





### MAYOR'S MESSAGE



RON CLARKE MBE Mayor, Gold Coast City

Gold Coast City continues to transform itself through innovation and our City's reputation for entrepreneurship and originality is becoming firmly established, to complement our world-class and wellknown tourism image.

The first edition of Council's "Innovation Stories" publication opened eyes to just some of the success stories that are contributing to our growing status as the Innovation City.

Some readers were surprised at the calibre of companies that call Gold Coast City home, and all were impressed by their stories of success.

Those stories, remarkable as they are, provided only a taste of the achievements of innovative Gold Coast businesses and an entrée to other bold and exciting projects being pursued in our City.

This second course, delivers up further proof of the City's credentials as a serious place to do business, and of our capacity to attract and nurture innovators across a range of industries. Indeed the stories featured are testament to the diversity of the business 'menu' on offer in our City – from manufacturers to television program makers, medical to marine businesses, Gold Coast City serves up a smorgasboard of innovation – and the wine to go with it!

One of the unique companies featured in this edition is Mt Nathan Winery – a family business that has added honey as the 'secret' ingredient to make a success of winemaking in the City's hinterland.

This edition features large and small companies, long-standing and new businesses, as well as paying tribute to two exciting projects in which Council is proud to be involved, in partnership with local industry.

The Gold Coast Marine Precinct and the Pimpama Coomera Waterfutures Project are both ground-breaking initiatives that demonstrate what government, industry and the community can achieve together, when innovation is a key ingredient. While tourism remains our 'bread and butter', and proudly so, I commend to you a sample of the progressive, unique and diverse companies that show just how much innovation there is to savour across so many different industries.

They provide inspiration to us all.

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RON CLARKE MBE MAYOR, GOLD COAST CITY

"THIS EDITION FEATURES LARGE AND SMALL COMPANIES, LONG-STANDING AND NEW BUSINESSES, AS WELL AS PAYING TRIBUTE TO TWO EXCITING PROJECTS IN WHICH COUNCIL IS PROUD TO BE INVOLVED, IN PARTNERSHIP WITH INDUSTRY"



### INTRODUCTION

Necessity is the mother of invention, or so the saying goes, and it has also proved the inspiration behind many of the innovations we feature in this second edition of "Innovation Stories."

For Surfside Buslines it was a case of needing to cut back on future fleet maintenance costs by replacing old buses, with new, better and more reliable models.

The problem was the company couldn't find any custom bus designers to meet their needs – so Surfside branched out with its own bus-making arm, *Bustech*, to design what has become Australia's most awarded bus, and in the process, establish a booming bus manufacturing business here on the Coast.

*Bustech* has recently signed deals with the two major bus engine manufacturers Volvo and Mercedes Benz, with plans to manufacture a bus a day, from a new state-of-the-art facility.

It's amazing to think that such a thriving enterprise started out as a sideline business, a story repeated in the stunning success of *Kanga Loaders*.

Engineers Alan Porter & Doug McIllwraith had started a business manufacturing heavy industrial hydraulic machinery, when they began working on their original concept for a motorized wheelbarrow 'on the side'.

What they developed, some 25 years ago, became known as the Kanga – the world's first mini-skid loader, which has since revolutionized construction sites and helped home handymen worldwide, to lift and dig their way through all sorts of jobs. The original Kanga has certainly evolved over the course of a quarter of a century, proving that innovation is as much about a continual process of research and development, as it is about capitalising on an initial good idea.

Gold Coast companies are also demonstrating that innovation can come from borrowing good ideas and adapting them in new and innovative ways...even if the original idea is almost 200 years old.

The Gibson family has combined a traditional family recipe for adding honey to wine with modern winemaking techniques, in the process establishing a unique reputation for their boutique *Mt Nathan Winery*.

*Kencraft Marine* looked to expensive sports cars for the inspiration to develop a remotely-operated self-locking marine convertible top – so that their customers (owners of luxury super-yachts) are able to covert their tenders from open boats to comfortable and protected runabouts, with the push of a button.

*Stratapay* examined the payment software systems available to big business and came up with it's own affordable system for small businesses.

In Information Technology, the Health & Medical industry, Manufacturing and Education, Gold Coast companies are leading the way and leading the world with inspired inventions and patented products, along with new processes and unique improvements. And it seems innovation and success have combined to breed more innovation.

The establishment of the *Gold Coast Marine Precinct*, in a unique partnership between government and industry, has helped to nurture the growth of innovative marine businesses – from a swampy piece of disused land, the precinct has grown into Australia's Marine Mecca, employing more than 2,500 people.

Gold Coast venture capital company inQbator has taken an innovative approach to 'active investment' to make a success out of fostering innovative technology companies. Indeed inQbator is only too proud to acknowledge that one of those companies, HCV Wireless, made it into the first edition of our "Innovation Stories".

### "GOLD COAST COMPANIES ARE ALSO DEMONSTRATING THAT INNOVATION CAN COME FROM BORROWING GOOD IDEAS AND ADAPTING THEM IN NEW AND INNOVATIVE WAYS...EVEN IF THE ORIGINAL IDEA IS ALMOST 200 YEARS OLD"





Introduction	1
Queensland Conservatorium Griffith University	7
Austmarine	8
Mt Nathan Winery	10
Bustech	12
Kanga Loaders Australia	14
Redmond Gary Australia	16
Kencraft Marine	18
Mustang Cruisers	20
Gold Coast Marine Precinct	22
Globalstarтм	24
inQbator	26
Stratapay	
Cloud 9	
Theyergfx	32
Caradata	
Myofunctional Research Co	34
Pimpama Coomera Water Futures Project	
Future Innovation Stories	
> Molectra Technologies Pty Ltd	
> Gold Coast Marine Aquaculture	
> Glykoz Pty Ltd	
> Alive Technologies Pty Limited	
> Tidal Energy Pty Limited	
> Healthe	
More Information	//0

### CONTENT'S

"THESE DAYS, POPULAR MUSICIANS HAVE TO BE PERFORMERS, SONGWRITERS RECORDING ENGINEERS, PRODUCERS, PROGRAMMERS, SESSION MUSICIANS -THEY HAVE TO STRADDLE ALL THOSE AREAS IF THEY'RE GOING TO HIT THE MUSIC INDUSTRY"

GOLD COAST CITY INNOVATION STORIES 6

## QUEENSLAND CONSERVATORIUM GRIFFITH UNIVERSITY

#### POPULAR MUSIC, CONSERVATORIUM STYLE

#### Graduating with a University Degree may be just the start future rock and pop stars need to break into the cut-throat popular music industry.

That's the theory behind the world's first ever Conservatorium based Bachelor of Popular Music, offered by the Queensland Conservatorium at Griffith University, Gold Coast.

Associate Professor Garry Tamlyn, who developed the unique course, grew increasingly conscious that educational institutions were turning out graduates who shared his passion for popular music, but whose training did not prepare them to break into the highly competitive industry.

"These days, popular musicians have to be performers, songwriters, recording engineers, producers, programmers, session musicians - they have to straddle all those areas if they're going to hit the music industry," Professor Tamyln explains.

"With our program we are giving musicians the edge in performing and audio engineering."

After failing to convince other universities of the value of offering a degree in popular music, Garry's tune was finally appreciated by the Queensland Conservatorium Griffith University, where he set up the world's first Bachelor of Popular Music, a three-year degree with an optional 4th year of honours.

Within a Conservatorium context, the Popular Music Production series of courses, provides perhaps the most significant and innovative teaching and learning strategies available to 'up and coming' musicians.

"The programs provide a conservatorium environment that nurtures creative talents in what is widely regarded as a world-class recording studio facility," Professor Tamlyn says. The degree program spans all popular music genres, and is designed to broaden skills, which can include collaborative projects with film, arts and multi-media students. This unique approach ensures that students graduate from the Conservatorium as diversely skilled musicians.

Literally hundreds of hopefuls from the Gold Coast as well as the rest of Australia audition each September for one of the 25 places available.

"There's a tremendous pool of talent here on the Gold Coast, and it becomes more and more evident each September," Professor Tamlyn says.

"We are developing the very best national and international raw talents into innovative and creative musicians. Previously, there was no benchmark for people to expand their musical knowledge and take their passion for popular music to a stable career level. Now, we've certainly addressed this issue." Graduates and current students are already enjoying exceptional success.

"Local band Dr Octopus, who recently graduated from the course, participated in the SKA Festival in Las Vegas last year and have been invited back again this year," Professor Tamlyn says.

