

Real Value Maintenance from Oceania

VISITORS to the Oceania Aviation hangar at Ardmore will have noticed some impressive changes over the last few months. The company has adopted a Maintenance, Overhaul and Repair Excellence or "MORE" programme based on the principles of Lean Manufacturing, but in this case applied to maintenance. Graham Boustred, Oceania Technical Representative explains that the programme of operational improvement has been embraced by all staff and is delivering great benefits to the company which are being passed directly on to customers. He says the programme is a prime driver behind Oceania's delivery of "Real Value Maintenance", meaning that a 100 hour check should be exactly that. Customers should never expect unplanned field servicing or trips back to the company for unscheduled maintenance.

A visible change

On walking into Oceania's hangar, one cannot help but notice a sense of tidiness, order and structure. Everything really does have a place and everything is in its place. This isn't due to a lack of aircraft or work, but to a cultural change in how staff think about the efficiency of their work and how they behave in terms of keeping customer value at the forefront of everything they do.

Oceania Director Jonathan Bowen explains that the programme they have followed over six months has not only increased their maintenance efficiency but also builds on and enhances their adherence to CAA requirements for record keeping and safety. It is a step forward in thinking that is beyond the regulations and that strongly positions Oceania for further growth. In Graham's words "the culture is no longer about getting through today but about leading the future".

Background

Lean manufacturing has its beginnings in the automobile industry (particularly Toyota) and can most simply be described as "a systematic approach to identifying

and eliminating waste through continuous improvement driven by the requirements of the customer".

Oceania's involvement began after observing the positive change that took place at sister company Pacific Aerospace Corporation (PAC) in Hamilton. PAC's improvement process began after discussions with NZ Trade and Enterprise regarding ways to improve productivity and

Timeframe and training

One of the principles behind successful adoption of lean manufacturing (or maintenance) practice is that the process be a cultural one that is led from the top. Training for and comprehension by all staff is a must, as there are many companies who have attempted to follow the lean path without the necessary groundwork and without success.

Oceania formed a "Strategic Leadership Team" for the programme and undertook six day-long training sessions with Skills4Work over a period of six months. Before commencing the rollout, everyone knew what was happening and why - and most staff became keen to start well before the due roll-out date.

The programme was named MORE, for Maintenance, Overhaul and Repair Excellence and involves all staff by way of PIT crews (or Productivity Improvement Teams) in each department.

The third tier of the improvement structure is at an individual level with a system whereby any staff member can suggest improvements at any time by way of Opportunity for Improvement forms. These are regularly reviewed by a committee, then resourced and implemented as appropriate.

Implementation

Implementation began on a pre determined roll-out day, starting with a "massive cleanup". Staff identified everything that was not needed in the hangar and either disposed of it or tagged the item and

moved it to a defined area for later review.

The timeframe within which items were used became a deciding factor for whether they were allowed to remain in the hangar or not. If something only gets used twice a year there was no need for it to be stored on the hangar floor.

Once the cleanup was complete, designated areas were assigned for all items that remained in the hangar. Finding things (when someone else was using them) was already a known problem so a tag system was created whereby staff leave a name



The Oceania hangar at Ardmore is full of aircraft and full of space as well. Having adapted the principles of Lean Manufacturing to aircraft maintenance, there is now a place for everything and everything is in its place.



Organisational changes weren't limited to the hangar floor. All departments participated fully (this picture shows the turbine shop), the result being a cultural change throughout the company and greatly improved efficiency.

their supply chain. Trade and Enterprise had recommended that PAC work with consulting group Skills4Work. The PAC programme (named PACE for Pacific Aerospace Competitive Edge) delivered a 42% increase in productivity in one year.

With the results obtained at PAC, the next logical step was to apply the programme toward maintenance, for which Oceania led the way. In turn, based on the very positive experience and improvement at Oceania, Aeromotive at Hamilton (another sister company) are following suit.



Planning and improvements within Oceania's Maintenance, Overhaul and Repair Excellence programme are reported on noticeboards.



Repeated trips to the consumables store were identified as unnecessary waste. Maintenance trolleys have been set up to avoid this.



Personal equipment and tools have received the same treatment as shop equipment. All have been tidied and organised to perfection.



Oceania's component division also has a new sense of space and order to it.



tag in place of a shared tool or piece of equipment when they take it from its storage place.

Ensuring everything had a place and was accessible extended also to personal tools with all staff taking the time to re-organise their own equipment and toolboxes, fitting them with foam inserts cut to accept only the right tool in the right place.

