter, we would welcome hearing from you.

**Ian Mackay – Director**

## John Morris (Director of EMICoL)

### New Membership / Sponsorship



We now have over 50 members and 4 sponsors and several other companies showing interest in joining the group. I would like to say a special thankyou to Andrew Cook our member from Blue Sky GPS, who's been of great assistance in providing me with contacts for great companies that have now become part of the EMICoL family. The EMICoL Board would like to welcome new members, Finn Planning, Klinger Australia, Panther Powder Coating, Raine Consulting and Universal Electro Tech.



We would also like to acknowledge our Sponsors.

## Gold Sponsors



[www.axisfg.com.au](http://www.axisfg.com.au)  
1800 111 299

1800



[www.supersimpler.com.au](http://www.supersimpler.com.au)  
467 467

## Bronze Sponsors



<http://cashflowrecovery.com.au/>  
1300 885 244



<http://www.wfi.com.au/>  
1300 934 934

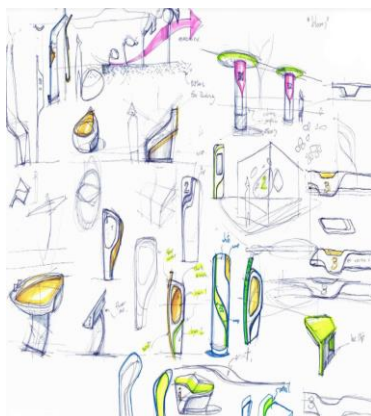


<https://www.thinkperform.com.au/>  
1300 667 099

This month our member Signtalk would like to share the following

## A Message From Our Members Signtalk

### Partner Up



The news is full of full of warnings about tough times. In our line of work, they seem a bit late to the party. You know all too well that it's been hard going for some time now.



The good news is that while times are tough, they are not impossible. You do need to work hard and make the most of every opportunity. But what if the job is outside our comfort zone? For our usual customers, it may be too big. For some, the job may be too small, or not well defined.

You could let it go by. Or you could get a helping hand.

Partner Up

There are things you are good at.. and then there's the things that you are absolutely exceptional at!

If you're a creative, you are brilliant at conceptualising, at design, at understanding your customer's needs, then creating the concept art & sketches to get the ball moving. The detail, the manufacturing – maybe not so much. You may be a larger business, with a great process for managing defined work packages. The small jobs, the concept art though.. You can do them, but they just take so much work for little reward.

Our focus is taking other people's creativity – those messy drawings, sketches or even just ideas – and building it. We don't need engineers drawings, or a complete brief to quote. We can work in the grey zone, just like you. I'm not saying we'll do the concept art or basic design. But we will work out how to make your concept a reality.

So on the bottom line, what does this mean to you?

More time client facing, focused on the areas that add most value to your Client and your business.

One last thing.

We've helped hundreds of Creatives confidently take on bigger, more complex work than they thought possible before partnering with Signtalk. Most importantly, our customers build reputations with their Clients as the "Can-Do" guys. We can do this for larger business as well, by cleaning out the small, distracting jobs that you sometimes get from your larger clients.

By giving you a one stop capability, you cement your position with your Clients. You lock in the relationship that makes your next big job much more likely, or pick up all the bread and butter work that keeps the wheels moving.

When times are tough, it's relationships that count.

Build a relationship with someone who will build you.

If you would like to know more please check out the Signtalk website or contact me direct on  
Warwick Carter

Mob 0407647004  
Ph (08)9248 9990  
E [warwick@signtalk.com.au](mailto:warwick@signtalk.com.au)  
[www.signtalk.com.au](http://www.signtalk.com.au)

Thanks Warwick Carter

The EMICoL Board would like to thank our member Signtalk for sharing their information with us. If you have an article that you would like to share in our newsletter, then please let us know. ( email us on: [enquiries@emicol.com.au](mailto:enquiries@emicol.com.au) or phone on Mobile:**0479 117 060**) or you can share on our Facebook page. Simon McGrath our sponsor from Cashflow Recovery is kindly looking after Facebook and LinkedIn for EMICoL, if you require any assistance Simon can be contacted on 1300 885 244

Thanks for your ongoing support

**John Morris – Director**