"Noosphere has contributed original music to a Pepsi Extreme Sports program that has aired across Europe, North America, and Australia, while another Graduate band Transport has released their first EP, written and recorded by the band members at the Conservatorium, and they are having huge success on National Broadcaster Triple J." Garry Tamlyn is quietly enthusiastic about the careers that are being achieved by graduates - they include popular music performers and songwriters, audio engineers and producers, independent record label managers and music teachers.

"It's only a matter of time before one of our graduates has a hit record."



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## AUSTMARINE

FOR THE SHEIK AND THE ELITE.



When the Sheik of the United Arab Emirates, not to mention some of the world's most notable hotel chains, were looking for an innovative system to keep their seafood live and well, they turned to Gold Coast man Mike Hanrahan, and his company Austmarine.

Austmarine is the world leader in the engineering and manufacture of live seafood holding and display tanks that can be found everywhere from the Sheik's palaces, to top restaurants in Hyatt, Sheraton, Shangri-la, Conrad and Holiday Inn hotels worldwide.

Hotels, restaurants, retail seafood shops, fish markets, seafood wholesalers, exporters, fishermen and aquaculture businesses all take advantage of the unique technology that has seen Austmarine tanks sold in more than 24 countries.

Mike Hanrahan says their unique systems keep the tank environment virtually identical to the ocean environment.

"The Austmarine technology actually emulates the exact environment of the ocean and controls the species metabolism so accurately, that the Department the first time you turn it on. You can't just drop into of Primary Industries, and private research laboratories, use the Austmarine Tanks for researching sensitive marine species," Mr Hanrahan says.

Austmarine Tanks include several unique features that set them apart from other manufacturers. They have several Australian and International Patents, and actually hold number 13 and 14 in the world, making Austmarine a clear market leader and they are about to launch number 15.

"Firstly the water never requires changing, " Mr Hanrahan says.

"There are no mortality problems, with the ability to hold live seafood for up to 3 months with no weight loss. "

"Importantly there is an extremely high holding and throughput capacity for live product - in other words our clients are able to hold more live seafood per litre of water than they would in conventional tanks, holding the same volume of water."

Add to this an energy smart design, an intelligent monitoring system, robust design and a full 2-year warranty, and it is easy to see why exports of the Austmarine tanks have been so successful.

"The equipment has to be practically fool proof" Mike Hanrahan savs.

"When you are setting up a live seafood tank in Dubai, you need to know that it is going to work well the local hardware store to get something extra. That's why the quality of our units has to be beyond reproach".

One of Austmarine's most notable clients is the Sheik of the United Arab Emirates who purchased two models after seeing a large number of the tanks at the Fish Market Restaurant in Le Meridien Hotel Dubai.

Austmarine tanks also enjoy the acknowledgement of the Hospitality and Seafood Industries as the most technologically advanced, fully integrated live seafood tanks available in the world.

"It's very important for us to be on the Gold Coast" Mike says "not only because we are able to source our materials locally, but because of the high exposure we get to international visitors."

Austmarine continues to grow both through their comprehensive marketing plan and word of mouth sales.

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"HOTELS, RESTAURANTS, RETAIL SEAFOOD SHOPS, FISH MARKETS, SEAFOOD WHOLESALERS, EXPORTERS, FISHERMEN AND AQUACULTURE BUSINESSES ALL TAKE ADVANTAGE OF THE UNIQUE TECHNOLOGY THAT HAS SEEN AUSTMARINE TANKS SOLD IN MORE THAN 24 COUNTRIES"



"GOLD COAST CITY REALLY HAS A BURGEONING FOOD AND WINE INDUSTRY AND WE ARE PROUD TO PLAY OUR PART IN ESTABLISHING THE REGION'S EMERGING REPUTATION AS A FOOD AND WINE DESTINATION"

GOLD COAST CITY INNOVATION STORIES 10

# MT NATHAN WINERY

#### Who would of thought a secret recipe from 1812 could kick off one of Australia's most innovative wineries in the Gold Coast Hinterland.

When George Gibson started making wines over 30 years ago, little did he know that the recipe for a special drink made by his great-grandfather, would become the flagship for an award-winning boutique winery.

George, a very sharp 83-year-old wine connoisseur and beverage blender, rediscovered the recipe for this special kind of 'mead' in the 1970's, and aptly called it the 'Bee Stinga'.

The 'Bee Stinga' is a blend of milk, honey and a myriad of other ingredients, that, when mixed together, make a superb and unique range of designer honey liqueur creams – indeed Mt Nathan Winery is the only winery in Australia to produce a range of drinks infused with honey.

"I've been mixing wines and other beverages for about 30 years and, I think I've got it pretty right now," George says, lamenting "the real shame is that with so much taste testing I don't get to drink much, I have to spit out the samples... well most of the time anyway."

The Gibson Family was lured to the Gold Coast, 'like bees to the honey-pot' from their successful Central Coast Winery in Holgate, on the NSW Central Coast.

George's son Peter, now Managing Director and Apiarist at the winery, is carrying on the tradition of blending the Bee Stinga's and wine varieties under the guiding hand of his father. "We moved here for a very specific reason," Peter explains. "The winters are so mild and the supply of pollen so good, bees are active all year round, which means we can continue to produce our unique product, without a seasonal lapse in bee activity".

"Our hives are located amongst the rich nectar of a Paulownia plantation on the banks of Clagiraba Creek, to produce our desired additive-free honey, which we package and sell, as well as fermenting and fortifying for our liqueurs and other products."

The winery's innovation doesn't stop with its honeyinfused liqueurs.

Those who love a drop of red wine will be interested to know that through a unique process developed by Peter and George, tannic acid can be removed from their favourite beverage.

"This wine is much softer to the palette and may even reduce that morning after feeling, although there are no guarantees," Peter says.

Other products in the range include Honey Ports and Liqueur Ports, along with a 'Bubbly Brut' that won a Gold medal at the 2004 Brisbane Wine Show and a Chardonnay that took out a Bronze.

"Everything we require to grow our business is available locally, so the more we grow, the more the businesses that supply us grow too, and that's the key to successful commerce," Peter says.



"Gold Coast City really has a burgeoning food and wine industry and we are proud to play our part in establishing the region's emerging reputation as a food and wine destination."

Visitors to the winery can even watch the honey being harvested from the hives and pick up a jar of the special ingredient that has helped distinguish this winery from every other in Australia.

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What started out as Gold Coast bus operator Surfside Busline's decision to build its own new replacement fleet of 20 buses a year, has turned into a highly successful venture manufacturing Australia's best buses for service around the country.

Five years ago, Surfside branched out with a new company Bustech, and the challenge of creating a better bus design to suit Surfside's own needs.

That new, environmentally friendly bus, has evolved to win Australian Bus of the Year four years out of the last five, culminating in the ultimate design, the VST Bus, which took out the industry's top award in 2003, and is set to position Bustech as Australia's leading bus manufacturer.

Surfside General Manager Luke Gray says the success all started out as a challenge that couldn't be resisted.

"Surfside co-owner Joe Calabro challenged engineer and Bustech Managing Director Frank Reardon to see what he could do to reduce future fleet maintenance costs, and that basically set the wheels on the manufacturing business rolling," Mr Gray says.

"While our bus designs include many innovative features, it is the concept of building bus 'models' as opposed to custom designs, that really sets Bustech apart from the competition."

Other bus manufacturers essentially produce each bus individually, while Bustech have followed the production line model of car manufacturers, based on working with a chassis and building the bus up from there, so that the engine sits inside the body, rather than being built on top.

### "WHILE OUR BUS DESIGNS INCLUDE MANY INNOVATIVE FEATURES, IT IS THE CONCEPT OF BUILDING BUS 'MODELS' AS OPPOSED TO CUSTOM DESIGNS, THAT REALLY SETS BUSTECH APART FROM THE COMPETITION"

'We don't change the model once it is in production, saving on labour and other costs," Mr Gray explains, adding "you don't see any tape measures or grinders, it is a bit like assembling a giant meccano bus."

"The current VST is built using a Volvo engine and chassis and we have just clinched a deal to work with Mercedes Benz, so we will be collaborating with the two major bus engine manufacturers in Australia."

In designing the VST, Frank Reardon completely dismissed the traditional rules of bus manufacture.

Mr Reardon assembled a team of advisors, including metallurgical expert, an aeronautical engineer and a mechanical engineer, and threw the textbook of traditional bus design out the window, borrowing technology from a number of industries to come up with his radical design.