PIT crews then began the task of Value Stream Mapping. This involved identifying all waste and non value adding activity, then reducing this to the lowest possible amount. Staff worked in groups to achieve this using root cause analysis techniques.

Early Outcomes

One of the early outcomes of the value stream mapping was the realisation that it took on average 12 trips to the consumables store during a typical 100 hour service. Each of these trips wasted a minimum of 1.5 minutes. An idea which was quickly implemented was the creation of a set of maintenance trolleys. These are located in each maintenance bay and replenished once at a minimum stock level. Having the trolley at hand eliminated the need to visit the consumables store at all during a service and is saving over \$4000 a year in labour costs – a saving that can be passed back to customers in reduced maintenance time on the job.

All staff now realise that 1 or 2 minutes of non value adding time can quickly add up and staff now continually question whether they are doing things the most efficient way on behalf of the customer. In Graham's words "Real Value Maintenance".

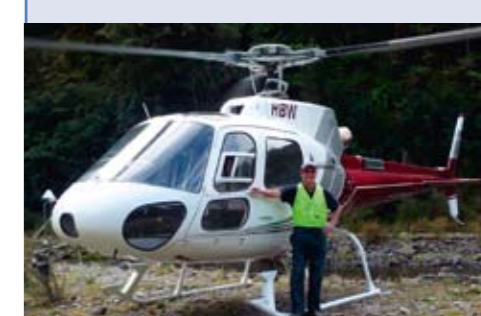
Another early outcome was the creation of more space in the hangar. Shelves can now be dedicated to storage for cowls and parts for specific aircraft in the hangar and are named as such using rewritable magnetic labels.

A particular outcome is the building of team spirit, already a strength of the Oceania operation. Graham says the better

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Customer Experience

LAKEVIEW Helicopters are based in Hawkes Bay and have a long association with Oceania. Owner/Pilot Mark Williams purchased his AS350 from Oceania as a B model ex Japan seven years ago. Oceania upgraded it to a BA model at the time and again more recently to a B2 model. Even though he operates from Hawkes Bay, Mark still returns the aircraft to Oceania at Ardmore for all of its checks and maintenance. In Mark's words, this is because the quality and value he gets are "second to none". He notes only one occasion in seven years when he has needed any unscheduled maintenance and that was for a solenoid failure.



Mark Williams with his well cared for AS350B2

Mark is a strong believer in doing things right and says he is particularly fastidious with the care and maintenance of his aircraft. "Maintenance is worth your life." Mark says his AS350 has never let him down and he never for a moment thinks that it will – "that's the confidence they give me". He has a new B3 coming in 18 months which Oceania will also care for.

During our interview Mark also commended the proactive communication he receives from Oceania and the "impeccable" paper trail that makes his CAA audits easy. Mark is happy to proclaim that all maintenance should be done by companies like Oceania Aviation.

Contact Mark on 0274 432 766 or email: mark@lakeviewhelicopters.co.nz.



Nothing escaped the organisational process. At right, the rivet cabinet. At left, the mousetrap.



Record keeping was always in good shape. Maintenance manuals are now easier to locate.

... from previous page organisation "creates happy families" simply because people know where things are and there is never any frustration arising from trying to find something that someone else is using or has misplaced.

People Issues

Effecting organisational change is not always without personnel issues, especially when the change is aimed at the cultural level. One of the things that helped smooth the process at Oceania (and continues to help afterward) was a day of personality profiling. This is a common approach to helping people understand more about how their colleagues think and feel. Graham says it was a very worthwhile exercise at Oceania, with many of the team learning as much about themselves as they did about their colleagues in the process.

The majority of staff embraced the changes that were proposed and according to Graham, "the others followed suit". There was actually very little resistance at all, and then only to the idea of rearranging ones toolbox. However, peer pressure came

to the fore and in hindsight, those who initially resisted admit that the new way is indeed an improvement.

Sustaining the Improvement

Part of succeeding with the lean manufacturing (or maintenance) mindset is sustaining the change by making it cultural. Oceania are achieving this by

regular PIT crew meetings and continuous feedback to all staff via "MORE" monitoring boards.

Each department also completes a weekly self audit, and charts their progress on the monitoring board. Departments also audit each other on a regular basis by way of a friendly system which helps to raise questions and maintain behaviour at a high standard. In short, each department is striving to be as good as it can be.

There is a clear sense of ownership of the system as well as a sense of fun toward its adherence. During KiwiFlyer's visit to write this article, we moved a rivet trolley out from its marked area beside a wall to improve the composition of a photograph.