"Because we started with a clean sheet, everyone felt open to make suggestions," Mr Reardon says.

didn't use rivets. The bus industry stopped using rivets years ago and it was the norm to glue in glass and panels. But he pointed out that the aviation industry, which is even more desperate to cut weight and increase strength, still uses rivets, despite the introduction of modern glues."

One of the main objectives was to decrease the weight of the bus, to reduce fuel consumption and minimise wear and tear on the roads. The new design achieves a weight reduction of 12% or 1.5 tonnes, without compromising strength or safety.

Space-age technology, including innovative and strong polycarbonate panels (some weighing less than a kilogram), which can be quickly replaced or repaired, is employed to ensure the buses have a life expectancy of more than 20 years.

"The engine will give in before the bus does," Mr Gray quips.

The frames are stainless steel and many components are plastic, making the VST lightweight and durable.

Bustech have borrowed mould making techniques and a non-rot floor from the marine industry, while they've employed an advanced electronics system from Sweden, so that the VST's electricals are basically run by a computer, cutting back on cabling, and once again, weight.

"The bus even does a self-diagnosis as soon as you start it up in the morning," Mr Gray adds.

With such a good product, Bustech will open a new "The aeronautical engineer asked me why bus builders purpose built factory at Burleigh in October 2004, which will eventually employ another 100 people and is capable of producing a bus a day – just as well as the production schedule is full, well into 2005.

> The company is also finalising an economical school bus model, which will be the first fully wheelchair accessible school bus in Australia, while the next VST commuter bus will meet 2006 engine emission standards, well ahead of the game.

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"THE SUCCESS OF THE KANGA IS LARGELY DOWN TO ITS VERSATILITY TO ACCOMMODATE ALL SORTS OF ATTACHMENTS, MAKING A VARIETY OF TASKS SO MUCH EASIER"

anter On

# KANGA LOADERS AUSTRALIA

NEW KIDS ON THE EUROPEAN BLOCK

#### It was the need for a simple motorized wheelbarrow that sparked the development of the world's first mini skid loader.

Gold Coast City based, Kanga Loaders Australia, developed the initial 11HP gas engine model over 25 years ago, and the highly successful company is now producing the 8th series – which Co-inventor Alan Porter admits has come a long way since the initial model.

"Unlike the initial models, current Loaders are designed to multi-task, using an array of attachments developed for the front end of the machine. These include bucket brooms for street cleaning, heavy duty trenchers, augers, back hoes, concrete breakers and fork lifts," Mr Porter says.

Even given the numerous innovations since, that first humble model created a revolution, receiving instant acceptance from operators and leading to strong demand from rental yards to service the home handyman, and construction industry.

The original Kanga Mini Loader was the brainchild of Mr Porter and friend Doug McIlwaith, who completed their apprenticeships together in the early 60's.

In 1978, they were both looking for an opportunity to work for themselves, and started a business manufacturing heavy industrial hydraulic machinery for the shipping and marine industry. As a sideline interest, just 2 years later, they turned their skills to the manufacture of mini skid loaders, in a business that would eventually eclipse the parent company.

The success of the Kanga is largely down to its versatility to accommodate all sorts of attachments, making a variety of tasks so much easier.

In fact Alan and Doug even work with companies to develop customised tools.

"Energex was looking for a specific mini digger to help them inspect power poles for termites," Mr Porter says "after working with them we came up with the perfect solution, which is now in use throughout Oueensland."

The new generation of Kanga Loaders has even spawned 'kids'.

"The Kanga Kid Series sees loaders small enough to be driven through a domestic doorway, and light enough to be transported in an elevator, making them ideal for indoor high-rise work, from demolition to renovation," Mr Porter says.

Manufactured in Burleigh Heads, the technically advanced 7 and 8 series models feature a specially engineered track system, created by their research and development team. The tracks are made from nonmarking nylon and are self-cleaning, allowing for smooth movement, even on boggy ground.

The new models also feature increased ground clearance (19.4 cm) enabling productive operations in all weather conditions including rain, mud, soft sand, wet weather and snow. The low ground pressure minimizes site and turf damage on exterior locations.

Safety is another secret to the brilliant success of the Kanga. The company works closely with a Safety and Forensic Engineer and Accident Investigator. This helps identify and overcome safety issues before they arise.

"Our later models include safety features like a self leveling bucket, auto auxiliary cutout and fully sealed transmissions," Mr Porter says. It's this leadership in safety and innovation that has seen Kanga Mini Ski Loaders exported to the United States, Canada and Europe.

Research and development is continual, although for some, the original Kanga is still the preferred choice.

"Two loaders that we manufactured in the early 80's were recently discovered still working in a privately owned rental yard, while another early model was found still operating in a North West Queensland opal mine, a testament to just how robust these machines are."



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# REDMOND GARY AUSTRALIA



Fixing damaged electrical lines during storms can be a dangerous, but necessary job – now a Gold Coast company is helping to protect the lives of workers, and get the power restored sooner.

When necessity called for safer equipment, Redmond Gary stepped up to the crease, or more accurately, up to the Elevating Work Platform, to reduce the danger for technicians working on or around live power lines, in everything from damp conditions through to torrential rain!

From a modest Southport workshop in 1963, Redmond Gary Australia Pty Ltd commenced business manufacturing high quality equipment for the mining and general engineering industries. Before long, their heavy duty hauling and winching equipment was being exported around the world.

In the late 1980's, an emphasis shift to their own product line, saw Redmond Gary take out licence agreements with Energex to design and manufacture cable handling equipment and cable drum trailers. In 1994 they commenced manufacturing Elevating Work Platforms or "EWP's". These platforms are subject to conditions like rain, fog and dew which leave the booms damp or wet, rendering them potentially electrically unsafe.

This risk was identified in the mid 1990's by an industry safety committee and steps were taken to introduce requirements for 'Wet Testing' EWP's. This 'Wet Test' involved spraying the platform and boom arm with water, then measuring the amount of electrical current passing through the boom.

Redmond Gary Managing Director Andrew Danks says the company was quick to take an innovative approach to respond to the risk.

"The new standard called for the insulation systems on EWP's to meet certain requirements with regard to wet insulation tests and safe operation near live power lines when wet, " Mr Dank explains.

in everything from damp conditions through to torrential rain! From a modest Southport workshop in 1963, Redmond Gary Australia Pty Ltd commenced business "However, at that time, manufacturers weren't able to comply with this requirement, therefore EWP's purchased weren't suitable for operating when wet or in the rain – basically ruling out emergency work in storms."

> "Our research and development team solved this problem by providing two specially designed and patented wet capable insulation systems - one for operation in damp conditions and the other for operation even in pouring rain, with precipitation of up to 150 mm per hour."

"Although nobody likes to work in these conditions, storm restoration work is often essential, and this insulation system remains completely effective even in these extreme conditions."

The secret is in the end of the boom arm, which is made completely of non-conductive material, yet is still strong enough to support the platform as well as the working crew. This boom arm is then 'wet tested' to a rating of 132,000 volts.

A special finish on the boom facilitates the beading of water and stops the 'sheeting' effect on the arm, which would normally act as a conductor and allow electriCity to flow, potentially endangering the life of the crew.

Redmond Gary Australia is now an active member of the working group developing the new Australian Standard for EWP's, due to their knowledge and understanding of the developments being proposed with this product.

"Our EWP's are the safest in the world because they fulfil all the criteria detailed in the wet test", Mr Dank says.

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"IN THE LATE 1980'S, AN EMPHASIS SHIFT TO THEIR OWN PRODUCT LINE, SAW REDMOND GARY TAKE OUT LICENCE AGREEMENTS WITH ENERGEX TO DESIGN AND MANUFACTURE CABLE HANDLING EQUIPMENT AND CABLE DRUM TRAILERS"





"KENCRAFT MARINE DESIGN AND BUILD THEIR BOATS FROM THE KEEL UP, USING LOCALLY SOURCED PRODUCTS, AND TAILOR EACH BOAT TO THEIR CLIENTS' INDIVIDUAL NEEDS"

# KENCRAFT MARINE

When you are targeting the US market to sell your

### 'gentleman's runabout', it certainly helps to have your vessels approved by the US Coast Guard!

Kencraft Marine is a family owned company run by Ken and Lesley Blacklock who together, with a team of dedicated craftsmen and designers, specialise in creating high quality vessels for use as tenders to super yachts.

"We mainly target the American market" Ken Blacklock says "and fortunately our unique vessels are approved by the US Coastguard because of their comprehensive safety features and high standard of workmanship".

Kencraft Marine must meet the needs of a highly discerning market of super yacht owners, who demand the absolute best in luxury custom design.

Innovation can make all the difference and Kencraft Marine have designed a feature that is both innovative and unique - the world's first key-ring remotely operated electric self-locking marine convertible top.

Kencraft Marine was the first company in the world to successfully produce this self-locking convertible top for marine use, similar to the tops found on expensive sports cars.

"Our customers can convert their open boat into a comfortable and protected runabout at the touch of a switch," Ken says.

Each vessel is truly a labour of love and a testament to traditional workmanship, combined with modern innovation. "We care a lot about our boats and the innovative features we incorporate into them, and that's reflected in the amount of time it takes to create one," Ken says.

"Currently it is running at about 9 months to turn one of these around, but we do have the ability and facilities to treble our current production."

The latest model is the Aquamajestic 27ft classic sports boat. As well as the remotely operated convertible roof, it features power windows, leather upholstery and classic timber decking.

The Aquamajestic boasts a hand-crafted dash complete with full electronic displays for superb handling, and provides seating for six, in total luxury. The forward cabin offers an electric toilet and veeberth arrangement which provides more than adequate privacy and accommodation should the need arise.

The hand crafted timber helm includes full instrumentation, remote control for stereo and six stack CD player, Morse electronic controls and engine room fire suppression system. The boat also has hot and cold water, a 12 volt refrigerator, and an airconditioned cabin.

Each craftsman working on a Tender or Gentleman's Runabout acts as his or her own quality control, with a pride-in-work ethic reminiscent of a by-gone era these romantic boats evoke. Kencraft Marine design and build their boats from the keel up, using locally sourced products, and tailor each boat to their clients' individual needs.

To date most of their buyers have come from the US, however with a strengthening Australian dollar, Kencraft Marine are now looking seriously at the Asian and European markets, as well as working towards producing a model for the Australian market.

"We're currently working on a new concept boat that could serve equally well as a luxury yacht tender or as a family runabout" Ken said "This boat will incorporate a hard top which when lowered does two things, firstly it reduces the overall height of the boat to make it easier to store or tow, and secondly it totally seals the cockpit protecting it from the elements when stored or towed".

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# MUSTANG CRUISEAND OF THE COMPETITION

#### Cutting edge technology is helping Mustang Cruisers lead the way in innovation in Australia's marine manufacturing industry...quite literally.

By employing the latest technology to cut out giant foam templates to produce precise moulds of its new models, Mustang is able to keep the new models, and the new innovations coming, at a faster rate than its competition.

This competitive advantage has helped the company expand its range with a string of award winning boats, including the hugely successful 3800 Sports Cruiser (Australian Boat of the Year, Australian Cruiser of the Year and the Australian Family Boat of the Year 2000/2001), and the 4600 Sports Cruiser (Power Boat of the Year and Cruiser of the Year 2003).

Marketing Manager Jan den Braber is proud to proclaim the company as the most advanced boat builder in Australia.

"We are the first Australian boat builder to embrace this technology and are still the only Australian boat builder using such advanced production methods. As a result, we have not only elevated the standard of boat building in Australia, we have attracted significant international attention to Australian manufacturing and have contributed to the high regard in which Australian boats are held internationally," Mr den Braber says.

In fact Mustang Cruisers employ the only 5-axis CNC (Computer Numerical Controlled) milling machine in the South Pacific...one of only four machines of its scale and capacity in the world.

"Even though marine manufacturing has to be precise, it is relatively easy, if labour intensive, to produce multiple vessels of the same model, " Mr den Braber explains. "Making an exact mould for the original boat is the hard part, and our technology allows us to do this more easily, and with hand- in-glove accuracy."

The process begins with the naval architect's 2D designs, which are translated into a computer-generated 3D format. This 3D image of the boat's hull or deck drives the machine's cutting head to carve the hull or deck from a life-sized block of foam. The foam plug is then used to produce a fiberglass mould.

"Amazingly, the machine works to a tolerance of just 0.25mm making it incredibly accurate, " Mr den Braber says.

'Most importantly, vital performance features can be factored into the initial design stage with the virtual certainty that the final on-water outcome will be as desired."

Not content with leading the marine industry in the use of technology, Mustang Cruisers have put their expensive machinery and creativity to work, cutting out foam templates in a range of large and unusual shapes.

"This process can also be used for component manufacture for the automotive, aviation, transportation, coach building, plastics and entertainment/film industries – or wherever something big and complex in shape and design needs to be economically and faithfully produced," Mr den Braber explains.

"We have created bumpers for trains, bath tubs and exteriors for racing cars, for clients including Fox Studios, Sydney Olympics, Ford V8 Racing and Yamaha." The latest in technology is backed by an investment in people – with 60 staff employed in research and development, to produce 3-4 new models each year – requiring a recent addition of 1000m<sup>2</sup> to the R&D area, with 15,000m<sup>2</sup> added to the factory floor.

"We recently launched our new 4200 Sports Cruiser, followed by the 3500 SC which was launched during the 2004 Sanctuary Cove Boat Show," Mr den Braber says.

Mustang is now investigating Vacuum Infusion technology to create lighter and stronger components using a technique that drives resin into laminate, in a cleaner and less wasteful process.

Another two new models the 2900 Sports Cruiser and 4400 Sports Yacht are under development.

"We are always looking to innovation for improvements in our processes, cost savings and ultimately better products for our customers." Mr den Braber says.

"It's a philosophy that has played a big part in our success."

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"BY EMPLOYING THE LATEST TECHNOLOGY TO CUT OUT GIANT FOAM TEMPLATES TO PRODUCE PRECISE MOULDS OF ITS NEW MODELS, MUSTANG IS ABLE TO KEEP THE NEW MODELS, AND THE NEW INNOVATIONS COMING, AT A FASTER RATE THAN ITS COMPETITION"



"THE GOLD COAST CITY MARINA AND INDUSTRY GIANTS, LED BY AUSTRALIA'S MOST SUCCESSFUL LUXURY BOAT BUILDER RIVIERA MARINE, HAVE ESTABLISHED WORLD-CLASS FACILITIES ON 50 OF THE 250 HECTARES THAT WILL EVENTUALLY BE AVAILABLE FOR DEVELOPMENT"



# GOLD COAST MARINE PRECINCT

A BOAT-BUILDING PARADISE BUILT FROM THE GROUND UP

## With nine times more waterways than Venice and 60 square kilometers of sheltered waterways, 71 Marinas and 37 boat-ramps, Gold Coast City has always been a boating paradise.

Now an innovative initiative – a unique partnership between government and industry to establish the Gold Coast Marine Precinct – has transformed the City into a boat-building paradise – the Mecca for marine manufacturing in Australia.

"The location is absolutely ideal," says Gold Coast Deputy Mayor, Cr David Power as he espouses the virtues that make the City the perfect marine manufacturing location – access to the boating playgrounds of the Great Barrier Reef, Coral Sea and South Pacific Ocean, sub-tropical climate, safe navigation, reliable transport and a lifestyle to be envied.

While the location and lifestyle were ideally conducive to marine manufacturing, the specific location chosen for the Gold Coast Marine Precinct, on the Coomera River, was far from ideal in the state it was in – before the Gold Coast City Council, in partnership with the State Government, stepped in to establish the firm foundations of a successful precinct, literally.

"It was a swampy, flood-prone piece of disused farmland that really wasn't much good for anything," Cr Power recalls.

"The flooding issue was a big one, as we couldn't afford to increase flooding in other areas of the catchment, by allowing the various land-owners to simply fill in their sites."

"Instead we had to negotiate with all the land-owners, and the State Government, to come up with a co-operative solution, which allowed all landowners to partially fill their sites, in order to maximise development potential, while minimising flood risk."

The next complex step was to widen and dredge the river and gain special approval to build so close to its banks. Even with these major hurdles solved, the precinct would not have got off the newly-raised ground without almost \$5 million in Council investment to build the initial roads, water and sewerage infrastructure – most of this money is being repaid by industry, which has invested much more, \$136 million in fact.

The Gold Coast City Marina and industry giants, led by Australia's most successful luxury boat builder Riviera Marine, have established world-class facilities on 50 of the 250 hectares that will eventually be available for development.