Racks in each bay offer dedicated space for aircraft cowls and parts, keeping them off the floor.

A couple of minutes later a voice calls out "who didn't put the rivet trolley back?" Oops. Guilty as charged.

Customer benefits and feedback

Aside from the obvious increase in maintenance efficiency and decrease in cost, an early customer benefit of the MORE programme is Oceania's new offer of fixed price maintenance. With standardisation of processes and confidence in their efficiency, Jonathan and the team have been determining a matrix of fixed price charges for maintenance checks. Providing the check proceeds according to the scheduled requirements, operators will know exactly what the costs will be before they land at the door with their aircraft.

Customers greatly appreciate the new approach and comment that the value is visible to them the moment they walk through the door. Graham says that new customers unfamiliar with the Oceania experience recognise that what looks good must be good and have been delighted with the service they have received.

For more information

Contact Graham Boustred at Oceania on 09 296 2644, email graham@ohl.co.nz or visit www.oceania-aviation.com

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Aviation Conference Week

AVIATION Industry Conference Week was certainly a well supported and attended event, as Aviation Industry Association CEO, Irene King has explained in the column at right.

KiwiFlyer was there as a sponsor, exhibitor, and conference attendee. We enjoyed many informative presentations as well as the quality and content of the trade exhibition. Congratulations are due to the AIA and all others involved in making the week the success that it was.

The general theme of the conference was one of safety with a keynote presentation on the first day by Bill Voss, CEO of the Flight Safety Foundation. As Bill observed, safety improvement is driven by information and one of the Foundation's primary concerns is the lack (internationally) of legal liability protection for self disclosed information. This was a theme picked up by several presenters.

The conference included the launch of an industry wide Safety Advisory Committee as well as other safety related initiatives including awards to recognise safety performance in the helicopter industry.

A vast array of industry issues were covered with separate presentation streams across several days for flight training, helicopter operations, commercial transport, engineering, airports, supply and services and rescue operations.

Of particular interest to the industry and community focus of KiwiFlyer Magazine were discussions on emerging opportunities and markets, collaborative marketing of aviation products and supply to Government agencies including NZ Defence Forces. We plan to construct articles on these subjects as well as on several interesting new products in future issues.

Conference Week sets benchmark

The CEO's Summary

WHO SAYS our industry doesn't know how to celebrate – over 500 of our colleagues from throughout Australia and New Zealand joined together to network, do good business, launch some new initiatives, get the inside global view on the big safety issues confronting our industry and to evaluate where as an industry we are going over the next 12 months.

With over 50 trade stands throughout the week, those who supply services did us proud. From the Bell 407 located in one of the conference halls to the various displays covering the whole range of aviation services and products in the main trade hall, good business was done. Suppliers commented that the real benefits of having all of the industry's key conferences in one week meant they could consolidate, get to all their key customers, reduce their costs and bring more of their sales staff to engage with the industry in an informal and social environment. A number have already committed to returning next year – if you can do six weeks turnover in one week why wouldn't you!

Several new initiatives were launched at the conference. The Safety Advisory Committee has participation open to all in industry. A number of safety presentations were made to the industry, some in a closed session relating to particularly sensitive issues but ones we all need to know about.

The Aircraft Engineers Association of New Zealand was also launched. The purpose of this group is to give a strong and unified voice for all engineers in New Zealand whether they be from large or small companies, single operators or an individual engineer.

Similarly the New Zealand Helicopter Association had its inaugural meeting and developed its work plans including the progression of a rule for helicopters.

Three industry "GOLD" safety recognition awards were made to Beck Helicopters, Over the Top Helicopters and Marlborough Helicopters and all of their pilots (GOLD and SILVER) signaling their outstanding safety performance.

And where will next year's Conference Week be held – in an exclusive scoop for KiwiFlyer this will be at the Palmerston North Convention centre from July 26 to July 30, 2010. See you all there... Irene.



Safety Committee Launch: Joe Cave, Toby Clark, Don McCracken, Bob Feasey, Ashok Poduval.



The forming and inaugural meeting of the New Zealand Helicopter Association.



Trade stands were fully allocated and well perused by attendees with many contacts made or renewed.



John Hobday from Rotor and Wing Maintenance at Taupo brought many of their products to show.



Maurice Gordon and Terry Brown on the Asia Pacific Aerospace trade stand.



The Welcome Social Dinner was held at the Omaka Aviation Heritage Centre.