Other large players include Quintrex, Australia's largest manufacturer of aluminium boats and custom yacht builders Azzura Yachts, which have recently moved to new, state-ofthe-art facilities in the precinct.

The precinct now employs more than 2,500 people – Riviera alone boasts more than 1,000 staff and is responsible for a large chunk of the earnings of an industry worth \$390 million a year to the Gold Coast economy.

Even Gold Coast Marine Industry Association President Charles Dickson is staggered by the success achieved in such a short space of time.

"The industry, apprehensive at first, has really realized the benefits of clustering and the synergy created by having a supply chain of 70 companies supporting the major manufacturers, " Mr Dickson says.

"It would have to be one of the most successful clustering operations of any industry in Australia."

It is a sentiment echoed by Jeff Leigh-Smith, who has done much to foster the growth, through his Gold Coast City Marina, one of the precinct's founding businesses and Australia's largest working marina. The Marina recently celebrated completion, after six years of staged development and a total investment of \$A55 million. It features Superyacht berths and 8 Superyacht refit & construction factories, along with a 150-tonne ship lift.

"It has worked a lot better than we ever thought," Mr Leigh-Smith says.

"Competition breeds quality and boat buyers and owners like coming to the one location where they can get all their needs serviced and shop around for the best deal, while individual operators can share the business and enjoy flow-on work from each other."

"It is really like a football team, where you pass the ball between yourselves for the whole team's benefit," is his positive analogy.

Council and industry leaders are now working to keep the momentum going, with the only limiting factor being a shortage of skilled staff in what is a labour intensive industry.

Again, an innovative approach has been called for, with the precinct's marine manufacturers looking to the motor industry, which has already proved a major source of labour.

"While staff numbers in other manufacturing industries are contracting through the uptake of technology, the complex nature of the marine industry means that even with innovations in technology and advances in production processes, a large workforce will continue to be needed for the foreseeable future," Mr Dickson says.

"The growth and success of the Gold Coast Marine Precinct can only continue."

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### **GLOBALSTAR**TM MOBILE EVERYWHERETM. ACROSS AUSTRALIA

From a customs officer reporting an illegal fishing boat in the Torres Strait to a police officer calling in for assistance on Norfolk Island or a long-distance truckie phoning home from the middle of the Simpson desert, a Gold Coast company is making mobile communication possible.

Globalstar<sup>TM</sup> Australia is even helping to make the Australian Rally Championships possible, by providing reliable communication in some of the most remote corners of the country.

In fact Managing Director Peter Bolger is proud to profess that the company's Mobile everywherem technology enables 100% voice and data coverage of the Australian landmass and up to 200 nautical miles offshore from the mainland and Tasmania.

Globalstarm is one of just five licenced mobile telcommunications carriers in Australia. Globalstarm is responsible for the Australian operation and distribution of the worlds only and most widely used handheld dual mode satellite and cellular voice and data enabled mobile phone."Globalstarm is committed to enabling our customers to be mobile connected wherever they choose to live, work or travel," Mr Bolger says.

"Our service works by the phone or data modem sending a signal to a constellation of 40 low earth orbiting satellites around the globe, which is then relayed to one of three ground-based gateways in Australia, before being passed on to the terrestrial telephone network.

"Through the combination of satellites and groundbased infrastructure we can deliver 100% coverage."

What makes the service unique is the innovative integration between the Satellite and Cellular services allowing a single Globalstar phone to access both the satellite and cellular networks.

"We've combined the convenience of using just one dual mode phone with just one mobile number and one itemised account for both Satellite and Cellular services, which our customers really appreciate."

Globalstar's Mobile everywherem customers can connect their laptop to a Globalstar mobile phone and The establishment of Globalstar's operations in access the internet at data speeds up to an effective 38.4kbps when used with the Globalstar Data everywherem accelerator service provided at no extra cost.

Globalstarm Australia boasts some 20,000 users across the country, including miners, farmers, long-haul drivers, mariners, police and emergency service personnel and, in an exciting test of the strength of the technology, the teams competing in the Globalstar Australian Rally Championship.

Globalstarm Australia as the naming right sponsors is assisting the running of the Globalstar Australian Rally Championships, by providing reliable communications to the six national events held within some of the most remote corners of the country.

"Finding effective communications for event organisers, competing teams and emergency services crews has, until now, been guite difficult," Mr Bolger explains.

"The cars are already packed with sophisticated technological hardware and we are working with the teams and organisers to improve their in-car voice and data communications allowing teams to track and monitor their cars and provide reliable communications with drivers and navigators."

"Additionally we are working to improve the on course communication for safety and rescue crews with time being of the essence in responding to accidents. Globalstarm has a role in expediting the rescue and the provision of medical assistance.

Gold Coast City was an innovative move in itself -Mr Bolger and Executive Director, Mr Robert Sakker took over the operations of the Satellite service in 2003 and promptly moved the operation out of a capital city to a regional base to exploit a niche market that has been largely ignored by the bigger telcos.

"We have grown from 8 to 40 staff in just over one year and expect to reach 100 staff and triple our revenues within the next few years," Mr Bolger says.

"It is appropriate, given our target market, to base ourselves in Australia's largest regional City."

"We have already undertaken some significant research and development in launching our dual mode CDMA and Satellite service and our Data everywherem service."

"We are now undertaking further research and development in applying satellite technology for vehicle tracking, including tracking stolen cars, and telemetry applications, such as enabling farmers to use their phone to control water pumps in remote locations, and facilitating remote readings of electricity meters."

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"WHAT MAKES THE SERVICE UNIQUE IS THE INNOVATIVE INTEGRATION BETWEEN THE SATELLITE AND CELLULAR SERVICES ALLOWING A SINGLE GLOBALSTAR PHONE TO ACCESS BOTH THE SATELLITE AND CELLULAR NETWORKS"

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### inQbator DELIVERING SUCCESS STORIES

#### The saying may go, 'it's not where you start, but how you finish', but the right start can make all the difference to future success.

By giving new ideas and new businesses the kick-start they need, Gold Coast based technology investment group inQbator, is helping to create success stories, and in doing, so, has become a significant success in its own right.

In fact, inQbator has topped the list of early-stage Venture Capital companies in optimising the Federal Government seed funding that it was granted to invest in fledgling technology companies.

"In 2000, we were one of 10 successful applicants under the Federal Government's BITS (Building IT Strengths) program, receiving \$9.5 million" inQbator co-director Rick Anstey explains.

"We have already invested \$7 million initially in promising start-ups, and through this seed funding and our mentoring, our portfolio of companies have been able to raise an additional \$22 million in followon funding – three times the amount of the initial investment."

inQbator has invested its time and expertise, not to mention its own funds, into the futures of a range of companies involved in Information Technology, Telecommunications and Bioinformatics (companies involved in bio-technology products that depend on information technology).

There are currently 18 businesses in its enviable portfolio, including three companies who are colocated at inQbator's Varsity Lakes facility, with ready access to advice and support.

### "WE WERE ONE OF 10 SUCCESSFUL RECIPIENTS UNDER THE FEDERAL GOVERNMENT'S BITS (BUILDING IT STRENGTHS) PROGRAM, RECEIVING \$9.5 MILLION" inQbator CO-DIRECTOR RICK ANSTEY EXPLAINS"

"We haven't simply handed over the funds, we have a disciplined investment process including an Advisory board to review our decisions and we constantly monitor the company once we have agreed to invest" Mr Anstey says.

"We've also been able to find synergies between the different companies we 'incubate'."

"For example, Grower Direct and Sand International have recently merged to pool resources in developing their MarketPoint<sup>™</sup> suite of mobile workforce products for the agribusiness industry."

With paternal pride, Mr Anstey and partner Dr Laurie Hammond, are happy to boast of the success of their staple of companies – businesses like HCV Wireless a business that develops Bluetooth Wireless devices and has recently done a deal to supply British Telecom in the UK, as well as already achieving sales of its products in 10 countries in North America, Europe and Asia. These products have provided wireless solution to prominent Universities, Telecommunication companies and multi-national corporations such as Sony Corporation.

Another novel but simple concept, which has been given support for commercialisation by inQbator, is the Gold Coast developed iTV product. ITV delivers interactive advertising into the back of taxi's using wireless communications. After inQbator's initial investment, private funding from a Sydney based investment group was raised in 2003. Genetrax – a company that is developing chip based technology to track the vital signs of performance animals such as race horses, is yet another success story.

With the distinctive, Q, in the company name, inQbator's Directors are proud to celebrate the company's Queensland base and to support local companies.

"60% of our investments are in Queensland and the Gold Coast has been an ideal base from which to manage our portfolio," Mr Anstey says.

"With five Universities and many research centres within our catchment area, we have a strong supply of ideas and resources."

InQbator has now received a further \$4.5 million of Federal Government funding bringing the total of funds being managed to \$14 million. In addition, the company will soon establish its own private fund under its Metatron Capital name which will be used for potential co-investment with inQbator or for appropriate investments in emerging Australian innovation.

"Our catchphrase is - We invest in quality people, pursuing significant market opportunities and creating real businesses where we have the knowledge and skills to add value"

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# STRATAPAY



Gold Coast company StrataPay has developed a unique system which enables small business to offer payment options to their customers, that only big business could previously afford.

The StrataPay solution is simple. It enables businesses of any size to present their customers with an invoice offering eight easy and recognisable payment methods, with a remittance slip containing all the information they need to settle their account.

This innovative solution integrates the eight payment services including BPay, credit card, and phone payment into one system, and offers it to organisations at an extremely cost effective rate.

This robust and scalable system is used by some of the largest strata management companies in Australia, which in turn sees StrataPay processing millions of dollars per day, from thousands of transactions, through their trust clearinghouse. StrataPay's General Manager Steve Heaton says the system even works for businesses with just a handful of customers.

"It's so revolutionary; it works for businesses with four customers right through to 40,000 customers," Mr Heaton says, "and there are no monthly fees, no annual fees and no exit fees, which is a big plus for small to medium sized businesses." processed and can be viewed on the StrataPay Administration Console. Funds are automaticall allocated to the StrataPay customer's bank acco Their accounting system then reconciles the transactional data against each individual invoid

StrataPay's innovation has been extended to their offering of the 'StrataPay RapidPay' system, which gives anyone, tradesmen and service companies alike, the ability to invoice and get paid at the time of the service, simply using a credit card with any mobile phone and any mobile phone service provider.

StrataPay's invoicing system is compatible with practically any other accounting system in use by business today, making it both convenient and simple to use.

Years of development and negotiations with billing providers and banks, coupled with a very conservative pricing structure, have seen StrataPay grow in quantum leaps.

"StrataPay is the only Australian company to facilitate a service with so much choice and flexibility."

"To be able to pay anywhere or anytime is what the StrataPay multiple solution payment service is all about." "Cash is no longer king" he adds "Convenience is king."

Incoming payments from customers are cleared, processed and can be viewed on the StrataPay Administration Console. Funds are automatically allocated to the StrataPay customer's bank account. Their accounting system then reconciles the transactional data against each individual invoice number. Account statements even carry their customer's account ID and invoice number from the remittance slip, so there's no more hunting for obscure listings.

"It works with existing account keeping software and increases cash flow through payment options. As a result businesses spend less time chasing outstanding debt and more time growing their businesses," Mr Heaton says.

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"STRATAPAY'S INVOICING SYSTEM IS COMPATIBLE WITH PRACTICALLY ANY OTHER ACCOUNTING SYSTEM IN USE BY BUSINESS TODAY, MAKING IT BOTH CONVENIENT AND SIMPLE TO USE"

GOLD COAST CITY INNOVATION STORIES 29

"THE INCREDIBLE TALENT POOL ON THE GOLD COAST ACTUALLY DRIVES THE GROWTH OF INNOVATIVE BUSINESS"



GOLD COAST CITY INNOVATION STORIES 30

# CLOUD WITH A SILVER LINING



With a company name like 'Cloud 9', it's not surprising that there's widespread excitement about the family television production giant choosing Queensland, and more particularly Gold Coast City, for its recent expansion into Australia.

Indeed the region's creative industry is elated that its growing reputation helped convince television production luminary Raymond Thompson to set up shop in a bid to create a mini 'Disney Down-Under'.

Chairman of the Cloud 9 Screen Entertainment Group, Mr Thompson believes the move will help place Gold Coast City on the map as a television centre to rival not only Sydney and Melbourne, but other centres around the world.

"This is a very exciting milestone for our Company as we enter our second decade of operation." Mr Thompson enthuses.

"We believe that our Gold Coast base is an excellent choice for us to build, consolidate and expand our business activities throughout the next decade and indeed far beyond." "The incredible talent pool on the Gold Coast actually drives the growth of innovative business."

While the company is newly arrived in Queensland, it is already getting down to the business of innovating, which has seen it produce a \$130 million portfolio of family friendly programs over almost ten years, including the hit cult series "The Tribe".

The Gold Coast move marks its first foray into motion pictures and the start of an exciting new venture in animation.

Together with Light Knights Entertainment, the Brisbane based creators of the world-wide hit 3D animation program 'The Sharpies', Cloud 9 has established a joint venture company 'Dream Cloud' to create new programming, with the first title, 'Rolly in the Country with Blue', set to go into production in late 2004.

"This development will position Queensland as the Australian animation hub, and as a force to rival major animation houses world wide," Mr Thompson said.

Cloud 9's client base encompasses all key end users, including icon broadcasters (from Disney to NHK in Japan, KIKA in Germany to Encore in the USA), with its programs marketed to 130 countries.

"Cloud 9 is fast becoming recognized as a major brand in its own right, with one of its programs aired in some country in the world, in any given 24 hour period."

The company is continually in the process of developing new business opportunities such as a global on-line classroom, so that children all over the world can study a series like 'The Tribe'. Teachers are provided with educational support literature, in order to examine social issues, such as justice and democracy.

Cloud 9 also works with publishing houses to produce tie-in novels and magazines to support its programs.

Other areas of cross-fertilization range from merchandising to popular music industry tie-ins, and includes an internet division which designs, builds and administers Cloud 9's websites, which themselves have spawned exciting business opportunities such as on-line shopping.

"Innovation is not just about creating a new product in the first place, but developing it in new ways to exploit all the opportunities available," Mr Thompson says.

Recognised for his services to the television and entertainment industry in New Zealand in the 2003 Queen's honours list, this native New Zealander is looking forward to future awards for its programs, created and produced on the Gold Coast.

"The way of life here inspires people to find workable solutions to difficult problems and that's real innovation at work".

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# THEYERGFX

**RIDING THE WAVE** 



Mark Theyer was riding his jet ski off Currumbin Beach when he decided his sport would make a fun PlayStation game. Little did he know that his simple idea, would see sales of several hundred thousand games worldwide.

With a background in Architectural CAD, 3D modeling and software programming, Mark decided to try programming a game that could be used on a Sony Playstation.

Things went so well he gave up his day job to focus entirely on the project. It wasn't long before his big break came and he scored a deal with UK based software publisher Midas Interactive Entertainment who provided the funding to complete the project.

"Looking back it seems to have happened easily, but you forget just how many days and nights over the years that you put into such a project." Mark says "you get so involved, you just loose track of time".

The game, which included surfing, body boarding, windsurfing and jet skiing, was published as 'California Water Sports'.

## "SINCE ITS INCEPTION 3 YEARS AGO, THEYERGFX HAS DEVELOPED INTO A SPECIALIST 3D COMPANY AND WORK IS MUCH MORE THAN FUN AND GAMES"

Since its inception 3 years ago, TheyerGFX has developed into a specialist 3D company and work is much more than fun and games.

"We do just about anything that relates to computer graphics or technical software development." Mark says.

His expertise came to the fore recently when local company Cellfield needed to implement a new visual and auditory-based dyslexia treatment. After several meetings and a series of trials, a software system was successfully developed that exceeded their expectations.

Mark is continually at the cutting edge of 3D technology and his research on "Higher Order Surfaces using Curved PN Triangles", has been published in the Graphics Programming Methods book by Charles River Media, and was first released at major conference SIGGRAPH in July 2003.

More recently, TheyerGFX decided to create a new style of educational product, targeting children and young adults interested in learning more about 3D modeling.

"The problem with learning 3D is that the tools on the market today are expensive, non-trivial to pick up and use, and require a high performance computer" Mark explains "so we made "3D Kit Builder" as a lightweight 3D modeling program which will operate on practically all Windows based PC's". The programme can be compared to building a plastic model kit, but without the sticky fingers. It challenges you to build a complex 3D model with 4 modes of difficulty, "No Brainer", "Easy", "Okay" and "Hard". The range includes a Motorbike, V8 Racecar, RANS Coyote II (kit plane), Police Helicopter, Highway Patrol (car) and Extreme 4x4.

The new "Play" mode features movable parts on the 3D Models so it is possible to spin the rotor blades on the Helicopter or open the doors or bonnet of the V8 Racecar.

Mark agrees that he has had it easy with his marketing to date "we simply developed a PlayStation game and passed it on to the Publisher who sorted all of the marketing and distribution issues," he says.

"3D Kit Builder" is a different story. This is our first attempt at a PC-based product so we'll be drawing on the experience we have gained with the initial game contracts to carefully plan the marketing and distribution of "3D Kit Builder" and any other subsequent products."

3D Kit builder has already secured interest from a European Publisher and as a result, TheyerGFX are planning several language versions, including German, French, Italian and Spanish.

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### CARADATA AN INNOVATIVE CHECK UP!

When Bridget Dickson, CEO and founder of CaraData decided there were areas of the health industry itself that needed a check-up, she wasn't to know her one woman crusade would lead to her company's software being implemented in clinics around the world.

CaraData Australia has designed a system that simplifies complex data in the health industry and, just as importantly, addresses the ever-increasing 'duty of care' issue - a major responsibility for doctors and clinicians.

Along with a string of impressive capabilities, the innovative software monitors all communications including letters, emails and SMS messages between doctors, clinics and patients. This tracking facilitates the proof of 'duty of care'.

In an exciting new development, CaraData has recently partnered with Gold Coast company Bond Wireless, to integrate SMS facilities into their software applications.

"Using a secure form of SMS we can communicate in a low-cost way, to advise patients of 90% of negative test results," Ms Dickson explains.

"The system resolves authentication and verification issues, is easy-to-use and includes facilities for tracking messages and receiving patient replies."

The main area of CaraData's interest has been in sexual health, family planning and HIV/AIDS, with Ms Dickson starting the Sexual Health Information Program (SHIP) in 1992. The initiative has evolved into an eight year contracted partnership with Queensland Health to enhance and support the product. The Queensland contract provided the springboard to take the unique software around the world.

"We have implemented this system in 64 clinics," Ms Dickson says.

"It all started with practices in Queensland and quickly moved to New South Wales, Western Australia, Kuala Lumpar, Ireland and Barbados with extremely positive responses from all our end users."

Much of the CaraData's success is due to word of mouth, with the company also benefiting from additional marketing assistance through the Queensland Government, Austrade and Clinics already using the software, who are only too ready to praise the product.

"Our current marketing strategy, relies on the strategic alliances we have formed with other ICT suppliers and consulting firms as well as using existing clinics as working models for delegates from interstate and overseas," Ms Dickson says.

One of the strongest recommendations for "SHIP" came in a recent World Bank tender for the St Kitt's project in Barbados. The CaraData software was the only product in the world to pass the technical assessment process, giving it a major competitive edge.

Bridget Dickson's vision for CaraData is strong and determined.

"I want to provide a health informatics software program that can be utilised with or without the Internet. This program would be used in the management and surveillance of sexual health, communicable diseases, HIV/AIDS and Family Planning clinics throughout the world," she says.

"We are currently finalising an Internet based product that will be trialed soon in Mexico, and if the results are as good as I expect, we should see it implemented in many more countries."

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"CARADATA AUSTRALIA HAS DESIGNED A SYSTEM THAT SIMPLIFIES COMPLEX DATA IN THE HEALTH INDUSTRY AND, JUST AS IMPORTANTLY, ADDRESSES THE EVER-INCREASING 'DUTY OF CARE' ISSUE - A MAJOR RESPONSIBILITY FOR DOCTORS AND CLINICIANS" "DR FARRELL HAS NOW BEEN GRANTED 4 WORLD PATENTS FOR NEW INTRA-ORAL APPLIANCE TECHNOLOGY FOR ORTHODONTICS, TMJ TREATMENT AND SPORTS MOUTHGUARDS"



1829



# MYOFUNCTIONAL RESEARCH CO

DENTAL TECHNOLOGY WITH BYTE



A Helensvale company is helping hundreds of thousands of children and adults around the world correct orthodontic and jaw disorders with innovative "intra oral appliance" technology.

Myofunctional Research Co or "MRC" was founded on the Gold Coast in 1989 by Dr Chris Farrell BDS. His primary goal was to further the understanding that the Dental and Medical professions had of soft tissue (myofunctional) causes of orthodontic and jaw (TMJ) disorders.

In 1990 he pioneered the application of Computer Aided Design (CAD) to intraoral appliances in association with the department of Engineering at Queensland University of Technology. "We were the first to use steriolithography for rapid prototyping of mass produced intra-oral appliances" he said. "The equipment we used was part of a Qld Government project with the Queensland University of Technology and it worked perfectly for this application."

Since then the Computer Aided Design and rapid prototyping facility has moved to Queensland Medical Institute where MRC has had a close technical association for many years. "We have now designed and produced multiple universal appliances for orthodontics, TMJ treatment and sport protection" Dr Farrell said "and we actually export around ninety percent of the products we produce to over 65 countries."

Dr Farrell has now been granted 4 world patents for new intra-oral appliance technology for Orthodontics, TMJ treatment and Sports Mouthguards.

In January 2002 Shock Doctor Inc in America who have a 90% share of the USA retail mouthguard market, approached Dr Farrell to supply some of his products for the USA market which is the world's largest. In May 2003 Shock Doctor Inc. subsequently awarded their design and manufacturing contract to MRC on a long term basis despite intense competition from local USA designers who could not match the new dual moulding techniques. Dr Farrell has designed their entire premium range for 2004, which comprises 5 new models.

The increasing volume and technical complexity of the products, saw manufacturing split between Melbourne and Taiwan with all final packaging, labelling, and quality control undertaken in Helensvale, "The Gold Coast is a great centre for R &D as well as for exporting" Dr Farrell said. "The infrastructure is here to support what we are doing and with a lifestyle that is second to none."

"One of our biggest challenges is developing new and innovative ways to get this information and training to the Dental profession worldwide" Dr Farrell said. "We already use a variety of mediums including DVD's, videos, and manuals, translated into more than 10 different languages but we're constantly looking for more effective avenues."

To that end, MRC has just created a new division dedicated entirely to educating practitioners.

They are soon to release a new educational DVD that incorporates a complete animation of the head and oral structures so practitioners can understand myofunctional habits, and how their TRAINER system corrects problems.

Dr Farrell has a clinic and administration centre in Helensvale, Queensland where he treats patients with these newer techniques. He also travels regularly and has recently lectured on this innovative technology to Professors in Orthodontics at universities in Denmark, Holland, Belgium, England, Ireland, Italy, Russia and Mexico on Myofunctional Orthodontics and TMJ Disorders.

"We apply our research into Dental and Orthodontics to produce practical and simple appliances, that can be used universally without individual fabrication" Dr Farrell said. "Couple this with the tremendous amount of children and adults embracing this innovative application of these appliances, and hopefully, in the next couple of years we will see MRC as a substantial entity in the global market."

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# PIMPAMA COOMERA WATER FUTURES PROJECT

AUSTRALIAN FIRST APPROACH TO WATER CONSERVATION

#### Cutting water consumption by up to 84% sounds pretty impressive – but achieving this massive reduction in water usage is just one outcome of the Pimpama Coomera Water Futures Project.

The groundbreaking project is the first in Australia to integrate a range of water saving initiatives on such a large scale, for an eventual community of up to 150,000 people, and is being driven by a far-reaching Master Plan, developed in a unique partnership between the Gold Coast City Council, the community, environmentalists and developers.

Councillor Daphne McDonald, who chaired the Advisory Committee behind the Master Plan, believes the project will become a model for future development in Gold Coast City and other fast-growing urban areas in Australia.

"The Pimpama Coomera region will be Australia's first fully integrated water sustainable community on such a large scale, and – when fully implemented - the innovative Master Plan has the potential to make a substantial contribution to a sustainable Waterfuture for the Gold Coast," Cr McDonald says.

"Once fully implemented, the Pimpama Coomera community will be more aware of the value of water, use less water, use water from a number of alternative sources, and live in a sustainable urban environment, enjoying a healthy environment and healthy waterways."

The project will see dual reticulation installed in new homes to deliver the right quality of water, for the right purpose – drinking water for the kitchen and recycled water for toilet flushing and outside use, with rainwater tanks providing water for bathrooms, laundries and hot water systems.

Rainwater tanks will help reduce stormwater flow, while water sensitive urban design will further improve stormwater management and 'smart sewers' will reduce the volume of wastewater and cut costs.

As well as reducing drinking water consumption so dramatically, the plan aims to reduce the quantity of treated wastewater released back into the environment; reduce greenhouse gas emissions; minimise the amount of stormwater entering the wastewater system; reduce the quantity of stormwater runoff to waterways and improve the quality of that stormwater runoff.

What makes the project so innovative, is the combination of water saving measures and the scale on which they will be implemented, however engineers are also leading the water industry with the design and manufacture of many of the individual components of the new integrated system.

"Cutting edge new materials are being used for constructing water and wastewater systems, incorporating new design principles and manufacturing processes. The new materials such as polyethylene, PVC and polypropylene are lightweight, easily installed and remove the potential for joint failure, increase performance, as well as reduce infiltration," Cr McDonald says.

Even the exhaustive process of developing the Master Plan demonstrated real innovation, and a new level of cooperation between Council, residents, developers and environmentalists over an 18-month period.

Environmental representative on the Advisory Committee, David Thirgood describes the project as an exciting venture from an environmental perspective.

"This Master Plan represents a win for the Gold Coast and a win for the environment. At worst this Plan won't negatively impact on the environment and at best it puts back more than it takes out."

Developers have also embraced the project – Coomera Waters is now well established, and in 2002 was named the champion project in sustainable development by the Queensland Environmental Protection Agency and the Urban Development Institute of Australia (UDIA). Developer Austcorp's Executive Chairman Trevor Chappell says sustainability has proven to be a good selling point.

"Environment and lifestyle are the area's greatest assets, and the two are intimately related, so the pursuit of market appeal and environmental protection finds a perfect match here," Mr Chappell says.

It's a sentiment echoed by Adam Gilbert of Global Properties Australia, developers of the \$125 million master planned community, Coomera Springs.

"At Coomera Springs, sustainable development has been a key priority, working to achieve best practice stormwater management, water conservation, bush fire management and habitat protection," Mr Gilbert says.

"These issues will increasingly influence the way property is developed and figure in the home-buying decision."

The Pimpama Coomera Waterfuture Master Plan will be progressively implemented as development occurs in the area, with completion of major new wastewater and recycled water plants at Pimpama scheduled for 2007.

"Council will also be conducting further research in collaboration with the Griffith Centre for Coastal Management to see just how well the initiatives work, as we strive for continual innovation throughout implementation" Cr McDonald said.

#### For more information please contact:

Telephone: 1300 366 692Email:waterinfo@goldcoastwater.com.auWebsite:www.goldcoast.qld.gov.au/gcwater

"THE PIMPAMA COOMERA REGION WILL BE AUSTRALIA'S FIRST FULLY INTEGRATED WATER SUSTAINABLE COMMUNITY ON SUCH A LARGE SCALE, AND – WHEN FULLY IMPLEMENTED - THE INNOVATIVE MASTER PLAN HAS THE POTENTIAL TO MAKE A SUBSTANTIAL CONTRIBUTION TO A SUSTAINABLE WATERFUTURE FOR THE GOLD COAST"



### FUTURE INNOVATION STORIES



#### MOLECTRA TECHNOLOGIES PTY LTD.

Gold Coast Innovation Architect John Dobozy has developed a clean industrial process to convert old tyres into valuable commodities. Waste tyres are a global problem. Consequently, the potential demand for a safe and profitable system to reprocess waste tyres is vast. This unique and highly innovative process is the ultimate solution that confidently tackles the global environmental challenge posed by waste tyres.

The Molectra technology comprises a series of processes that convert the tyres into a range of products including: rebonded rubber, oil, carbon and activated carbon, and jet and diesel fuel. The system leaves no waste and the processes can be quickly customised to meet market demands.

This technology, which recovers and reuses the Earth's resources, is a prime ethical investment opportunity for everybody, given both its global environmental impact and the products that it creates for the population.

#### For further information please contact:

Phone: +61 7 5597 5533 Email: molectra@bigpond.net.au



#### GOLD COAST MARINE AQUACULTURE

Gold Coast Marine Aquaculture (GCMA) is a family owned and operated business that commenced in 1985. Noel Herbst who turned his sugar cane farm into a prawn farm was one of the first driving bodies behind this new industry in Australia.

Its hatchery supplies juvenile prawns to other prawn farms throughout Australia as well as selling cooked and raw prawns to local, interstate, and export markets. GCMA is recognized as one of the worlds leading prawn farms in environmental management and production.

GCMA is currently expanding the farm with construction under way and expected to be completed in the next 12 months. It will have over 50 ponds in production that will produce over 500 tonnes of farmed prawns per year. At the same time GCMA will continue to work with government departments to continuously improve all aspects of the prawn farm industry.

### For further information please contact:

**Phone:** +61 7 5546 1361 **Email:** gcmh@ion.com.au



#### **GLYKOZ PTY LTD**

An immediate public health concern is the increasing prevalence of infectious diseases caused by drugresistant bacteria. Many clinically significant diseases, including pneumonia, meningitis and childhood ear infections, have become more difficult to treat due to the emergence of so called 'superbugs'.

Glykoz, a biotechnology company located in the emerging Life Sciences corridor of South East Queensland, confirmed that these 'superbugs' were being targeted in the company's new drug development program. The Company leverages worldleading expertise in carbohydrate-based drug discovery to develop new drug candidates for licensing to international biotechnology and pharmaceutical companies.

Glykoz is developing a new class of antibiotics with the aim of improving the clinicians' arsenal against infectious diseases caused by emerging microbial strains which are resistant to existing drugs.

For further information please contact: Phone: +61 7 5596 7714 Email: info@glykoz.com



#### ALIVE TECHNOLOGIES PTY LIMITED

Alive Technologies was founded by CEO Bruce Satchwell in February 2003 to design and manufacture wireless medical devices and systems. The company's products use the latest wireless technology to provide improved healthcare outcomes.

Its products include the Alive Heart Monitor and the Alive Diabetes Management System. The heart monitor, which is about the size of a credit card, measures the patient's heart rate and ECG, and transmits it wirelessly, allowing the patient's condition to be continuously monitored remotely.

Currently, diabetics mainly use hand-written records to manage their disease, and 80% fail to keep their blood glucose levels within the ideal range. The Alive system automatically transmits the diabetic's blood glucose readings to the Internet where the diabetic and their physician can review the results. The physician can then use the Internet to send an SMS text message to the diabetic advising of any issues or of treatment changes.

#### For further information please contact:

Phone: +61 7 5563 2871 Email: info@alivetec.com Web: www.alivetec.com



#### TIDAL ENERGY PTY LIMITED

Tidal Energy Pty Limited was formed by Aaron Davidson and Craig Hill as a vehicle to develop technology to harness the kinetic energy in rivers, tidal and open ocean currents. Their philosophy was that future energy generation processes should not "hurt, pollute or destroy the natural environment".

Building on feasibility studies they had conducted in 1998-99, it was concluded that the kinetic energy in moving water currents had great commercial potential. In 2001 Tidal Energy secured an AUS Industry Grant from Commercialising Emerging Technologies (COMET) for IP protection, small prototype construction and business planning.

If as expected Tidal Energy projections prove conservative and consistent with recent tests, Tidal Energy will be capable of providing commercially viable energy to national grid systems, both in Australia and elsewhere throughout the world.

#### For further information please contact:

Phone: 07 5535 4421 Email: tidalenergy@yahoo.com.au



#### HEALTHE

Our Olympians were the first to get a taste of Healthe - a Gold Coast company that's set to change the face of personal health management and wellbeing.

In Athens, the Australian Olympic Team's medical staff were operating the medical clinic with the assistance of Healthe Athlete, a shared health record management system that enables sports medical officers to access an athlete's medical history information and flags prescribed medications that are on the World Anti-doping Authority's banned substance list.

This system is being rolled out to the broader sporting community and will enable Australian sports to maintain their clean and healthy record into the future. These innovations are just the start of how Healthe will be using leading edge technology to provide an affordable way for all Australians to manage their wellness, health and lifestyle. Healthe will soon be unveiling other exciting new ways to help individuals and families better manage their personal health and wellbeing.

#### For further information please contact:

Phone: 07 5577 7888 Email: afanning@healthe.com.au



### FOR MORE INFORMATION

Gold Coast City Council's Economic Development and Major Projects Directorate was established in 1995 with the mission to broaden and strengthen the economic base of the City.

For further information on any of these stories or business opportunities in general, please contact a Business Development Officer.

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